User Manual

StoreFlow GV

User Manual

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StoreFlow GV

Proper sales management clearly affects the course of commercial activities and is therefore one of the main requirements for the smooth running of a business. StoreFlow Sales Management offers a number of useful tools for increasing the capacity and productivity of a company and significantly improving the quality of the service it provides.

What is StoreFlow Sales Management?

StoreFlow Sales Management (SF-GV) is a management tool designed for controlling and following up the daily activity in a store.

Its design also enables the data generated by StoreFlow Point of Sale (or by an equivalent application) to be updated automatically, thus providing immediate sales information broken down based on the various criteria used by the business.

SF-GV is intended for all kinds of retail companies that require advanced sales management, based on actual, consolidated, and real-time data. Among other functions, Sales Management offers the following possibilities:

- Full system configuration, including the company's structure, the organization of point of sale terminals and the messages associated with various events.

- Administration of customer and item databases, as well as other aspects related to sales management.

- Real-time generation of sales-related graphical reports, summaries or statistics, and forecasts of sales or any parameter affecting the daily activity of a retail business.

- Real-time control of the execution of processes in the existing stores or branches.

- Generation and receipt of orders for goods and control of all aspects associated with those orders, such as the supplier, the accompanying delivery note, the status of an order and the various prices related to the goods.

- Knowing at all times the status of the stocks of items and their location in the store, as well as controlling their labeling and prices.

- Design and printing of shelf, price or promotional labels.

One of the key features of Sales Management is its configuration flexibility, which is a result of both its design philosophy and the modules that make up the application. Thanks to its configuration capacity, SF-GV can adapt to large chains with high numbers of stores and terminals, and also to single retail outlets with a few terminals.

Modular Structure of Sales Management

Sales Management was designed as a modular system comprising a group of modules which are essential for ensuring the proper operation of SF-GV (Basic, Utilities and Administrative-Financial Administration) and a number of additional modules that may be purchased depending on the company's specific needs. This type of design makes it possible to:

- Adapt to the customer's commercial structure
- Configure the location of a module's programs
- Create and delete user folders
- Associate external applications

Moreover, this structure enables the buyer to purchase only those modules that are needed for running the business. Each module includes a built-in set of related functions, grouped together by folders. These folders are user-configurable as regards both their name and their contents, since each of them includes the programs that are available for the function or folder in question. For greater ease of use, the programs can be transferred freely between folders in the same module, although programs from different folders can be interrelated. It is also possible to include frequently used external programs in the Sales Management interface.

The Client-Server Architecture in Sales Management

Various operations can be performed from the Windows client stations in StoreFlow Sales Management, such as on-line querying of sales, controlling withdrawals, terminal closing, sales cycles, etc., and requesting that the system server run the processes required for carrying out those operations.

This server is thus responsible for providing the data and services needed to the Windows client stations and to the Sales Management terminals. To do this, the server needs all the programs for handling this data, and also the programs required for processing and managing sales, such as those for opening and closing centers or stores, loading and unloading the tables used by the database management system installed on the server, providing data to the terminals in ASCII format, etc.

The server programs are organized in related areas or sectors of activity. For more details, see appendix A, ➤ "Sales Management Server".

Configurations and Platforms Available in Sales Management

Sales Management basically supports two different configurations which are distinguished by the degree of centralization or distribution of the server and are shown in the following figures:

1. Normal configuration: SF-GV + SF-PV
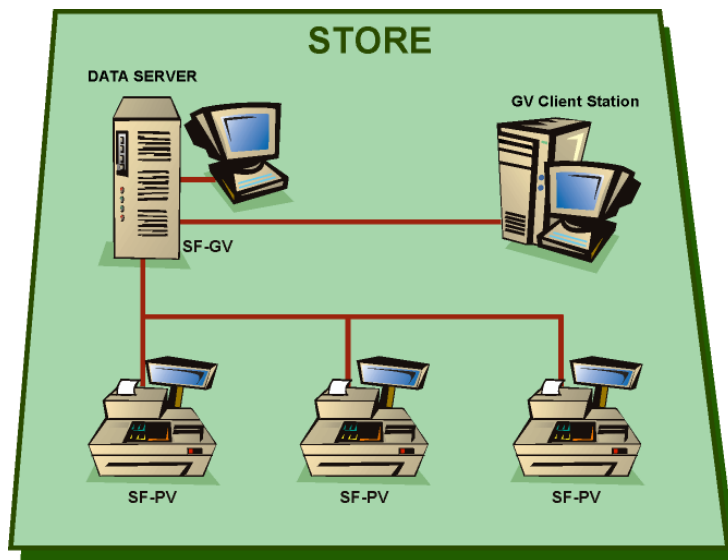
Fig. I.1 Normal configuration

2. Terminal/controller configuration

Both SF-GV and SF-PV reside in the point of sale terminal.
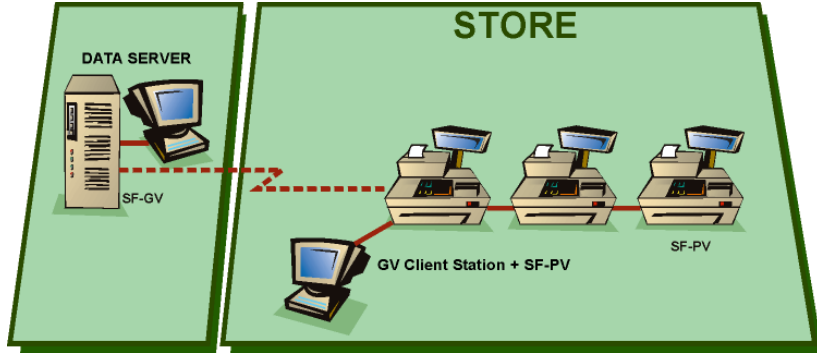
Fig. I.2 Terminal/controller configuration

Available Platforms

The following platforms are available:

- Hardware
  - RISC processor
  - Intel processor
- Software
  - Server:
    - For RISC: AIX 4.2.1
    - For Intel: Windows NT Server 4.0 with Service Pack 5
    - TCP/IP, SQL/NET, SQL/PLUS
  - Client:
    - Windows NT Workstation 4.0 with Service Pack 5, Windows 95 (TCP/IP, SQL/NET)
- Database
  - Oracle 7.3.4/8.1.6 for NT and Aix, Informix 7.30Tc7 for Windows NT and SQL Server 7.0 for WNT

- Networks
  - Token Ring 16/Ethernet 10/100
- Additional hardware
  - Symboll PDT-6800 portable terminal for the GIS module (replaces model LDT-3805)
  - Dongle included with the Label Matrix software, for printing labels
- Additional software
  - PDTPal 2.6 communications program for the GIS module portable terminal.
  - Label Matrix 4.60: label design and printing program for Windows 95 or Windows NT

StoreFlow Application Family

StoreFlow is a family of sales- and retail-oriented applications that help businesses to conduct and manage their commercial activity. The use of the StoreFlow applications enables companies to:

- Enhance management security and business control
- Facilitate management and planning tasks
- Reduce global system costs
- Increase their responsiveness in the competitive business environment

StoreFlow encompasses the entire logistic and commercial cycle of a business, from the moment a transaction takes place at a point of sale terminal in a store, to the high level analyses conducted regularly by the company's sales management, to the mid-level management activities entrusted to SF-GV.

Through its many applications, StoreFlow also meets various needs of today's companies by incorporating functions such as:

- Processing the point of sale terminals' data
- Electronic payment systems
- Management and negotiation with suppliers
- Item encoding and maintenance
- Stock and order management
- Special offers, promotions and loyalty-building campaigns
- Analysis of business profitability
- Study of the competition

In addition to SF-GV, StoreFlow includes the following applications:

Point of Sale

StoreFlow Point of Sale (SF-PV) processes sales operations in stores of any size with the agility and security required for each type of environment. Point of Sale not only processes typical sales transactions, but also incorporates functions that transform the sales terminal into a multi-service point.

Electronic Payment System

StoreFlow EFT (SF-EFT) is an electronic payment system that integrates ideally with the Point of Sale application, facilitating transactions with payment documents such as credit and debit cards, checks and, in the near future, electronic purse.

Price Checker

StoreFlow Price Checker (SF-PCK) manages the price information points (PIP) available in outlets and department stores and provides an automatic price information service that can be used by the customer without the involvement of the store's personnel.

Sales Management Documentation

The documentation available is organized so that each item is focused on a specific aspect of Sales Management:

- The user's manual contains all the information needed for learning how to use the application and understanding the usefulness of each of its programs. The manual is particularly useful when the user wants an overall view of the product or needs to know the available actions, or how to use the existing programs. The manual includes a detailed description of the function of each field and its main parameters, providing the user with an agile and effective reference tool that helps to attain the maximum performance with the application.

- In StoreFlow-GV, the help is designed so that the user can get answers to the questions that arise during the execution of the programs. The purpose is twofold: on the one hand to provide an overall view of the application, interconnecting all the programs with the various tasks that take place in the stores, and on the other hand to describe in detail each of the programs, indicating the meaning of the data they contain or they have access to.

Manual Organization

To simplify its use, the manual has been structured by following the sequence in which the Sales Management operations are to be carried out.

Specific chapters are dedicated to the essential parts of the Basic Module and to each of the remaining modules included in the application, as well as other far ranging topics.

The contents of the user's manual is as follows:

- Chapter 1, "Sales Management User Interface", describes the Navigator which acts as an entry point to the application, and explains how to perform the basic operations required for using its programs. It also addresses other key aspects such as customizing the application's structure or changing the regional configuration.

- Chapter 2, "System Configuration and Customization", describes the complete sequence of all the tasks that must be carried out prior to the normal operation of the system, which are necessary to start using Sales Management as a store administration tool. It also describes tasks which are carried out regularly (e.g., owing to changes in the store) or are required for customizing the system.

- Chapter 3, "Item Management", includes the information necessary for obtaining the highest performance with the programs used for managing the items sold by the company: registration; grouping into families, departments and sectors; price control; follow-up of active special offers and promotions; on-line generation and printing of labels, etc.

- Chapter 4, "Customer Management", describes in detail the operations needed for managing the store's customers. Customer management in StoreFlow is focused on three different aspects: management of cards and means of payment in general, customer management, and management of credit granted to the customers.

- Chapter 5, "Terminal Management", offers the information needed for configuring the point of sale terminals installed in the store and defining the environments they will be assigned to. These environments, in turn, will be associated with a number of basic operation parameters such as maximum cash amounts permitted, refunds available at a terminal, the means of payment and the default delivery method.

- Chapter 6, "Advanced Use of Sales Management", describes how to use those SF-GV functions reserved for users with an administrator profile, technical training and in-depth knowledge of the application. Advanced functions include managing processes and their files, defining process chains, handling events that arise during the execution of processes, etc., and in general those daily tasks which owing to their special significance are reserved for the system administrator.

- Chapter 7, "Loyalty-Building", provides the information required for taking full advantage of the programs designed for building the customers' loyalty to a store, brand or chain. These programs have been designed to develop successful loyalty-building techniques based on offering rebates or prizes as a reward for repeated purchases or for using a particular method of payment.

- Chapter 8, "Weighing Scales System", offers the instructions that enable the user to manage this system, which has been designed for those stores with an electronic scales section capable of operating with weighable or unit items. This chapter explains how to perform all necessary operations: registration of counters (logical groupings of scales with similar characteristics), scales models, salespeople, scales items, etc.

- Chapter 9, "Utilities", explains how to use the programs which offer management tools, basically for the system processes, events taking place during the execution of a process, or messages displayed at the POSTs.

- Chapter 10, "Administrative-Financial Management", describes all the processes included in this module, with special emphasis on configuration, querying the available information, cash discrepancies and cash withdrawals at the terminals. It explains how to manage and control sales made from a floating cashier and perform the cashbox settlement process from a client station.

- Chapter 11, "Merchandise Management", includes topics such as stock management, receipts and deliveries of goods and their effect on the actual stock, order and supplier management (order registration, querying and issue), and delivery note management.

- Chapter 12, "Label Design and Printing", describes the Labels module, the programs available in the application and how to use them to generate labels or associate them with different entities.

- Chapter 13, "Implementation and Stock Management", describes programs used for controlling the inventories and stocks of merchandise located in a store. This control is performed on the price of the items, their labeling, the stock of merchandise and its location within the store.

- Appendix A, "Sales Management Server", gives a brief description of the operation of the SF-GV server and its processes, together with a list of these processes and the SF-GV processes described elsewhere in the manual.

Finally, the manual ends with a glossary of terms specific to Sales Management and an index.

Conventions
and Graphical Symbols Used

The information contained in this manual uses certain conventions and graphical symbols which facilitate its understanding. This enables the user to identify at all times the type of operation referred to in the text and which parts of the text are more significant.

Two types of conventions are used: format and symbols. The format conventions are as follows:

This format ...	*Refers to ...*
Bold text	Characters that must be entered exactly as shown, and names of menus and dialog boxes.
	Example: Click on **Configure**
Italics	Information parameters that the user must provide when prompted by the system. For instance, when prompted to enter [filename], the user can enter FIELDS.TXT.
	Example : *fields.txt*
"In inverted commas"	Names of dialog box buttons and options, such as "OK", "Cancel", "Yes", "No", "Update links when opened", etc.
	Example : Press "OK"
SMALL CAPS	Combinations of keys that must be pressed to execute an action. When the keys are joined by the "+" sign it means that the keys must be pressed simultaneously. When the keys are separated by a comma "," it means that they must be pressed in sequence.
	Example : CTRL + ESC

The symbols are icons or figures associated with an aspect or action that appears frequently in the text. The following symbols are used:

This symbol ...   *Refers to ...*

Warning symbol. The operation requires special attention or can have unwanted effects, and should therefore be performed with due precautions.

Sequence of operations. A sequence of operations that must necessarily be carried out step by step in order to execute the desired action.

Bibliographic reference or an allusion to another part of the manual.

Notes that complete what was said about a topic covered previously.

1

Sales Management User Interface

- Access to Sales Management and Main Screen
- Organization of Sales Management
- The Interface and Using the Processes
- Customizing the Interface and the Application Structure

StoreFlow GV

This chapter presents the Sales Management user interface and other subjects relating to both Sales Management and the programs which form part of the application or are associated with it. In this chapter you will find information about the following:

- The user interface of the Sales Management application.

- A description of the main screen and how to access the various programs and modules that make up Sales Management.

- An explanation of the buttons available on the common toolbars for the various processes.

- A description of the configuration possibilities and layout of the Sales Management folders and processes.

Accessing the Sales Management Application

Select the Sales Management icon from the Windows 95 **Start** menu or its equivalent in Windows NT, or run the STOREFLW.EXE file directly. The log-on box will appear. You will need to enter your identification details in order to use the application.

Fig. 1.1 StoreFlow Sales Management connection dialog box

Fill in the following fields:

- "Company": name or code of the company from which you are logging on to the system. This will need to have been registered during the initial setup phase.

- "User": code of the user who is logging on. The user will also need to have been registered during the initial setup phase.

- "Password": the user's personal access key.

Click on "OK" to accept.

Unlike many other programs, Sales Management does not disable users who try to access with an incorrect password. This avoids the risk of the user being locked out during a log-on attempt after forgetting his or her password.

Sales Management User Interface

The StoreFlow Navigator provides a user interface which acts as an entry point to the application and which shows the client processes comprising Sales Management in an orderly and hierarchical way, making it easier to run or stop processes.

The program starts with a window containing the elements shown in the figure below:

Fig. 1.2 StoreFlow Sales Management Navigator

- Icon area: this consists of a toolbar with scroll buttons allowing you to move around an area containing all the application modules. Depending on the client station on which the application is being run, the modules which have not been installed will be shown disabled. Each client station belongs to a group. It is therefore necessary to define the modules with which this group is able to work.

- Folder area: shows the folders included in the selected module.

- Description area: shows an informative text describing the selected process, the folder or the module.

- Process area: shows the icons of all the processes included in the selected folder. The process is executed from here, by double-clicking on the corresponding icon.

- Status bar: this shows the active processes, i.e., those which have been set running and have not been stopped by the user.

StoreFlow Sales Management Navigator Elements

Menu Bar

This includes the following menus:

- **File:** From this menu it is possible to access two options in order to carry out the functions described below. These two options are **Preferences** and **Exit**.

  - **Preferences:** This opens a window from which various aspects and characteristics of the programs which make up the application can be configured. It is also possible to access this window from the "Preferences" icon located on the application icon bar. This window offers two options, "Appearance" and "Properties". These can be used to configure the following aspects of the application:

    - The text and background color for the main lists in the SF-GV programs.

    - The styles in which the lists can be displayed.

    - Flat or three-dimensional scroll bar.

    - Confirmation of program exit with a safety message.

    - Selecting lines from a table by placing the mouse pointer over them.

    - Showing data in table format.

    - Allowing columns to be moved.

  - **Exit:** This option allows you to leave the application. It is also possible to exit by clicking the icon located on the application icon bar. A warning message asks for confirmation before exiting.

- **Folder Groups:** This menu has been designed to allow the user to access the application folders via the keyboard.

- **View:** Allows you to activate/deactivate the option showing the StoreFlow Sales Management module, folder and process explanatory texts. It also updates modifications made to the application interface.

● **Help:** Gives information about the version, copyright and the company that
developed the application.

Icon Area

From this area you can access the StoreFlow Sales Management application
modules and the "Preferences" icon described above. The door icon allows you
to exit the application.

All the application's modules are shown, although some may appear deactivated.
This will be the case if the user has not purchased a particular module or if access
was not given to a particular group when the application client station groups
were set up.

The application consists of the following modules:

Basic module

Includes the main StoreFlow Sales Management programs, in particular the system
setup, security maintenance and queries, terminals, processes and transactions,
the integrated management of items, codes and special offers, customer and
payment method management, and basic stock management.

Financial Administrative module

Contains the programs needed for managing the organization, in particular
the actual and forecast sales query functions, generation of charts and reports,
withdrawal functions and cash differences.

Utilities module

Contains programs providing system administration tools, in particular for
handling system processes and events, controlling the versions installed at
a center and handling messages sent from POSTs in the event of an emergency.

Loyalty module

This contains the programs intended for managing loyalty-building campaigns,
registering and exchanging points, and looking up the points earned by a
customer during a campaign.

Weighing Scales module

Contains the programs used for the weighing scales configuration system, for registering and discontinuing weighed items and for producing reports on accrued and historical sales.

Merchandise Management module

Contains the general maintenance programs for merchandise and suppliers, the company's sales and warehouse areas, management of delivery notes and supplier orders, and performing overall inventories and partial counts.

Labels module

Includes the processes used for setting up the label models, designing and printing labels, and associating them with different elements within the organization.

EFT module

Includes the processes used to configure and manage the electronic funds management system at both client and server level.

G.I.S. module (Implementation and Stock Management)

Management of stock and implementation in the store's sales area. This control covers the price of items, their labeling, the stock and its location within the store.

Price-Checker module

Contains available server processes. It controls the operation of the item bar code reader or Price Checker. This reader gives information about special offers and promotions that apply to an item as well as its price.

New Group

This module is intended to allow the users to create their own groups of folders containing the processes they consider most important or use most often.

Folders Area

Folders group together processes with similar functions and which are preceded by an identifying icon. The Navigator shows the folders belonging to the module selected by the user.

Description Area

Each Navigator element has an associated description which appears in the central part of the Navigator when the element is clicked.

The option for viewing these descriptive texts is activated on the menu.

Processes Area

The processes area shows all the processes in the selected folder.

If you click on a process icon once its description will appear to the left. Double-clicking on the icon opens a window showing the selected process.

Status Bar

This is located in the lower part of the Navigator window. It gives information about the company you are working with, the date of updating and the processes that are open.

The Interface and Using the Processes

Process Toolbar

The toolbar includes the most commonly used buttons for the Sales Management processes.
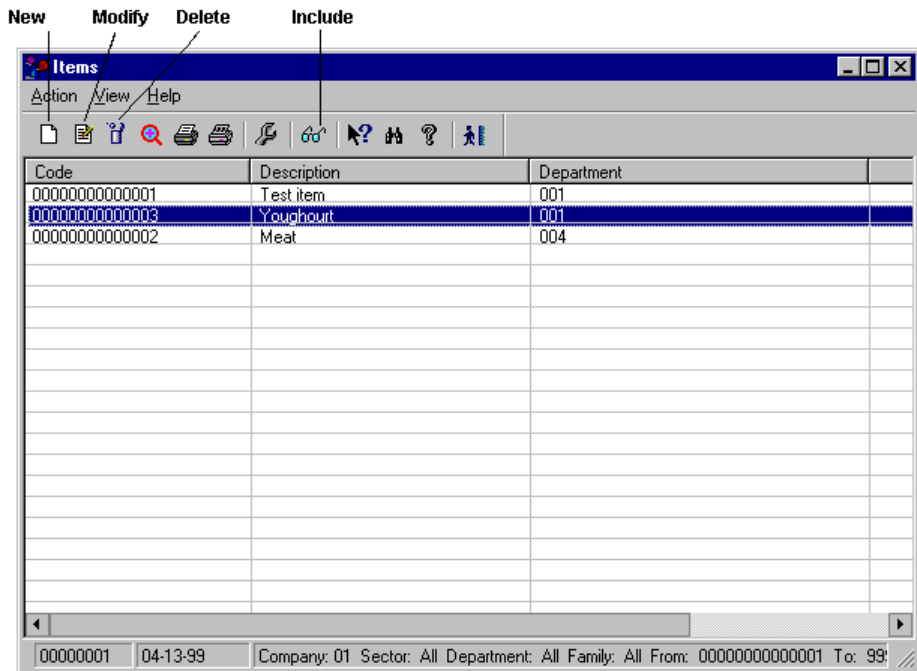
Fig. 1.3 Toolbar of a typical Sales Management process

Placing the mouse pointer over a button brings up a description of the corresponding action

Menu Interface and Using Processes

Most Sales Management processes work with database tables in which certain basic operations are performed. These are described below. The following basic operations are repeated in virtually all processes:

Registering a New Element (Standard Registration)

- *Action performed:* includes an element in the database.

- *Operation:* open the **Action** menu, select **New** and fill out the dialog box which appears.

- *Shortcut icon:*

Discontinuing an Existing Element (Standard Discontinuation)

- *Action performed:* eliminates an existing element, provided it does not have dependent information.

- *Operation:* using the mouse, select the element you want to delete from the list shown in the main process window. Open the **Action** menu and select **Delete**.

- *Shortcut icon:*

Selecting from the List of Elements Displayed (Standard Selection)

- *Action performed:* searches for system elements (usually) on the basis of the company they belong to.

- *Operation:* open the **View** menu and select **Include**. In the dialog box shown, select the company for which you want to carry out the query and click "OK".

- *Shortcut icon:*

Looking Up Information about an Element (Standard Query)

- *Action performed:* shows a table with detailed data or parameters for a selected element.

- *Operation:* select the element in the main process window, open the **Action** window and select **Modify**, or simply double-click on the element.

- *Shortcut icon:*

As the operations carried out on the table tend to be the same, most Sales Management processes have a similar interface structure.

For your information, a table of typical actions performed on processes and their most common order is given below.

Order	Action	Commands/options involved
1.	Selection of an environment to which the action is applicable (company 'n', group of employees, series of processes, etc.)	·View menu, Include option
2.	Selection of an element to which the action is applied (process, employee, item, etc.)	·Click on the required element
3.	Execution of the action (registration, modifying data, deleting, etc.)	·Action menu, New option ·Action menu, Modify option ·Action menu, Delete option
4.	Data entry, if	·needs to be filled in the associated dialog box

Multiple Selection

In the case of most operations with processes, SF-GV allows operations to be performed on several elements in the table at once, thus saving time and effort. A typical case would be, for example, that of deleting elements from the system. In order to select multiple elements use the standard Windows procedures, i.e., SHIFT+CLICK for a series of elements and CTRL+CLICK for individual elements.

In those cases where it is necessary to detail the operation differently for each element (such as modifications to data), SF-GV shows each element in the element box in turn so you don't have to repeat the operation.

Customizing the Interface and the Application Structure

Sales Management has been designed to allow flexible configuration of the interface so that considerable tailoring of its use is possible. In addition to the configurable aspects discussed in the Navigator section, other customizable aspects of Sales Management include:

1. Names of modules which appear on the main screen (also referred to as folder *groups*).

2. Names and locations of folders.

3. Processes included in each folder.

In order to be able to monitor the processes listed below it is necessary to start from the initial Store Management setup so that the predefined folders and *Folder Groups* are available, although others may have been added.

Modifications made to the interface and application structure from one client station will affect all the client stations in the system.

Changing the Name of Folder Groups and Folders

The procedure for changing the name of the modules shown on the Sales Management main screen is as follows:

1. From the **Folder Organization** group in the Basic module, start the **Folder Groups** process.

   The **Folder Groups** main window will appear.
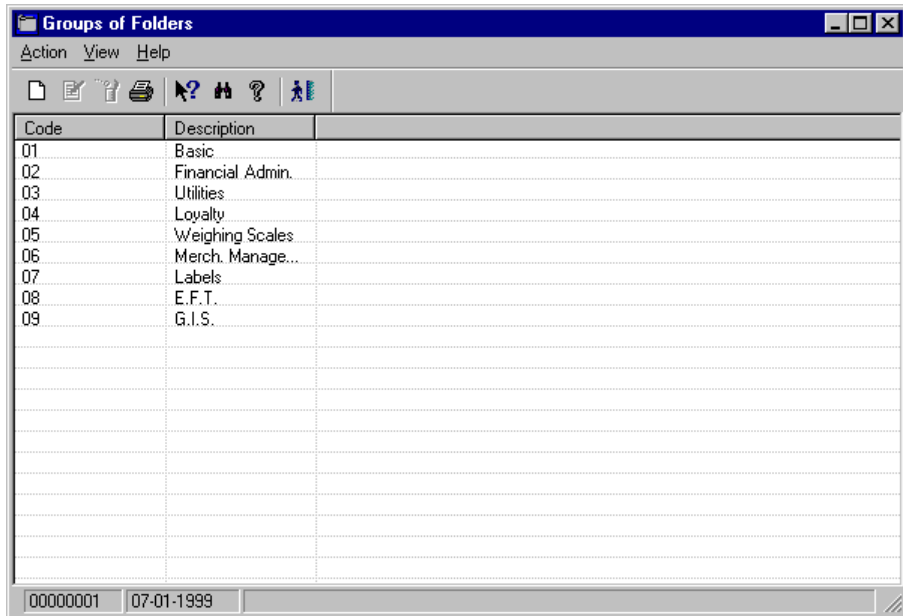
Fig. 1.4 Module name customization process

2. To change the name of a folder group, first select it and then open the **Action** menu and choose the **Modify** option. Alternatively, simply double-click on the folder group.

    The following dialog box will appear.
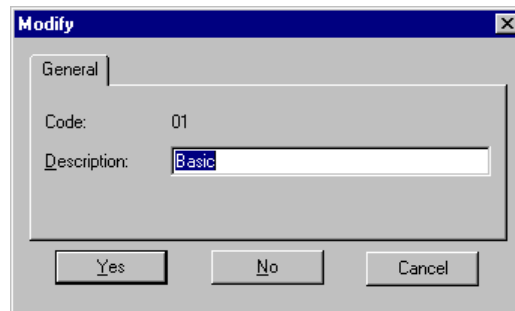
Fig. 1.5 Process name modification box

3. Type in the module's new name (up to 20 characters).

4. Click on "Yes".

The name of the folder group shown on the Sales Management main window will change. Note that new groups can also be added or deleted from this process.

The procedure for changing the names of folders is similar. You just need to run the **Folders** process. First select a folder and then select the **Modify** option from the **Action** menu. Type in the new name in the **Modify** dialog box and click on "Yes".

Changing Folder Locations

As we have seen, folders are grouped together in folder groups. These usually correspond to the commercial modules in the initial configuration. Sales Management allows you to change a folder's location (and therefore that of its associated processes) so that it becomes part of a different folder group.

The procedure for moving a folder to a different group is as follows:

1. From the **Folder Organization** group in the Basic module, start the **Folder groups/Folders**.

   The main window of the **Folder groups/Folders** process will appear. The main window is divided into two columns. The column on the left contains a list of the existing groups. The one on the right contains a list of the folders in each group. Both also show the code.

Fig. 1.6 Folder grouping process showing the relevant folders

2. Open the **Action** menu and run **Associate**.

   The dialog box of the same name will appear. This includes three lists: **Folder group** (existing groups, predefined), **Folders** (existing folders, predefined), **Associated** (folders included in each group, configurable).
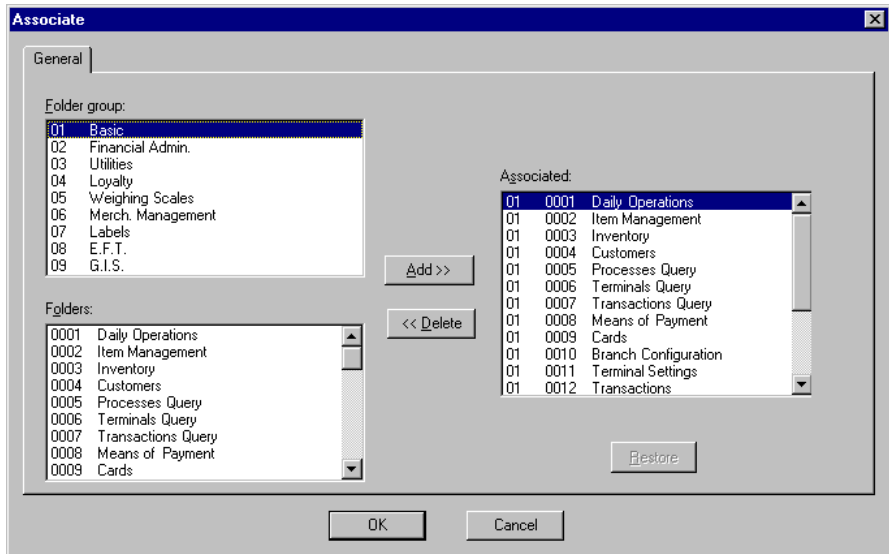
Fig. 1.7 Changing the location of a folder

3. Next

   - To add folders to the active group, double-click on the elements on the "Folders" list that you want to add, or click once and then click on the "Add" button.

   - To delete folders from the active group, double-click on the elements on the "Associated" list that you want to remove, or click once and then click on the "Delete" button.

4. Click on "OK".

The location will have been changed. If you want to return to the original configuration and have not yet validated any new associations, click on "Restore".

Changing the Processes Included in a Folder

The procedure for changing the processes contained in a folder is very similar to that for changing a folder's location described in the previous section. To move a process run the process called **Folders/Processes**.

In the main process window, double-click on the folder you want to configure. The **Associate** dialog box will appear. To add a process to a folder, select it and click on "Add". To delete process from the active folder, select it from "Associated" and click on "Delete". When a process is deleted in this way it will only be removed from the configuration; the process will not be physically deleted.

Adding an External Program to SF-GV

You can also add external programs to the application user interface.

The procedure for adding an external program to SF-GV is as follows:

1. From the **Processes and Files** group in the Basic module, start the **Processes**.
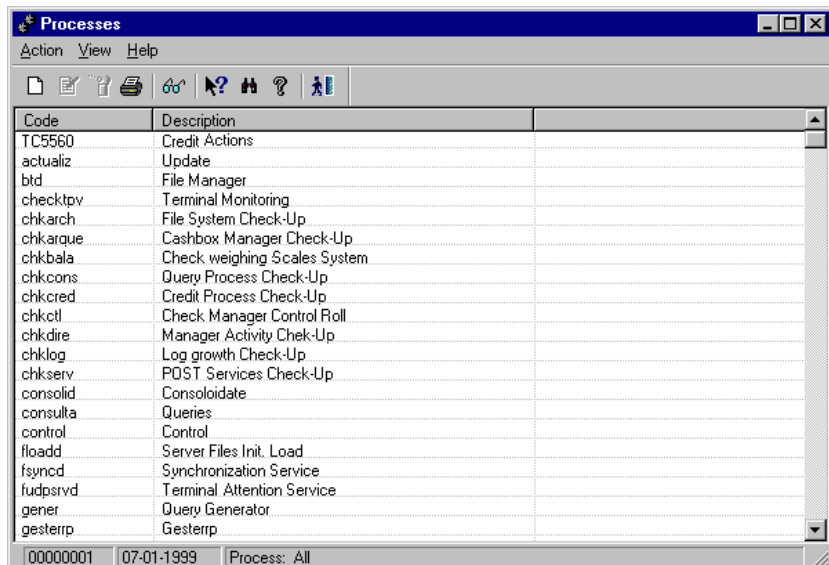
Fig. 1.8 Main window for process registering

2. Open the **Action** menu and select the **New** option.

    The process registration box will appear.
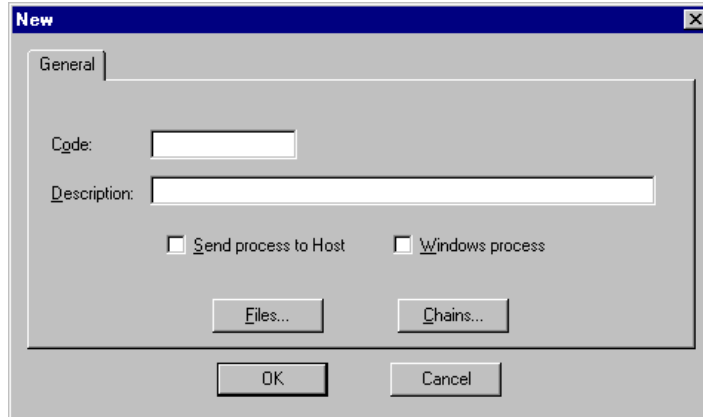
Fig. 1.9 Process registration dialog box

3. Enter the process code in the "Code" box and its name in the "Description" box.

    Check the "Send process to Host" checkbox if you are registering a process on the server.

    Before clicking on "OK" you will have to select the files the process will use and the chains in which it intervenes.

    If it is a Windows process check the relevant checkbox.

4. Click on "OK" to register the new application and exit the current process.

5. From the **Folder Organization** group, start the **Folders/Processes** process.
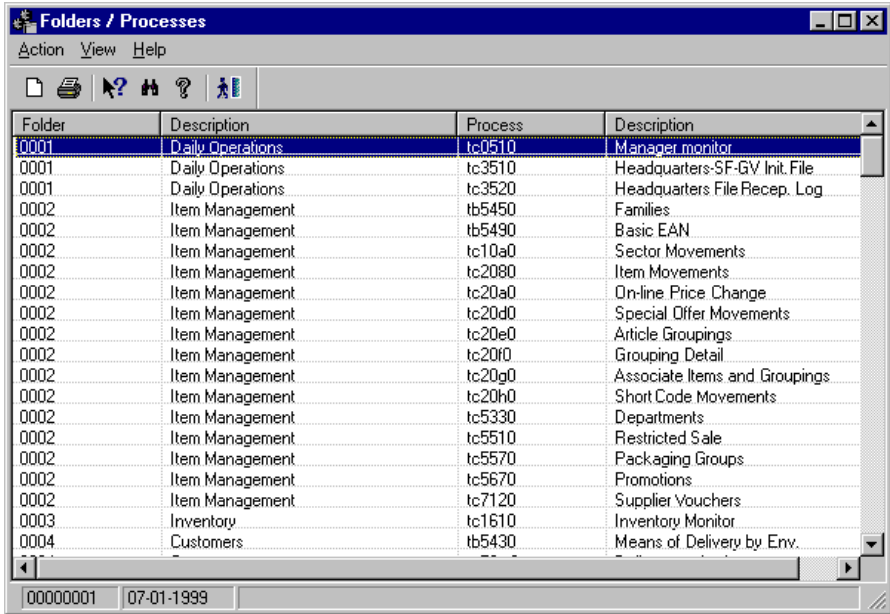
Fig. 1.10 Main window of the process used for associating folders and processes

6. Open the **Action** menu and select the **Associate** option.

    The **Associate** dialog box will appear.
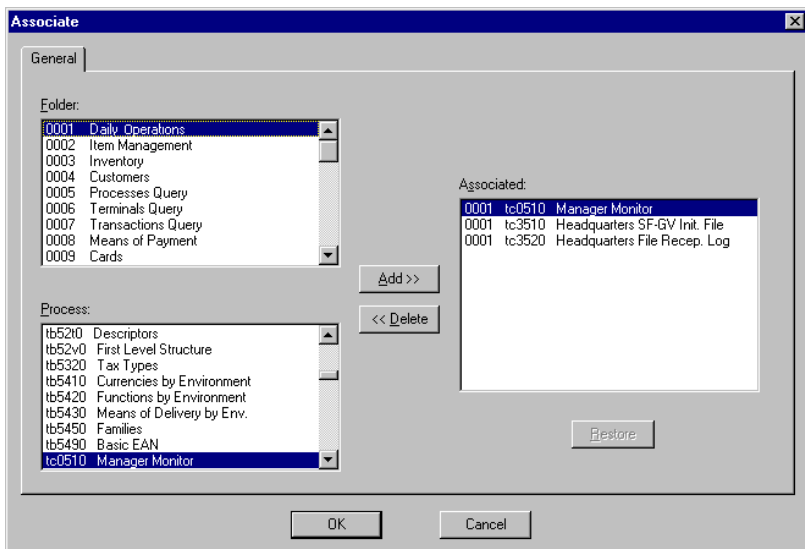
Fig. 1.11 Dialog box used for associating a process with an SF-GV interface folder

7. Select the folder where you want to locate the process, the application registered previously in the "Process" field and click on "Add". The process will appear on the "Associated" list.

8. Click on "OK".

9. Using either the Explorer or the File Manager, copy the executable file for the process to the main SF-GV directory (for example, G:\ORA\SFPROC\BIN).

The new process will now appear in the SF-GV interface group to which you moved it. Also use this procedure to delete an external process from the interface, by clicking on the "Delete" button in step 7.

Regional Settings

SF-GV offers the possibility of automatically modifying the interface and processes included so as to adapt it to other countries and languages. SF-GV is easy to adapt to the chosen country by changing the configuration as described below:

From the main Windows 95 or Windows NT screen, click on the "Start" button and then select the "Settings" icon.

Select the "Control Panel" option and double-click on the **Regional Settings** icon.
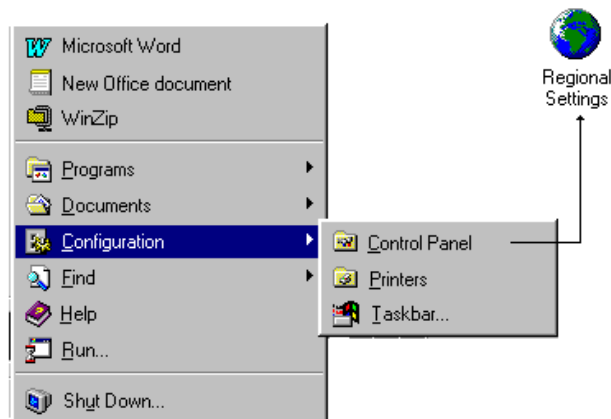
Fig. 1.12 Icon for selecting the language configuration of the interface

Select the "Regional Settings" table and choose the required country for the SF-GV interface from the drop-down list. Click on "OK" or "Apply" and restart your computer.

The next time you run SF-GV you will notice that the interface appears with the new configuration and it is possible that some application programs may have changed.

2

System Configuration and Customization

- Configuration Methodology
- SF-GV Configuration Sequence
- Configuration of the Business Structure
- Configuring Security and Users
- Configuration of Groups and Client Stations
- Configuration of the Types of Taxes
- Configuration of Environments and Associated Functions
- Terminal Configuration
- Associating General Entities
- Transaction Configuration
- Configuration of Customers and Credit Cards
- Configuration of the Commercial Structure
- Configuration Conflicts and Priorities
- StoreFlow Integration with SA/GSA

StoreFlow GV

T his chapter describes the configuration and customization tasks available in Sales Management, in particular concerning the initial configuration of the system before it can be put into operation, but also regarding configuration of the running system with a view to customizing it.

Moreover, the last section explains the developments built for integrating StoreFlow with SA/GSA, which are other sales management applications.

Sales Management offers a wide range of configuration tasks covering, among others, the following aspects:

- The business structure of the group or chain in which Sales Management is installed. This is basically reflected in the companies registered and the levels of description of each of the descriptors.

- Definition of the general profiles and user profiles allowed on the system.

- The system's terminals, including definition of the functions available for the set of terminals and their codes, the hot-keys they have assigned to the most common products or functions, the environments where the point of sale terminals are located, keyboards, terminal types and other aspects.

- Definition of the types of cards and customers in the system.

- Definition of the specific behavior of each POST according to the department to which it belongs or the functions it performs.

- Definition of the commercial structure of the store and the items sold in it.

We will also consider this to include other tasks carried out periodically on the system that alter the commercial structure or merchandise, such as for example changing the department an item belongs to.

The initial stage of configuration of Sales Management is carried out from a client station created by default during the installation. During the "Configuration of groups and client stations" phase (also described in this chapter) additional client stations can also be added from which the configuration may be continued at a later stage.

Configuration Methodology

The main actions carried out during the configuration are based on two basic aspects:

- *Top-down* structure: In the case of system aspects which are hierarchical or defined in levels (for example, companies and descriptive levels dividing them into buildings, floors and areas, client station groups and client stations, etc.), the uppermost hierarchical level is always defined first. Thus, first you create the group and afterwards you assign the stations that it will contain. First you create the company and then the buildings, areas and floors it will contain.

- *General entity-particular attributes* sequence: In the case of those system aspects where there is a general concept or entity which may be created freely (for example, user profiles, client station groups, terminal environments) and linked to particular attributes (functions, terminal parameters, etc.), first the general entity is created and then only in the following phase are specific characteristics assigned to it.

Sales Management Configuration Sequence

The task order described is not unique, but neither is it totally flexible. Certain tasks must be carried out before others or you will not be able to complete them as stated. A configuration sequence is proposed below which tries to be as general as possible with an application as broad as Sales Management. The fact that this sequence is given here does not mean there cannot be others which are equally valid.

Where necessary the order of priority of the processes has been indicated.

In the following figure the classic PERT-CPM project scheduling nomenclature has been used.
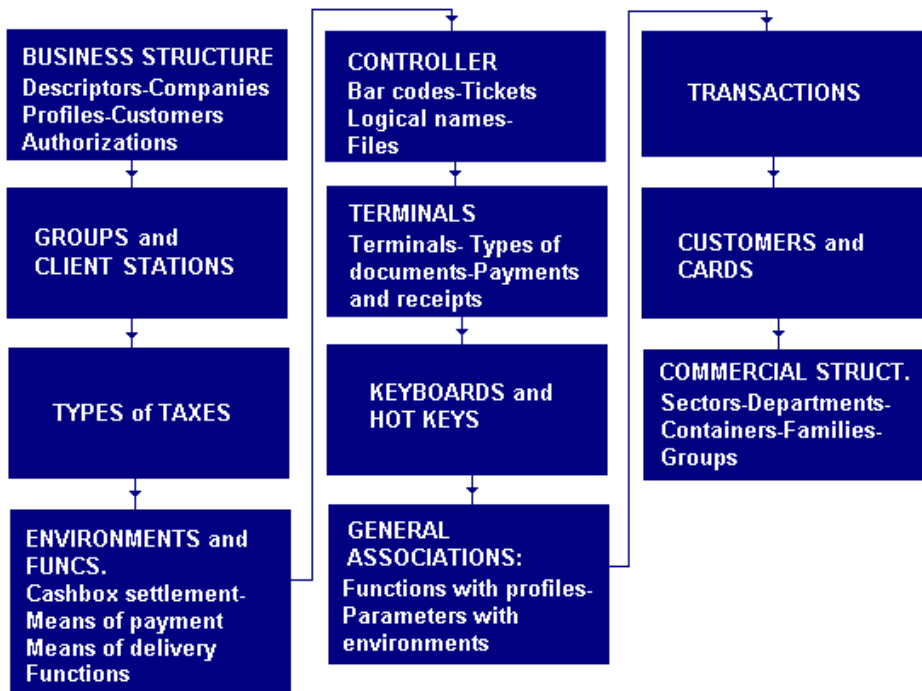
Fig. 2.1 Sequence of tasks necessary to configure SF-GV, with their order of priority and interdependencies

The suggested sequence includes the following phases (this list only includes the main phases):

1. **Configuration of the company structure:** In this first phase the various companies in the group are registered, they are given their individual characteristics and their levels of description are defined company by company.

2. **Configuration of profiles and employees:** In this phase the basic profiles are created together with the authorizations, and all employees and SF-GV users are registered, from the cashiers in the stores up to the general manager of the group.

3. **Configuration of client stations and groups:** In this phase all the client stations in the SF-GV system are created and grouped together according to affinities.

4. **Configuration of environments and terminals:** In this phase the environments are created and configured, i.e., the groups of terminals with specific characteristics. Once created, the existing terminals can be assigned to environments according to their location and the tasks that each is going to carry out.

   This phase also includes the configuration of important aspects such as the cashbox groups, the available means of payment, the means of delivery that are allowed by each company and the denomination and basic operation of the POSTs.

5. **Association of general entities:** In this phase specific aspects of general entities created earlier are determined, such as the functions linked to an environment or the specific attributes of a non-pre-defined profile.

6. **Configuration of the business structure:** Here is where the structure of the merchandise in the store is defined. The concept of "merchandise structure" includes other concepts which are described below (in chronological order):

   - Definition of sectors.
   - Definition of departments.
   - Creation of returnable container groups.
   - Definition of families.
   - Definition of groups.
   - Definition of group details.
   - Item registration.
   - Assignment of identifying codes to the items on sale (bar code, EAN, etc.).

During the description of the configuration process we will assume that the SF-GV program and folder names follow the default configuration given at the time of installing the system. Remember that this configuration may be different if you have altered the structure of the interface, as described in "Customizing the Interface and the Application Structure".

Some of the steps in the configuration sequence are not detailed here, but in their corresponding chapter. Thus, customer configuration is described in the chapter ➤ 'Customer Management' and part of the configuration of the business structure (that referring to registering the EANs and items) is defined in the chapter ➤ 'Item Management'.

Configuration and the Company Level

Before starting the configuration process it is worth highlighting the following principle:

   "In Sales Management, the basic level of configuration is the company level."

SF-GV has been designed for managing multi-company groups. However, most of the procedures that are described in this chapter (except certain specific processes, such as the configuration of the company descriptors or user authorizations) are always carried out at the company level.

In practice, this means that the actions carried out must be repeated for each company, even if the configuration adopted is identical for all the companies in the group.

An alternative to this is to use the GV-Central Office Interface application and to develop custom software (in Oracle, and in the case of a simple copy of the contents of one company to another this development work would be extremely simple). In these cases, the tables of data holding a company's configuration can be exported to other companies in the group via the central office.

In the sections that follow, remember that the location of the processes described can differ in your system from that given here, particularly if you have modified the default structure of the of SF-GV interface as described in the previous chapter.

Configuration of the Company Structure

The company structure configuration phase in SF-GV, together with the configuration of items, is one of the most laborious tasks involved in the overall configuration. Some of the tasks described in other sections of this chapter, such as departments or sectors, can be considered as part of the company structure an also of the commercial or merchandise structure. For simplicity of organization they have been included in this latter section, as they are associated with other operations that undoubtedly belong to the commercial structure.

Continuing with this idea, there are three basic aspects to the commercial structure of the company:

1. Definition of the *group of companies*, i.e., the companies making up the structure of the group. Even if there is only one company this phase will still have to be carried out, this being treated as a special case in the configuration of a multi-company group. The organizational scheme is shown below:

    STORE

    CENTER OR BRANCH

    COMPANY

A company can be in just one center or store (which will therefore coincide with it) or else every center can include several different companies.

2. Definition of the *company levels* in accordance with the specific characteristics of the business group, which must later be described for each company concerned.

3. Definition of the *general operating parameters* and configuration of the center or store where the group of companies is located.

    An example may perhaps clarify these concepts. Let us imagine a group consisting of five companies. Companies 1 and 2 are one-floor supermarkets. Companies 3, 4 and 5 each include several floors.
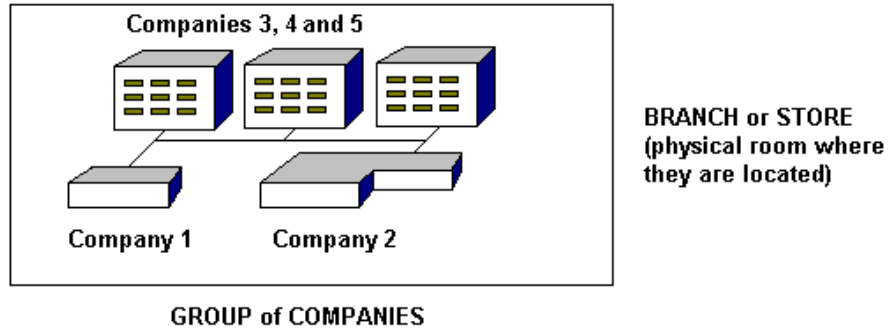
Fig. 2.2 Example of the organization of a group of companies in centers and companies

During the configuration process for a multi-company structure like this the following elements would be registered in the order shown:

- Three levels of description for the group of companies; these could be **Building** (level 1), **Floor** (level 2) and **Area** (level 3). Companies 1 and 2 probably do not need as many levels as companies 3, 4 and 5. Having only one floor it is possible that a two-level description is sufficient for the latter, for example **Floor** and **Area**. However, the number of levels will be the highest of all those in the group, and it will therefore be necessary to register all three levels mentioned.

- The five companies

- The description of the levels of each of the five companies (this will probably be the longest stage of the configuration procedure), through the **first-, second- and third-level structure** processes.

- Definition of the general parameters for all the companies, such as closing dates, the default mode for closing the shop, the number of copies of the transaction log that are going to be used, etc.

The following figure summarizes the levels of the complete structure of a company group from its highest level (group) down to the smallest of the descriptive levels allowed by SF-GV.
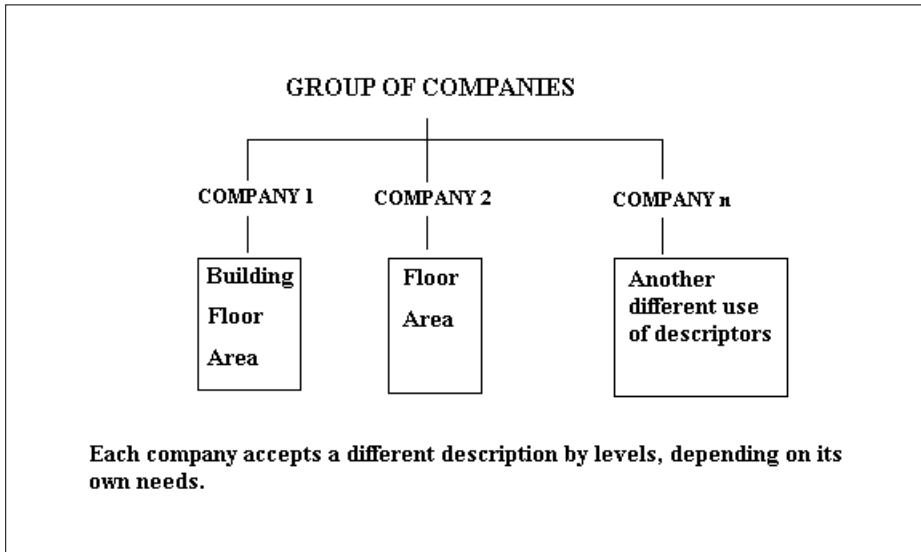
Fig. 2.3 Complete structure of a company group.

The structure of Sales Management is organized around the concept of store, center or branch, terms that are used synonymously in this documentation. Throughout this manual the store is understood to be a unified physical space in which different firms can coexist, such as for example a supermarket with a number of small businesses and a large company divided into departments.

SF-GV is a *multi-company* application, but it is not *multi-store*. That is to say, several companies can be configured and located in the same center, but a single SF-GV cannot manage several companies spread across several stores. For this type of solution it is necessary to use other applications from the StoreFlow family.

This does not, however, mean that the SF-GV server must be located in the same physical point (in the shopping center) as the group companies.

Descriptors or Company Levels

The descriptors are the levels into which a group company is divided up in order to improve management of the system. Their usefulness is demonstrated by a variety of cases. For example, imagine that you want to calculate a company's sales yield statistics. If the company has been organized in several levels, including floors and areas, this organization will allow the results of sales to be calculated, at least, for those two levels.

Sales Management allows you to use a maximum of three level descriptors per company. It is not essential to use all of them.

To define the system descriptors:

1. From the **Branch Configuration** group of the Basic module start the **Level descriptors** process.
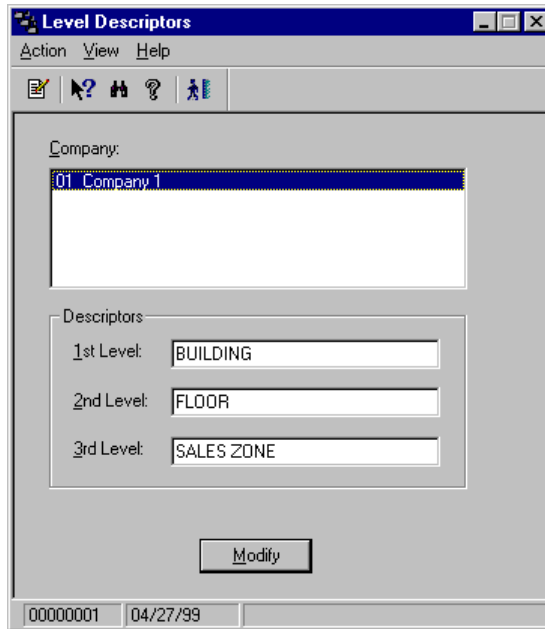
Fig. 2.4 Configuration of SF-GV descriptors

2. Select the company that you want to configure (obviously, if the company's group includes several companies, different descriptors will be allowed for each).

3. Write the identifiers for the descriptor levels that you want to use, ordered from larger to smaller (level 1 corresponds to the highest element in the structure hierarchically, level 3 to the lowest). For example:

    *   "1st Level": **BUILDING**
    *   "2nd Levell": **FLOOR**
    *   "3rd Level": **SALES ZONE**

4. Click on "Modify" to validate the definition.

The three levels have been defined and assigned to the selected company. Remember that although Sales Management supports up to three levels, there are other levels that are apparently hidden in the configuration, but that are *real*. Thus, when you later configure the terminals, note that each terminal is located in an environment, which could be considered to be level 4 of the company description. Other aspects of the company, such as the sectors and departments, item families, etc., are also subject to the different hierarchies in relation to the levels that have just been established. In short, they are simply different organizations of the business and commercial structure, in order to achieve better management.

Company Registration

The registration of companies is an operation that is carried out exclusively when a company that is going to work with the application is registered. A large number of parameters are defined that affect the daily transactions that are carried out on a specific sales terminal.

The procedure for registering a new company is as follows:

1. From the **Branch Configuration** group start the **Companies** process.

2. Access the company registration screen.

   The **New** dialog box will appear.

Fig. 2.5 New company registration dialog box

3. Complete the "General" tab with the following data:

    - "Company": Numerical identifying code for the company, 2 digits.

    - "Description": Brief text about the company, maximum 30 alphanumeric characters.

    - "Tax id.": Tax identification code for the company.

    - "Address": Company address.

    - "City": Place where the company is located.

    - "Base currency": Code of the currency with which the company will normally work.

- "State": State where the company is located.

- "Days in activity period": Time in days that elapses between two consecutive POST closings, with a maximum of 3 digits.

- "Transaction No. digits": Number of digits that the transaction number will have in the company POST. Type in a value between 1 and 7.

- "Next invoice No.": The number that will appear on the next invoice that the POST issues for this company, up to 9 digits.

- "Days to save special offer and promotion rep.": Number of days that the system will keep information on the special offers that are registered for the company. Maximum 3 digits.

- "Days to save I/O info.": Number of days that the system will keep information on movements of merchandise which are not accompanied by an order, delivery note, etc. Maximum 3 digits.

- "Days to save inventory": Number of days that the system will keep information on the inventory of stock. Maximum 3 digits.

- "Flags": Allows you to set the validation controls applied by the POST to every operation, whether to force terminal closing before store closing, and the options for stock control in the company.

> **!** If you do not enable the "Stock control" option, when you register items the 'Stock management' checkbox will appear grayed out (see the "Item Registration and Query" section in the chapter "Item Management"). This configuration allows the user to access the optional Merchandise Management module.

4. Fill in the fields in the "Cashbox in office" tab with the following data:
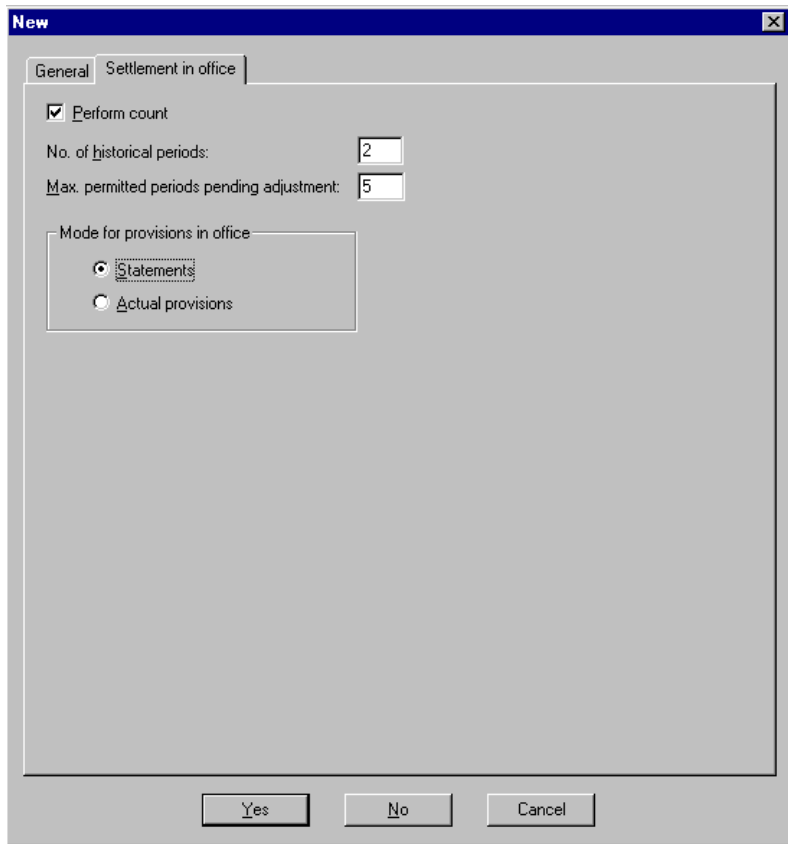
Fig. 2.6 "Cashbox in office" tab

- "Perform count": Select this checkbox if the money kept in the cash registers managed at the office must always be counted in the company.

- "Number of historical periods": Maximum number of closed periods (but not transferred to the history log) permitted by the application.

- "Maximum number of periods pending regularization permitted": This prevents the table containing the movements for the current period and those pending regularization from overflowing. Should this maximum limit be exceeded, the application will display an information message and the user may continue operating normally.

- "Mode for provisions made in the office": Select one of the following options:

  - "Statements": If you select this option, it will not be necessary for the provisions to be made by placing an envelope with money in the drawer when performing the operation. In this case, the money would be placed by the cashier who is operating the drawer. These statements will be compared later with an actual provision made at the point-of-sale terminal when confirming or adjusting them.

  - "Actual provisions": If you select this option, the actual money must be placed in the drawer when performing the operation. The person in charge of managing the accounting from the client station at the office enters the money, i.e., for all purposes, provisions are money movements made from the office to the drawer, and as such they must be confirmed or adjusted.

Definition of the Group Structure by Levels

In the previous section "Descriptors or Company Levels", one, two or three levels are defined according to the internal organization to that you want to assign to the multi-company group managed by SF-GV.

To define the real levels now, proceed company by company following the recommendations given below:

1. If they exist for the selected company, create ALL the company's levels 1 (usually **BUILDINGS**).

2. If they exist for the selected company, create ALL the company's levels 2 (usually **FLOORS**) and locate each floor or level 2 in the building or level 1 to which it corresponds, for ALL the buildings registered in the previous phase.

3. Create ALL the levels 3 (usually **AREAS**) for all the floors in all the buildings created in phases 1 and 2 above, and locate each zone in the floor and building to which it belongs.

Although intuitive, this process is laborious and must be carried out in detail, following the group's organization tree or chart. These levels are designed using the **First Level Structure**, **Second Level Structure** and **Third Level structure** process in the **Branch Configuration** folder in the Basic module.

The procedure for the definition of levels using these three processes is identical, and coincides with the standard registration of elements described in the interface chapter.

Center Configuration

In this section the term "center" is used as a synonym for "store", with the peculiarity that it is used from the point of view of groups that not only make up several companies (referred to here as multi-company groups), but also multiple shops or centers (multi-store groups), which can be managed using other Central Office applications. The center can be considered as the management area associated with the unified physical space where the group companies are located. For reasons of efficiency, SF-GV requires you to configure some general operational parameters that will affect all the current group companies. These are set during this phase.

To configure these parameters:

1. From the **Branch Configuration** group in the Basic Module, start the **Center configuration** process.

    The main process window, from which you will be able configure the store parameters directly, will be brought up.
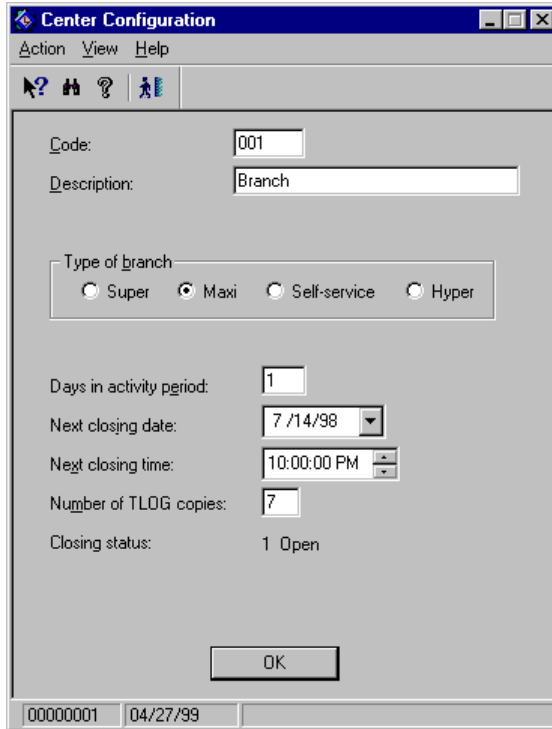
Fig.2.7 Main window used for configuring centers

2. Complete the main window as follows:

   - "Code": Code by which the branch will be identified in the StoreFlow management applications which are capable of handling several shops.

   - "Description": Free text acting as a reference for the branch.

   - "Type of branch": Allows you to select the type of shopping center concerned. The choice of the type of shop (supermarket, maxi, self-service, hypermarket) is for information purposes only and does not affect the operation or other SF-GV parameters.

   - "Days in activity period": Enter the number of days that make up the store's activity period (maximum 3 digits). This is usually set to 1 so that the period of activity is one day long.

   - "Next closing date" and "Next closing time": Enter the date and time the store will next close.

- "Number of TLOG copies ": Number of TLOG files that will be kept on the system's storage device (maximum 2 digits). When this number has been reached, every time a new TLOG file is stored the oldest transaction file will be deleted.

- "Closing status": Indicates whether the branch is open (**1**) or closed (**0**).

- "Trigger company closing": If this is enabled, when the branch is closed all the companies included in it are also closed (➤, "Center Monitor").

Configuring Security and Users

In Sales Management, security is basically managed through the configuration of the company's employees and the privileges conferred on them, either individually or by means of a profile. The latter is associated directly with the functions available from a point of sale terminal.

The steps in the usual procedure are as follows:

1. **Configuration of user profiles:** These profiles will be used by the company's employees who are going to work at the POSTs. Usually the four predefined profiles will be sufficient, but you can create other new profile if required.

2. **Employee configuration:** Individual registration of company employees, including both those who will work with the POSTs and those who are going to use the client stations.

3. **Configuration of user authorizations:** These are equivalent to profiles for users that are going to use the Sales Management client stations.

Profiles

In SF-GV, a profile is a set of privileges that cover the range of competencies of each kind of user included in the company. These privileges are grouped together in order to make them easier to assign. Employees, which will be defined more fully in the following section, are basically any person who works for the organization, whatever their rank in the company.

The use of profiles and employees is one of the security management tools available in Sales Management. Since users access most of the functions from terminals located in the center, SF-GV controls the security in two ways:

- Assigning the terminals to environments with predefined functions (for example, a sales terminal in a hypermarket can be configured so that it is impossible to look up the department's total sales from it).

- Limiting the functions of each terminal operator by using a specific profile.

When an operator accesses a terminal, he or she will have available the minimum subset of functions allowed by both the terminal and his or her profile. This avoids improper use being made of the information stored on the system.

Before proceeding to register a profile you should bear in mind that in SF-GV terminals havefive operating modes:

- Salesperson: When there is one terminal for several salespeople. Each salesperson is identified by his or her personal key before carrying out each transaction. This is typical in stores organized in departments.

- Cashier: When there is a single salesperson assigned to the terminal, who identifies him or herself at the start of the day. This is usually the case in hypermarkets.

- Operator: When there are several salespeople but only one of them is responsible for using the terminal. In this case, the person responsible for the POST will identify the salesperson through his or her personal key before carrying out the transaction.

- Non-salesperson: In this mode, the operator or operators of the terminal do not have to be identified when carrying out a transaction.

- Cashier managed at the office: Terminals belonging to the 'cashbox in office' environment; the salespeople who use this type of terminal are responsible for its removable drawer, whose accounting is managed from a client station installed in the office.

You can now create a profile.

To create a profile:

1. From the **Employees** group in the **Basic** module, start the **User Profiles** process.
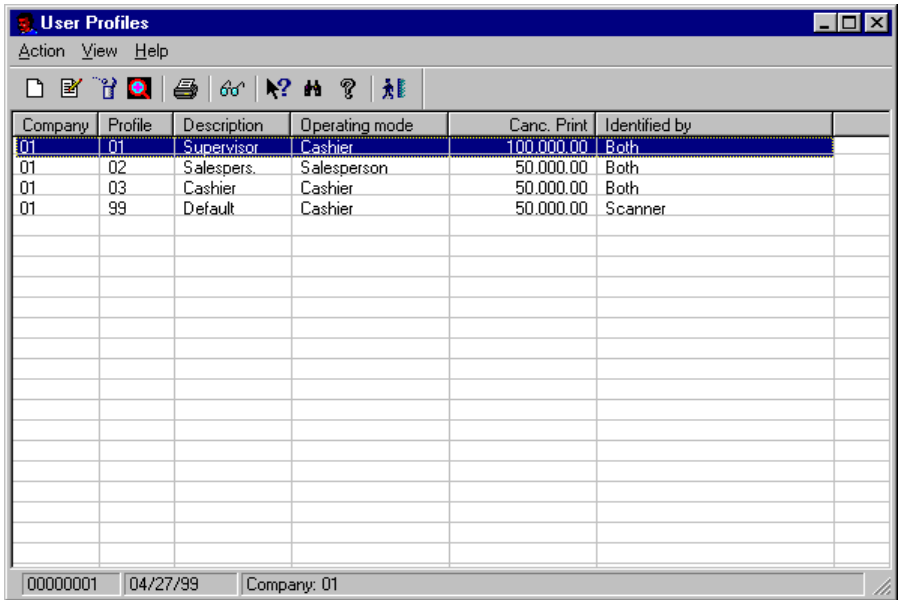
Fig. 2.8 User profile creation process

2. Access the new profile registration screen.

The new profile creation dialog box is brought up.
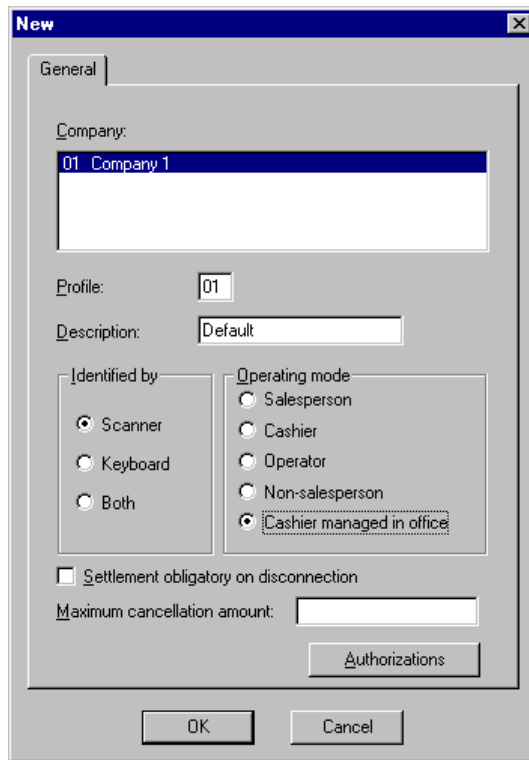
Fig. 2.9 Employee profile definition dialog box

3. Complete the dialog box as follows:

-   "Company": Select the company to which the profile you want to register belongs.

-   "Profile": Two-digit identifying code for the profile you are creating.

-   "Description": Text describing the type of profile (maximum 10 characters). The default configuration of Sales Management includes five predefined profiles (supervisor, salesperson, cashier, operator and cashier managed at the office). Additionally, you can add any further profiles you need.

-   "Identified by": Choose the identification system for the employee.

-   "Operating mode": Choose one of the operating modes provided by the application. If you select the "Cashier managed at the office" profile, the "Cashbox settlement required on log-off" checkbox will appear; select it if you want these cashiers to necessarily log off and perform the cashbox settlement operation at the end of each day.

- "Maximum cancellation amount": Type in the maximum transaction value that the created profile will be authorized to cancel (maximum 9 characters).

- "Authorizations": Clicking on this button will give you access to the screen where the user's competencies concerning discounts, returns/refunds, cancellations, etc. are defined.

4. Click on "OK" to confirm the new profile and register it on the system.

Employees

All the employees who work in the company, both at the POSTs and the SF-GV client stations, must be registered beforehand during the configuration phase.

The employee registration procedure is similar to that for registering profiles.

To register an employee:

1. From the **Employees** group, start the **Employees process**.

Fig. 2.10 Employee creation process

2. Access the new employee registration screen.

    The employee creation dialog box will appear.

Fig. 2.11 New employee definition dialog box

3. Complete the dialog box as follows:

    - "Company": Name of the company where the employee is going to work.
    - "Reference": Internal identifying code, for example, the code for staff.
    - "Surname" and "Name": Personal details of the employee.
    - "Short name": Employee management alias. This may be included in the documents.
    - "Password": Identification key for operations.
    - "Profile": Any of the profiles predefined in SF-GV.
    - "Building": Building or center where the employee works.

4. Click on "OK" to confirm.

Repeat the process for each of the employees that you want to assign to the group. In order to modify an employee's personal password, open the **View** menu and select the **Password** option. Then open the **Action** menu and execute the **Modify** option.

User Authorizations

In the context of Sales Management client stations, user authorization is equivalent to a profile in the context of the POSTs.

User authorizations enable you to control:

● A user or employee's access to a given process.

● The employee's access to specific options and functions.

Before you start to create authorizations you need to know how the programs are structured. The following figure shows the internal organization of a hypothetical process.
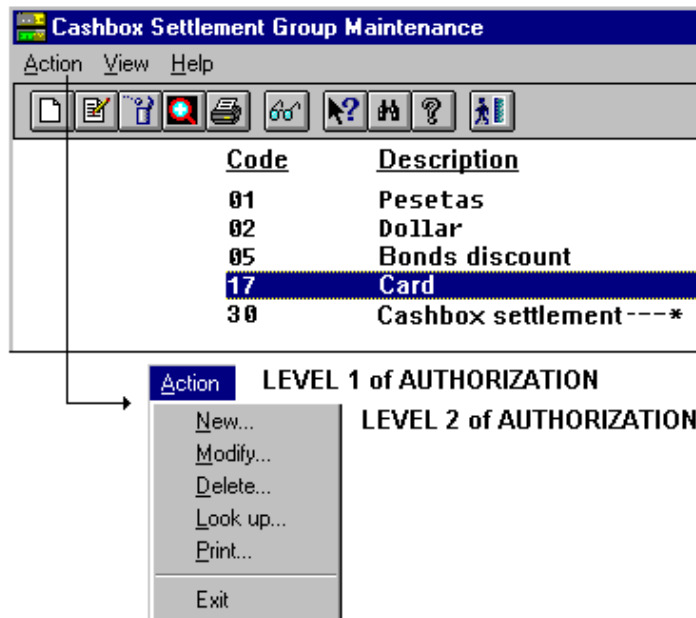
Fig. 2.12 Organization of a process into menus, with 1st level options and 2nd level options

Authorizations are assigned to a user as follows:

1. From the **Employees** group, start the **User Authorizations** process.

   The main process window will appear. This window includes three elements:

   - "User": List of the employees that were created in the previous section.

   - "Windows Process": Overall list of existing SF-GV processes, ordered alphabetically by the names given in the "Customizing the application structure" section in the previous chapter.

   - "Actions": Options and commands relating to the selected process that can be enabled or disabled by the current user.
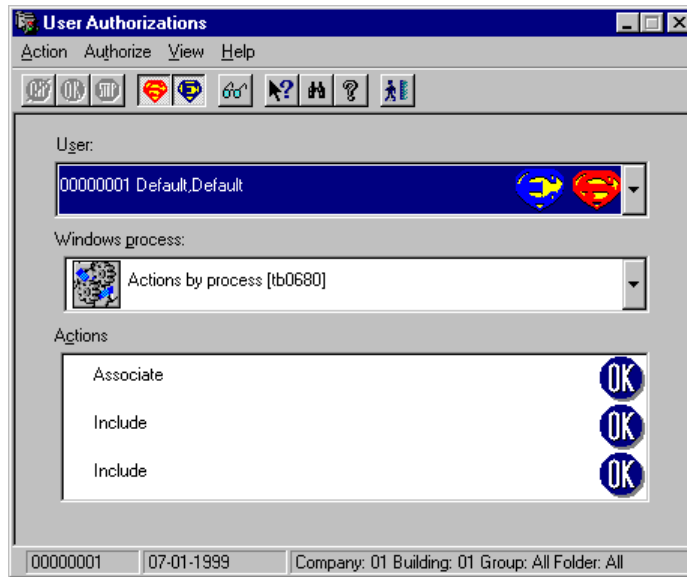
Fig. 2.13 Main window of the "User authorizations" process

2. Open the **View** menu and select the **Include** option.

   The **Select** dialog box will appear on the screen. You can use this dialog box to limit the users and processes to which the authorization will apply.
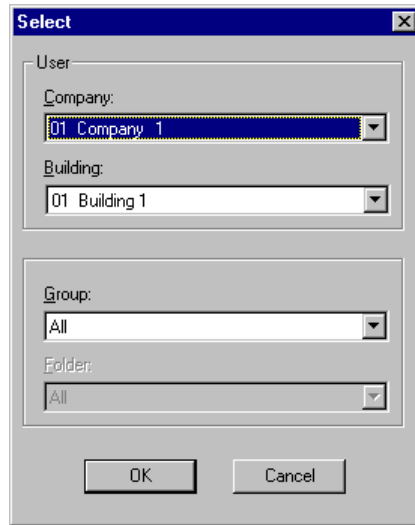
Fig. 2.14 Users and processes selection dialog box

3. In order to limit the employees and processes to which the authorization
    applies, select the "Company" and the "Building" to which you want to apply
    the authorizations, the "Group" (program module) that you want to enable and
    the "Folder" (if any) that you want to keep active. Once this has been selected,
    click on "OK".

    The processes and employees resulting from the selection are now shown on
    the lists in the main window.

4. Open the "User" list and select the employee to which the authorization will
    apply.

5. Open the "Windows Process" list and select the SF-GV process that you want to
    configure for the active employee.

6. Open the "Actions" list and activate those that you want to configure for
    the user.

7. In this last point you can opt for either:

    ● Opening the **Authorize** menu and enabling the **Supermanager** or **Superuser**
       options, depending on the rank you want to give to the employee. The
       difference between these is that the Supermanager has access to *ALL* the
       options of *ALL* the programs in *HIS/HER* company, whereas the Superuser
       has access to *ALL* the options of *ALL* the programs of *ALL* the companies
       in the group.

- Open the **Authorize** menu and select the **Change authorization** option. This will allow you to vary the permissions relating to the active option on the "Actions" list. If you want to authorize or de-authorize all the process actions at once, select **Authorize all** or **Unauthorize all**.

The user has now the privileges granted for the selected process. This process needs to be repeated individually for each employee whose privileges you want to configure.

Configuration of Groups and Client Stations

Client stations means those stations that will have access to the Sales Management application, regardless of their physical location. The client stations can be a long way from one another (, Sales Management Configuration). It is therefore fairly normal in a multi-company group for there to be (one or more) client stations for each company in the group, a client station in each center, and one or more client stations at the central office, where top-level executive decisions are made.

The client stations are grouped together for organizational purposes according to the tasks for which they are used or the staff that use them. Thus, a Management group station does not have access to the same functions as a Cashier group station.

By default, only one client station is created during the installation of SF-GV. This station is where initial configuration must be carried out from and the rest of client stations registered. Once created, you can continue the configuration from any of these stations.

Groups of Client Stations

The groups must be created before the client stations themselves, since the definition of a client station requires that it be a member of an existing group.

To create a group of client stations:

1. From the **Client Stations** folder in the Basic module, start the **Client Stations Groups** process. Open the Action menu and select the **New** option. The client station group registration dialog box will appear.
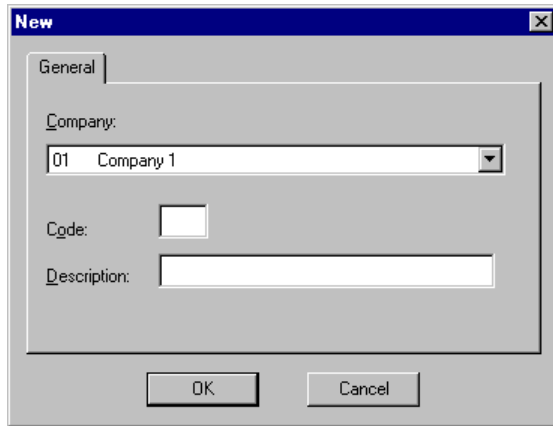
Fig. 2.15 New group registration box

2. Select a "Company", enter a 3-digit identifying code for the group "Code", and a brief reference "Description".

3. Click on "OK" to create the group.

> Remember that in this phase the group is created for information purposes only and is assigned neither characteristics nor privileges. Characteristics are given to the group at a later stage. This is described in the "Associating Client Station Groups with Folder Groups" section later in this chapter.

Client Stations

Once the groups have been created you can include client stations in them.

To register a new client station:

1. In order to register a new client station, start the **Client Stations** process from the **Client Stations** folder.

2. Access the client station registration screen.

   The new client station dialog box will appear.
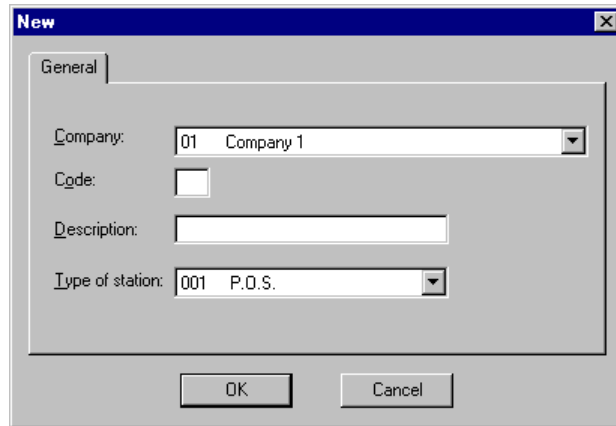
Fig. 2.16 Registration of new client stations

3. Complete the box as follows:

    - "Company": Select the company where the client station is located.
    - "Code": 2-digit identifying code for the client station.
    - "Description": Reference text for the client station.
    - "Type of station": On this list, choose the group where you want to place the client station.

4. Click on "OK".

Repeat this process for all the client stations belonging to all the companies in the group (up to a maximum of 100 client stations).

Tax-type Configuration

Taxes are added to the price of an item either as a flat rate or a percentage. Their configuration is therefore essential in order to obtain the retail price printed on the sales ticket and for other functions such as item management and means of delivery registration (which can include a surcharge), as well as for department registration, etc.

To configure the applicable taxes:

1. From the **Taxes** group, run the **Tax Types** process.

Fig. 2.17 Window for registering the types of taxes used in the company

2. Access the tax-type registration screen.

   The new taxes registration box will appear.
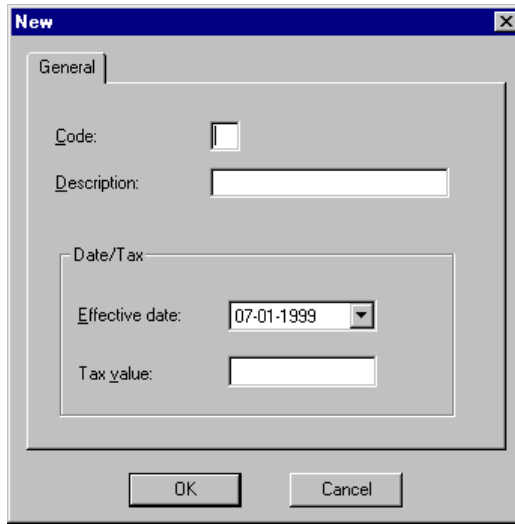
Fig. 2.18 New tax-type definition dialog box

3. Complete the dialog box shown as follows:

    - "Code": Enter a 2-digit numerical code that will be used as an identifier.

    - "Description": Brief reference text describing the new type of tax.

    - "Flag of" checkbox: Select the option corresponding to the type of tax
      in question, i.e., "VAT" or "Reduced VAT".

    - "Associated VAT": Select one of the available surcharges from the list.
      Reduced VAT only applies in the case of customers to whom a flat-rate VAT
      estimate is applied. This tax regime is applicable to many self-employed
      workers (Spain).

    - "Date/Tax" edit box: Enter the date when the tax will become effective
      and will begin to be applied automatically in the store, and the tax rate
      as a percentage.

    4. Click on "OK" to confirm the creation of the new type of tax.

Configuration of Environments and Associated Functions

Environment grouping must necessarily be carried out prior to the definition of terminals, since the terminals must be assigned to an environment before they can begin to be operated. An environment is, in fact, a group of point of sale terminals with some specific attributes and functions.

The assignment of environments is more a logical grouping than a physical one, where terminals located physically very close to one another can belong to different environments. Thus, consider the case of a supermarket with only one floor where most of the POSTs are operating in cashier mode, as payment terminals (checkouts) at the exit. One environment can be assigned for this set of terminals and another for the rest of the terminals that are used, for example, for the central cash register where the item returns/refunds are carried out. Each environment will have specific functions, focused on the most frequent users and tasks of the group of terminals.

As the functions available in each environment are different, each POST can only be located in one environment.

There is a wide range of aspects that can be configured for an environment. The main ones are as follows:

- The number of shifts worked on the terminals.

- The amounts set for rounding off, returns/refunds and the maximum amount of cash that the terminal will accept.

- The default values for the means of payment, change in returns/refunds, the essential function and the delivery method.

- The maximum acceptable time the cash drawer can be open and the limit for terminal locking.

There are also other more specific parameters that can be set during the definition of the environment, such as for example the VAT breakdown, the maximum discounts allowed, the general operating mode or the way in which rounding-off is done.

Before defining the environments, you will need to configure other aspects of the application as described below.

Cashbox Groups

Cashbox groups are different payment method groups that are used when closing a cash register and settling a POST. Cashbox settlement is the operation whereby the employee in charge details the total amount for each of the different means of payment used during the day, which in this context are called cashbox groups. This classification requires the prior configuration of these groups.

To create the available cashbox groups:

1. From the **Means of Payment** group, in the Basic module, start the **Cashbox Settlement Groups** process.

   The main program screen will appear.
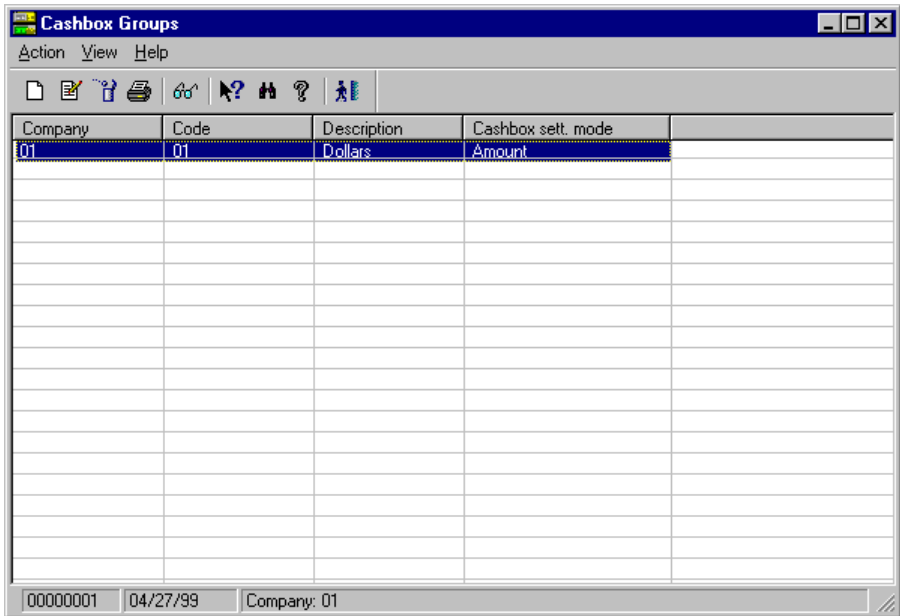
Fig. 2.19 Main cashbox settlement group maintenance window

2. Access the screen for registering new cashbox groups.
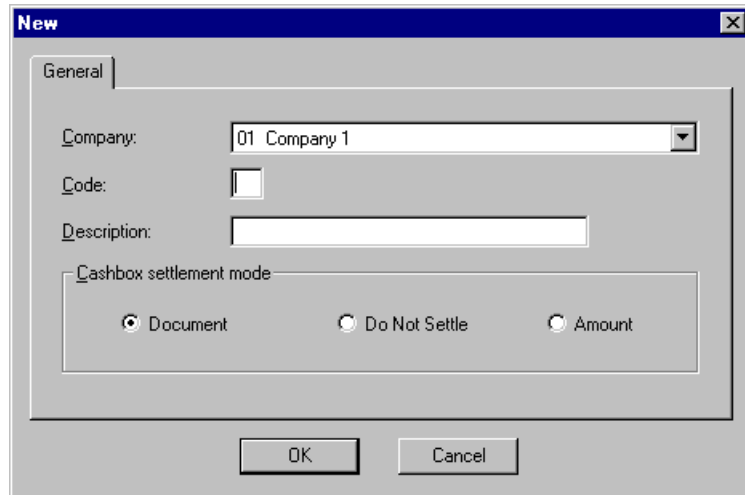
Fig. 2.20 Registration of new cashbox groups dialog box

3. Complete the dialog box shown as follows:

- "Company": Select the company for which you are creating the groups. Let us assume that it is Company one.

- "Code": Enter an internal identifying code. Each cashbox group must have its own unique code. For Pesetas the code is 01.

- "Description": Type in the name by which the group will be known. In this example, enter CASH.

- "Cashbox settlement mode": Choose the appropriate option for the group created. Thus:

  - "Document": The cashbox settlement mode will refer to a document, such as for example the documents issued during card transactions. In this case what is taken into account is the number of documents issued and which will therefore be available in the cash drawer.

  - "Do not settle": For those groups that cannot or should not be settled (for example, checking account payments).

  - "Amount": When the payment is in cash and can be settled (for example, coins and bills). Choose this mode for the group called CASH.

4. Click on "OK".

Payment Currency

In Sales Management, a payment currency is any means which may be used to settle the amount due against a transaction. Payment currencies, therefore include, among other things, cash, checks, foreign currencies, cards and store coupons.

The payment currencies defined are common to the company as a whole, since this is the level at which they are defined. This is another of the basic configuration tasks which may in no case be omitted before starting sales operations at the store.

To register a new payment currency:

1. From the **Means of Payment** group, start the **Payment Currencies** program.

2. Access the payment method registration screen.

   The new payment method dialog box will appear.

Fig. 2.21 Dialog box for creating new payment methods

3. Complete the following items in the box:

- "Company": Select the company for which you are going to define the methods of payment.

- "Payment currency": Enter a 2-digit code for the method of payment you are registering.

- "Description": Short descriptive text for the payment currency (maximum 15 characters).

- "Processing code": This code will be available for use later if you want to develop a program to process the payment currencies. If no value is entered this will default to 00, which implies you are not planning to develop any such programs.

- "Rounding unit": Minimum monetary unit that a POST can count. By default, this takes the value 1.

- "Maximum amount": Maximum amount of money accepted for a transaction.

- "Type of currency": Currency processing options for totals.

- "Exchange rate" (active only when "Currency" has been selected in the previous option): This allows you to set the exchange rate. This is necessary for foreign currency payment functions and exchange rate queries at the POSTs. This value is necessary since the POST makes the calculation automatically.

- "Cashbox group": Select the cashbox group that the selected currency belongs to. The cashbox groups must have been registered previously in the **Cashbox groups** process.

- "Currency for change": Select the payment currency that the POST will use to give change. The list of currencies that appear here comprises the methods of payment defined earlier in this same process.

- "Flags" box: Allows you to enable certain actions that the POST will carry out during the transaction.

- "Require document number" box: Allows you to determine whether the POST should ask for additional data when carrying out the transaction (for example, a checking account number).

- "Document to print": Document that will be printed, depending on the type of payment currency used.

- "Allocation of points for": Choose the mode whereby points are awarded if a payment method loyalty-building campaign is active. This box appears only if the Loyalty module has been installed.

- "E.M.U.": This box indicates whether the country who issued the currency being registered is a member of the European Economic and Monetary Union. This box will always be disabled, since such membership of the E.M.U. is established during the installation.

- "Conversion amount": The currency's exchange rate against the Euro.

- "No. decimals places" (Number decimals places): This box will be filled automatically by the system once the conversion amount (Euro rate) of the currency you are registering has been entered.

4. Click on "OK" to confirm the method of payment.

Delivery Methods

The definition of delivery methods is another of the essential phases in setting up environments and associated functions. However, this stage is independent of the other tasks that are described in this section, and so can be carried out before or after them. For most companies there will only be one means of delivery, usually home delivery.

To register a delivery method:

1. From the **Customers** group in the Basic module, start the **Delivery Method** process.

2. Access the delivery method registration screen.

   The new delivery method registration box will appear.

Fig. 2.22 New delivery method registration dialog box

3. Complete the dialog box shown as follows:

- "Company": Select the company for which you are going to define the delivery method.

- "Code": Enter a one-digit code for the delivery method.

- "Description": Brief reference text.

- "Expenses" box: Indicate whether the use of this delivery method will imply a surcharge for the customer over the selling price. The options are:

    - "Generate amount": Enable this option and in the "Amount" and "Tax" boxes type the cost that the use of the delivery method entails. The price shown by the POST will be the selling price plus these two amounts.

    - "Require": Select this option if the delivery method that you are defining implies an additional cost to the customer (optional).

    - "Do not require": In this case a surcharge is not requested, and therefore SF-GV will not pass any cost on to the customer for the use of this delivery method.

- "Flags": Includes the controls "Commitment date", which allows the POST to request a delivery commitment date, and "Print Receipt", so that the system prints a receipt when making a sale.

4. Click on "OK".

Name of POST Functions

The SF-PV application provides a set of about 40 functions which the cashier can access via a numerical function identifying code. The specific functions available on a POST cannot be modified, but their name can be changed and, as seen in the section on environments, it is possible to decide which terminals belong to each environments.

This phase of the SF-GV configuration process allows you to customize the names of the functions mentioned and to set some of the basic operational parameters, such as:

- Whether access is restricted

- Whether they print a ticket

To change a function's name and parameters:

1. From the **Terminal Settings** group, start the **Functions** process.

2. Access the new functions registration dialog box (if you only want to modify an existing function you can access it via **[Action] [Modify]**).

   The **New** dialog box will appear, where you can register new functions.
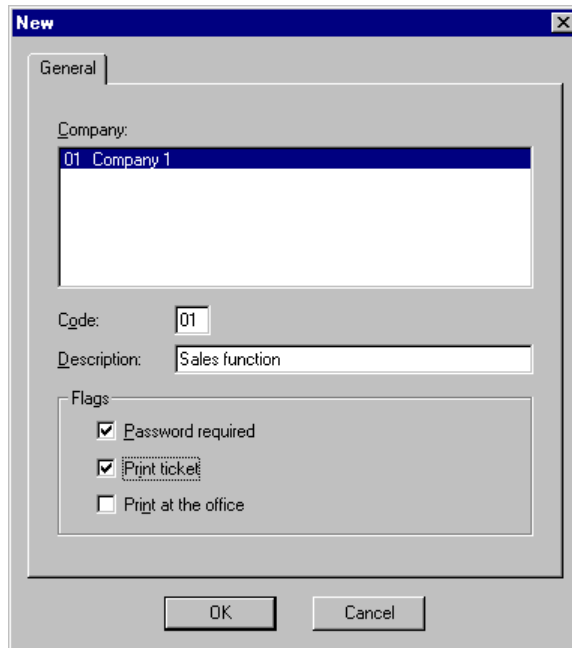
Fig. 2.23 New function name registration box

3. Complete the box as follows:

- "Company": Select the company for which you are configuring the functions.

- "Code": Type in the code of the function that you are going to configure. Remember that the choice of this code is not free, but must match the 2-digit code the POST uses for the function in question. See the section ☞ "Transaction configuration" in this chapter, or the user manual for the Point of Sale application.

- "Description": Write the name you want to give to the configured function.

- "Flags" box: Allows you to configure the function according to the following parameters:

  - "Password required": Before being able to use the SF-GV function a user password is requested.

  - "Print ticket": A ticket is generated when the function terminates.

  - "Print at the office": A ticket generated by each transaction performed at a floating station is printed in the office.

4. Click on "OK".

This process is used mainly for changing the names of predefined POST functions and for registering new functions on the system. The name that is adopted in the process will apply to all of the company's terminals.

Definition of Environments

Environments are used for defining the behavior of one or more point-of-sale terminals based on the specific activity they carry out.

When environments are defined they are associated with a company. Their importance stems from the fact that the environment to which terminals are assigned limits their capabilities and allows important operational aspects to be set, such as:

- The maximum amount of cash kept at a terminal and the maximum value allowed for refunds.

- The default method of payment used for sales and refunds.

- The default function and the delivery method.

- Other specific parameters related to the breakdown of quantities, rounding-off, behavior when errors arise, etc.

Thus, for example, a company running a department store could define one environment grouping together terminals used as checkouts (cashier mode) and another grouping together terminals shared by various salespeople who are identified at the time of making a sale (salesperson mode). Specific environments for different sections of the store can be defined, for instance, one for areas where transactions are frequent but involve small amounts of money, and another for areas where a single cash register operator is in charge of handling high-value transactions.

To define an environment:

1. From the **Terminal Settings** group, start the **Environments**.
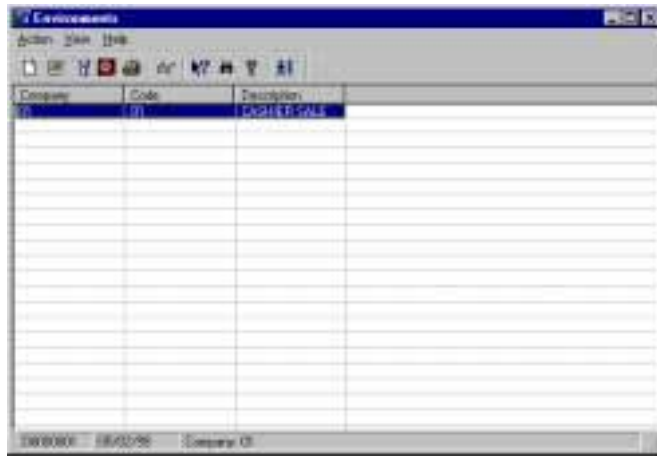
Fig. 2.24 Main window of the Environments process

2. Access the new environment registration screen by selecting the option **New** in the **Action** menu.
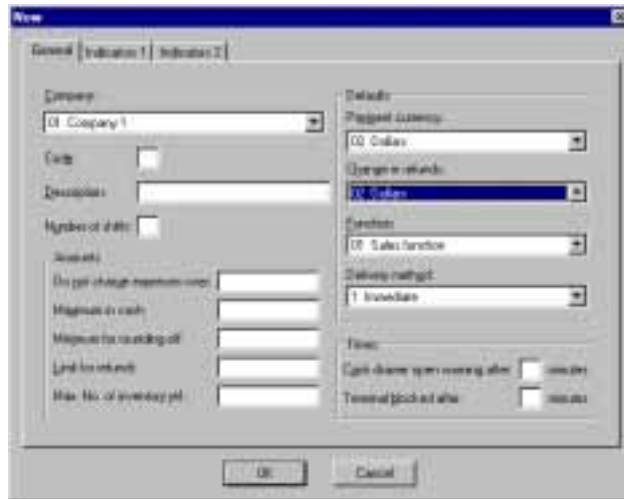
Fig. 2.25 Dialog box for defining new environments in a store

3. Fill out the following fields in the "General" tab:

- "Company": Select the company for which you want to define the new environment.

- "Environment": Enter a numeric code to identify the new environment.

- "Description": A brief description of the environment.

- "No. of shifts": Enter the number of shifts for the terminals associated with this environment.

- "Amounts": You can specify the following values in this box:

    - "Do not charge for expenses above": Amount above which additional expenses will not be charged, e.g., if the customer's purchase exceeds a given amount, home delivery will be offered free of charge.

    - "Maximum cash": This indicates the maximum amount of cash that can be kept in the terminal drawer without a withdrawal being requested from the headquarters.

    - "Minimum amount for rounding off": This is the value below which the amount will be rounded off. This field is usually given the value 1.

    - "Limit for refunds": Maximum amount allowed for making a refund.

    - "Max. inventory ref.": Maximum number of inventory references that each operation can contain.

- "Defaults": This box is used for specifying the following operating values, which will be used by the point-of-sale terminals assigned to this environment:

    - "Currency": This list shows all the accepted payment currencies. Here you can select the default payment currency that will be used by the point-of-sale terminals assigned to this environment.

    - "Change for refunds": Currency that will be used when a customer returns an item.

    - "Function": The function chosen on the list of available functions will be the one used when starting up the terminals in this environment.

    - "Delivery methods": Default delivery method.

- "Times": Here you can set maximum time intervals for showing warnings on the POST display or for blocking the terminal. The following controls are available:

    - "Display drawer open warning after _ minutes": Maximum number of minutes that the POST drawer can remain open without showing a message on the display.

- "Terminal blocking after _ minutes": Maximum number of minutes that the terminal can remain inactive before it is blocked.

4. Go to the "Flags 1" tab to move to the next part of the dialog box for defining the environment parameters.
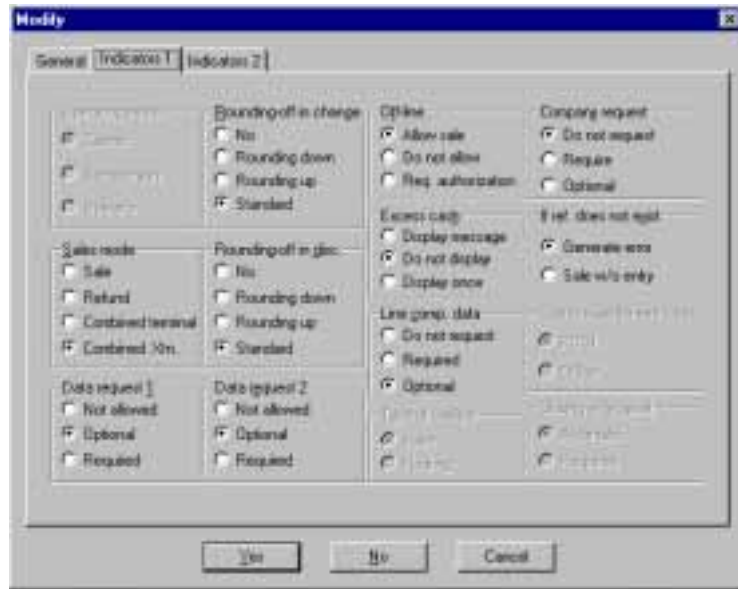
Fig. 2.26 First dialog box for defining specific aspects of the new environment

- "Operating mode": Select the operating mode (these controls can be modified only if the store status is "closed").

  - "Cashier": One cashier logs on at the beginning of the shift and one single operator works at the terminal during each shift, who is responsible for all the operations performed; cashiers are automatically assigned all the transactions until their shift ends. If this option is chosen, the "Type of cashier" and "Closing at terminal" groups will be available.

  - "Salesperson": An unlimited number of salespeople can work at the terminals included in an environment. The salesperson number is requested for each transaction performed and the cashbox settlement operation is carried out by terminal totals (total for each of the company's sales periods) and cashier totals (total per shift).

- "Operator": As with the "Cashier" mode, one single user works at the terminal, but a different operator code may be required for certain types of transactions. If this option is chosen, the "Type of cashier" and "Closing at terminal" groups will be available.

- "Sales mode": Choose one of the following options:

  - "Sale": The terminals in the environment can only carry out sales transactions. the environment definition dialog box.

  - "Refund": The terminals in the environment can only process refunds.

  - "Mixed by terminal": In this mode, the terminals can perform either sales or refunds, but not both in the same transaction.

  - "Mixed by Xtn." (mixed sale transaction mode): The terminals will display a sale line and a refund line for each transaction.

- "Request data 1" and "Request data 2": Specify whether you want the point-of-sale terminals to request additional data when processing a transaction, such as the color, design, size or company code. Both of these options include the following controls:

  - "Not allowed": The terminals in the environment will neither request nor permit additional data to be entered.

  - "Optional": The terminals will request that additional data be entered, but a transaction can be completed if no data is entered.

  - "Required": The terminals in the environment will require that additional data be entered, and the transaction cannot be completed unless it is entered.

- "Rounding off in change" and "Rounding of in discounts": Indicate how the terminals will round off the amounts related to change given and discounts offered.

  - "None": No type of rounding off will be applied.

  - "Round down": The amount will always be rounded down (1'2 = 1).

  - "Round up": The amount will be rounded up (1'6 = 2).

  - "Standard": The amount will always be rounded off to the nearest unit (1'2 = 1 and 1'6 = 2).

- "Off-line": This defines how the terminals will behave when they go off-line and connection to other system components is lost (enable the sale to proceed, do not enable the sale to be completed or request authorization).

- "Excess cash": Choose whether you want the terminal to display a message uninterruptedly until an excess cash situation is solved at a terminal, whether the message should only be displayed once, or whether no message should be displayed at all.

- "Complementary line data": Indicate whether the terminals should request some complementary data for each transaction line, such as the size, color or design: "Not requested", "Required" and "Optional".

- "Type of cashier": If you choose the "Cashier" or "Operator" option as operating mode, the controls included in the "Type of cashier" box will be available. Specify whether the terminal operating mode will be "Fixed" (one single salesperson or operator will work at the terminal during the session) or "Floating" (even the terminal's location can be changed, and different salespeople or operators will work at the terminal during work sessions involving several shifts). For floating cashiers, in "Cashbox settlement location" you must indicate whether the cashbox settlement operation will be performed at the terminal itself or subsequently at the office.

- "Request company": Specify whether the terminals will require as additional data the code of the company where the sale took place. The available values are "Not requested", "Require" and "Optional".

- "If ref. does not exist": Specify whether sales of an item will be permitted even if it has not been registered, or a message should appear on the display indicating this situation.

- "Closing at terminal": The controls shown in this box will be enabled if the terminal is operating in "Cashier" or "Operator" mode. Indicate whether the terminal closing process will be performed automatically or manually ("Required").

5. Go to the "Flags 2" tab to access the last environment parameters definition dialog box.box, where you can define specific characteristics for the point-of-sale terminals, particularly economic aspects:
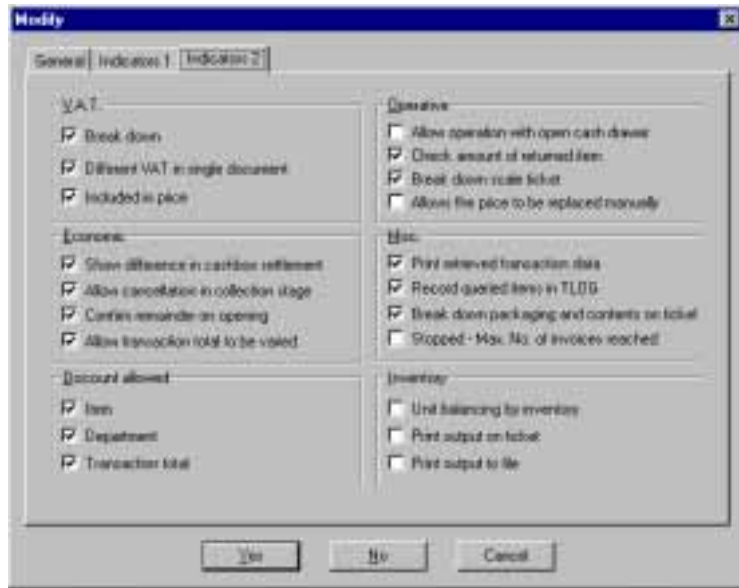
Fig. 2.27 Second dialog box for defining specific aspects of the new environment

- "VAT": Specify how the VAT amount should appear on the various sales documents printed by the terminals in the environment.

  - "Break down": The sales document will detail the item and the tax amounts.

  - "Different VAT on a single document": Indicates that sales documents containing items with different taxes can be printed.

  - "Included in price": The sales document will only show the total amount (price + tax).

- "Economic": Specify how the economic aspects should be processed.

  - "Indicate cashbox settlement difference": The terminal display shows a message if cashbox discrepancies exist.

  - "Allow cancellation during collection stage": Sales transactions which have not yet been collected can be canceled from the terminals in the environment.

  - "Confirm remainder on opening": The terminal will request confirmation of the remainder on being opened, either when the store opens or when a shift changes.

- "Enable transaction total to be changed": The terminals in the environment will allow the total of a transaction which has not yet been collected to be changed.

- "Discount allowed": Configure whether discounts will be permitted for items, departments and transaction totals based on the type of active campaign, special offer or promotion.

- "Operation": Define the following characteristics for the operating mode.

  - "Enable operation with open drawer": This indicates that the point-of-sale terminals can process new transactions even with their drawer open.

  - "Verify amount of returned item": Select this check box if you want the terminal to verify the amount of an item being returned.

  - "Break down weighing scales ticket": The weighing scales tickets will show the item and the tax amounts.

  - "Enable manual price change": Enable this check box to allow prices to be changed manually.

- "Miscellaneous": In this box you can configure the following characteristics:

  - "Print retrieved transaction data": If you enable this check box, the terminal will print a ticket with all the data corresponding to the suspended transaction. Otherwise, only the total will be printed when it is retrieved.

  - "Record queried items in TLOG": All the item price queries made from any terminal in the environment are stored in chronological order in a file.

  - "Break down container and contents on the ticket": The purchase ticket will specify the value of the container and the contents.

  - "Stop if maximum number of receipts is exceeded": Indicate whether you want the terminal to become blocked and a message to be displayed if the limit established for the numerators is exceeded for a certain type of document. You must then reset the numerators and unblock the terminal. This prevents the number of a receipt or payment document from being duplicated.

- "Inventory": Specify how the terminal will process the various inventory operations.

- "Balance units by inventory": The terminals will request the number of units in stock for each item before the stocktaking process begins.

- "Print output on ticket": When the inventory function is executed at a terminal, a ticket showing the result will be printed.

- "Print output to file": The information generated by the terminal inventory function is saved to a file.

6. Click on "Yes".

The new environment must appear registered on the main process screen so that it is available for assignment of company-specific terminals.

Terminal Configuration

A point of sale terminal can be defined as a specialized keyboard allowing transaction-related operations to be performed, together with other data storage and communication elements, which is connected to the server, where the information to and from the POST is stored. There are several types of POST with different types of keyboard; those with 102 keys (computer type) or reduced keyboards for departments where fewer operations are carried out are the most common.

From the operator's point of view, a terminal can be in one of three different states:

- *Closed*, once the close function (14) has been executed on the terminal (for example, outside normal business hours).

- *Open*, the normal state, i.e., that in which operations related to commercial transactions can be carried out. The terminal is open once it has been switched on and the opening operation (function 13) has been executed.

- *Blocked*, in this state the terminal is operational but cannot be used unless the operator unblocks it (function 35). The terminal can be blocked either manually by the operator (for example, when going for lunch), or automatically after a configurable time (in minutes) has elapsed.

From the point of view of communications with the server, a terminal can be in either of two states:

- On-line: When the system is operating correctly and the server and the POST can exchange data with one another.

- Off-line: When, for whatever reason, there is no communication between the POST and the server. SF-GV is designed so that the POST can continue working off-line. When the terminal comes back on-line it retrieves the information that the server sends it automatically.

The configuration of POST keyboards is another essential phase in the overall process of configuring SF-GV. This involves two tasks:

- Registering the models of keyboard existing in the company.

- Assigning the hot keys or multifunction keys for each type of keyboard.

A store with a large sales volume can have as many as several hundred terminals with different models of keyboards, and each of these keyboards may work differently. Depending on the configuration of the system (the company department, for example), the operation triggered by pressing a given key may differ from one terminal to another. How is this behavior obtained? This will be described below, in the description of the processes involved.

POST keyboards support a wide variety of hardware terminals and operating environments, as described below.

Software

> MS-DOS 6-22, PC DOS 7.0, PCTCP 3.2, Pharlap SDK 8.0, Runtime 8.2

Hardware **Terminals**

> IBM 4694/4695
>
> IBM SureOne
>
> NCR 7453
>
> Siemens Nixdorf (Beetle), models M and 60

Weighing Scales

> Epelsa: Minerva, 386
>
> Mettler Toledo: MiRa, L2
>
> Dibal: A-564
>
> Campesa:Dina

The processes covered in this section affect terminal configuration and customization. As all these processes operate similarly, we will focus on the usage sequence and will only describe the procedure for specific processes in the group.

This group of processes allows you to solve issues such as how to obtain *different behaviors* from different POSTs on the system, depending on aspects of the terminal such as:

- The company it belongs to
- The department it belongs to
- The type of function that it is intended for

The configuration of each terminal will depend on the conversion group it belongs to. Essentially, a conversion group is a set of similar terminals in an environment created from the **Logical Names** process. This is assigned during the terminal registration process, which is described below.

Models of Keyboard

This program enables POST keyboards to be configured by assigning different types of functions to the keys and configuring the number of each key on the keyboard and the motor keys that can be assigned to any configured keyboard model.

Registering Keyboards:

1. Select the **New** option from the **Action** menu on the main screen of the **Keyboards** process.
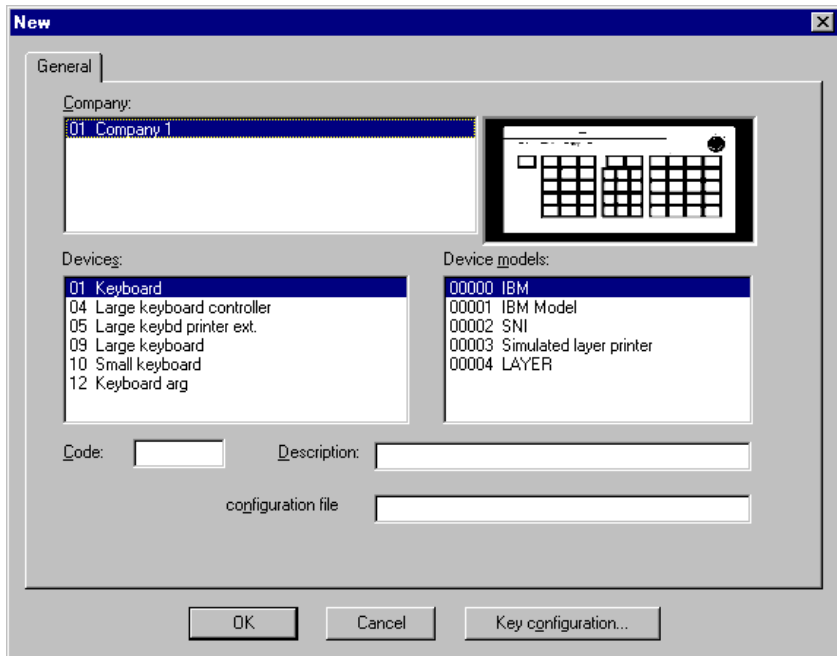
Fig. 2.28 Keyboard registration dialog box

2. Next, choose the data that identifies the keyboard:

- "Company": Select the company for which you are registering the keyboard.
- "Devices": Select the type of device you are configuring.
- "Device models": Choose one of the device types from among those shown on the screen.

  During the selection, an image of the keyboard chosen in "Device models" will appear in the box to give a visual representation of it.

3. Key Configuration. Once the keyboard model has been chosen you can configure its keys. Click on the "Key configuration" button that appears in the window. If you do not do this, the keyboard will remain empty.

   The following screen then appears:
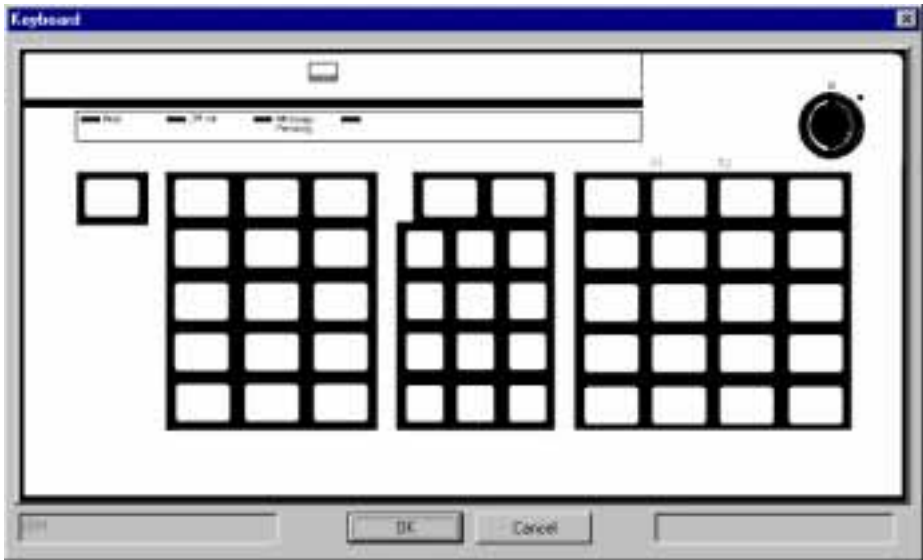
Fig. 2.29 Keyboard set-up dialog box

For each of the keys shown you can associate a motor key, hot-key or printable key, each of which is identified by a color as described below:

White: key not defined

Gray: printable key

Orange: motor key

Blue:	item hot-key
Sky blue:	item-quantity hot-key
Dark pink:	department-amount hot-key
Brown:	department-amount hot-key
Yellow:	delivery method hot-key
Green:	payment currency hot-key
Light pink:	payment currency-amount hot-key
Red	function hot-key

Each of the keys can be configured by double-clicking on it and choosing one of the options from the pull-down text menu that appears. Once you have chosen the types of key from among those allowed, a dialog box will appear containing the data you will have to configure. This data will vary according to the type of key you have selected.

1. Printable Keys:

These are keys associated with one of the two following special functions: "Double Zero" or "Delete".

In order to configure a key as printable, you need only to assign it a description and a character, or just a description, choosing one of the two special-function check boxes.
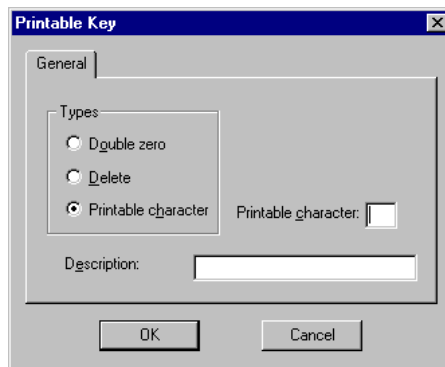
Fig. 2.30 Printable keys set-up dialog box

2. Motor Keys:

These represent the main POST functions. These functions must have a code in the range 61 to 84 (inclusive). Once this range is full it will no longer be possible to assign more motor keys on the keyboard.

To configure a key as motor key you first have to assign it a description and associate it with one of the motor functions on the list shown in the dialog box.
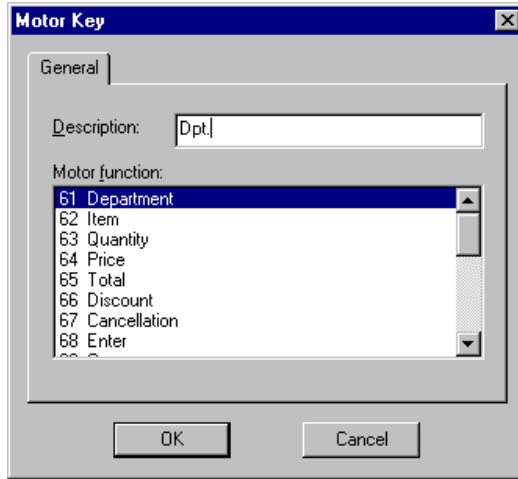
Fig. 2.31 Motor keys set-up dialog box

3. Item Hot Key:

This type of key, which is associated with a code, is used to facilitate transactions involving the store's fastest moving items. In this case you will have to choose the item that you want the hot-key to represent and identify it on the **item hot-key** screen by means of its code.

For facilitate access to an item you can first select the department that it belongs to and then select the item itself.
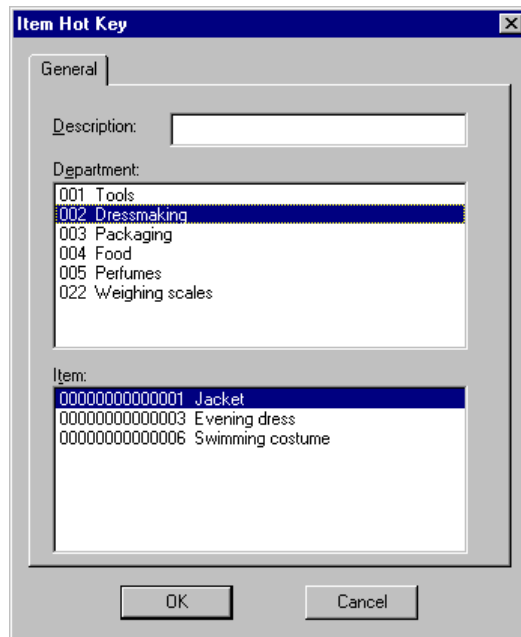
Fig. 2.32 Item hot-keys set-up dialog box

4. Item Quantity Hot Key:

This is a key associated with both an item code and a quantity, for use when these frequently come together. In this case you have to choose the item the hot-key is to represent, identifying it by its code, and enter the quantity that will be associated with it. To improve organization, you can access items via the departments they belong to.
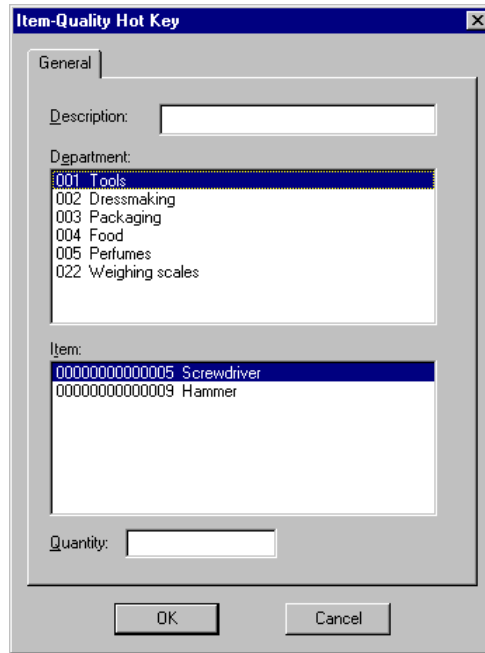
Fig. 2.33 Item-quantity hot-keys set-up dialog box

5. Department Hot Key:

A key associated with the code of a department frequently entered from the POST. To configure it you will have to enter a description for the key and select a department from among those that appear on the list shown on the screen.
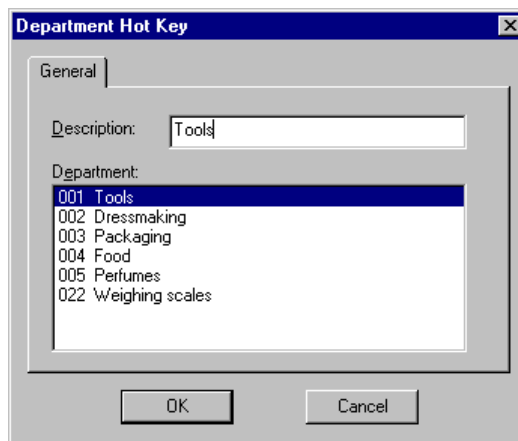
Fig. 2.34 Department hot-keys set-up dialog box

6. Department-Amount Hot Key:

Key associated with the code of a department where a specific amount is used frequently.

To define a key of this type you need to select a department and enter an amount and a descriptive text for the department.
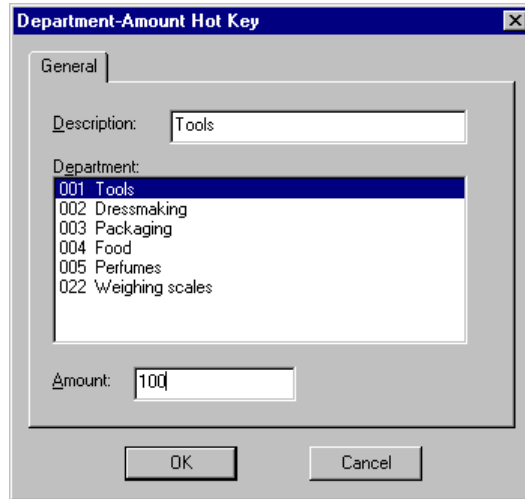
Fig. 2.35 Department-amount hot-keys set-up dialog box

7. Delivery Method Hot Key:

A key associated with a delivery method frequently used by the company.
To define the hot-key you will have to choose one in the company's delivery methods and enter a description for it.
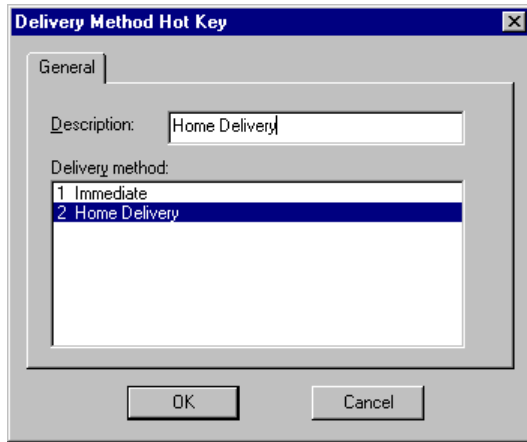
Fig. 2.36 Means of delivery hot-keys set-up dialog box

8. Payment Currency Hot Key:

A key associated with the code of a payment currency frequently used at the POST.
To define it you have to choose one of the payment currencies registered for the
company from the list shown on the screen and enter a descriptive text for it.
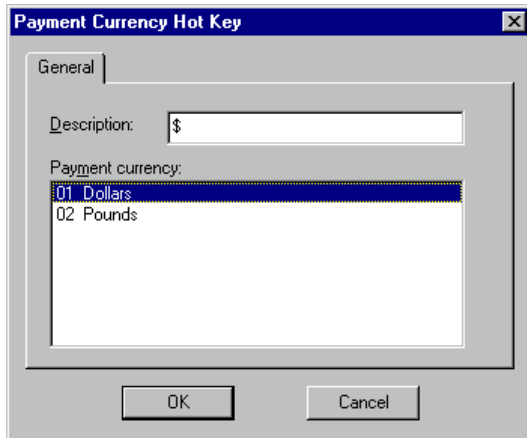
Fig. 2.37 Payment currency hot-keys set-up dialog box

9. Payment Currency-Amount Key:

Key associated with the code of a payment currency used together with a specified
amount. In this case you need to choose a payment currency and apply the
amount that the hot-key will represent. Then a text description of the key will
be required.

Fig. 2.38 Payment currency-amount hot-keys set-up dialog box

10. Function hot-key:

A key associated with the code for a user function. To set up the hot-key you have to select one of the functions and enter a description for it.
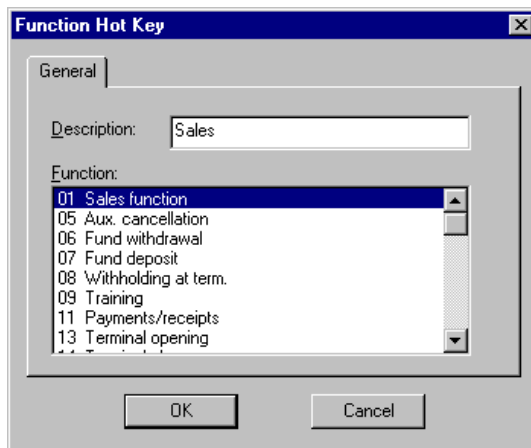
Fig. 2.39 Function hot-keys set-up dialog box

Motor Keys:

Motor Key maintenance is also performed from this application program. Motor keys are keys which identify the main functions carried out from a POST.
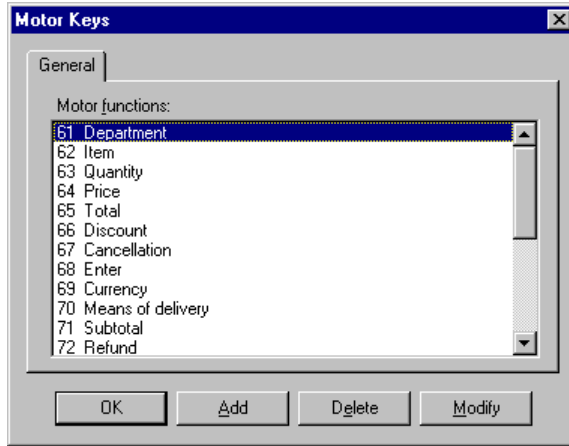
Fig. 2.40 Motor keys set-up dialog box

To register a new motor key click, the "Add" button:
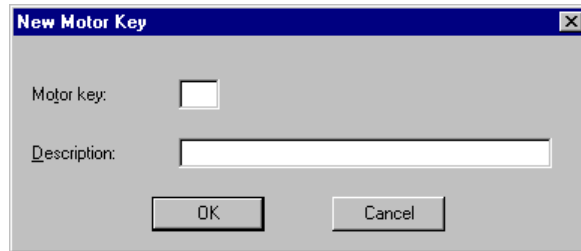
Fig. 2.41 Motor key registration dialog box

Enter a Description for the key and an identifying code. This code must be between 61 and 84 (inclusive). This limit permits up to 24 different motor functions at the same time.

Once the data is complete, click on "OK" to confirm.

Manufacturer Numbers:

This maintenance process enables the numbers each manufacturer associates with each key on the keyboard to be configured

Once the steps described have been completed the keyboard will be configured and should be registered on the system. To do so enter an identifying code, a descriptive text and the name of the keyboard file to be used. The format is as follows:

/{directory}/keyboard_file

For example: /l/keyboard.dat

Click on "OK" to add the new keyboard to the system database.

Types of Bar Codes

This program manages the bar codes registered for the company which are used by the POST to identify the items.

To do so, access the **Bar Code Types** process. The following main process screen will appear:

Fig. 2.42 Bar code types main window

To register a new bar code, select the **New** option from the **Action** menu.
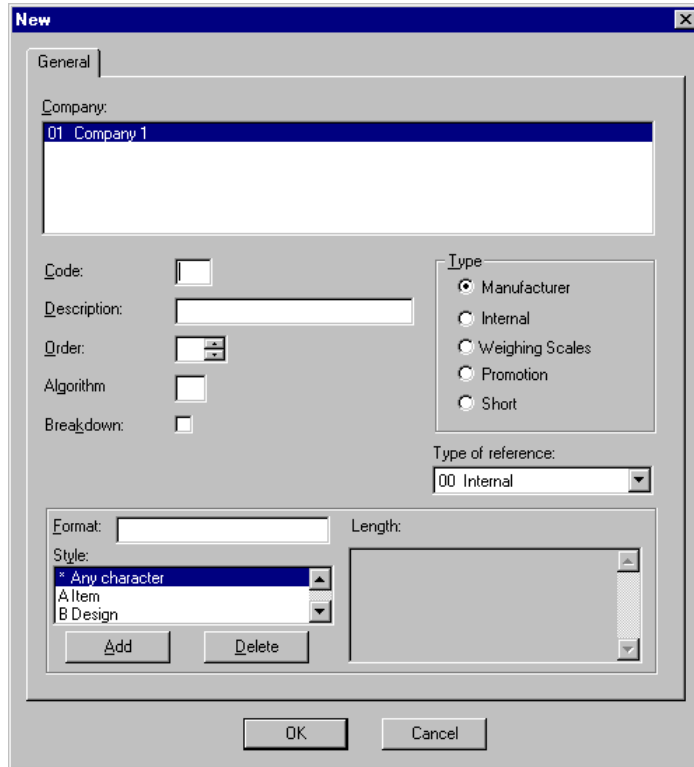
Fig. 2.43 Bar code registration dialog box

Complete the dialog box as follows:

- "Code": Enter the identifier for the new code.

- "Description": A brief reference text.

- "Format ": Type in the series of possible formats for setting up the bar code, for example 28AAAAAAWWWWWG. This code is made up of the number 28, 6 digits for the item, 5 for the weight, and a final control digit. You can add a brief explanation in the box at the bottom.

- "Type": Indicate one of the following values:

  - 1: Manufacturer

- 2: Internal

- 3: Weighing scales

- "Type of Reference": Enter any value between 1 and 99.

- "Order": Enter a value between 1 and 30. This is the order in which the codes will be checked when there are two with the same length.

- "Algorithm": Enter a value between 1 and 99, referring to a validation algorithm that will be used as user output.

> The string must not be more than 14 characters long.

3. Click on "OK".

EAN Codes

To register, modify or delete an EAN code, select the corresponding option in the **Action** menu on the main screen of the **Bar Code Types** process.
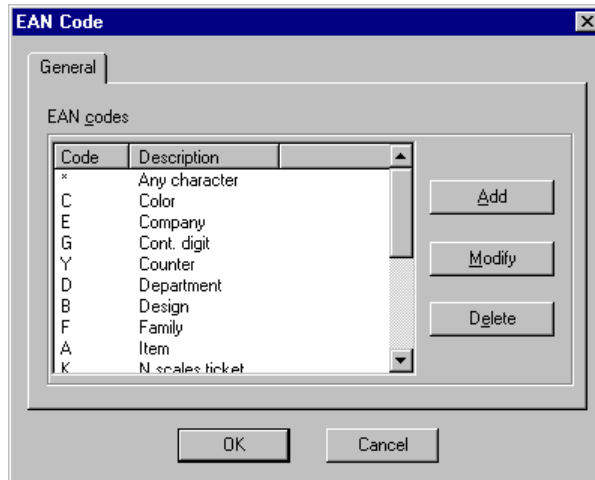
Fig. 2.44 EAN codes maintenance dialog box

From the list that appears in the window, select one of the types of EAN code that you have defined for the company and then click on the "Add" button to register the new EAN. This will bring up another window, where you must enter a code and a description for the new EAN. The system will automatically check that these do not exist already and will display an on-screen message once the data has been filled in correctly. Confirm with the "OK" button to register the new code on the system.

Ticket Header and Footer

The ticket header and footer are two of the configurable parts of the ticket, and free text messages can be defined for them. These are configured for each company and each conversion group.

SF-GV allows you to define up to seven header lines and seven text lines for the footer, although normally not all are used.
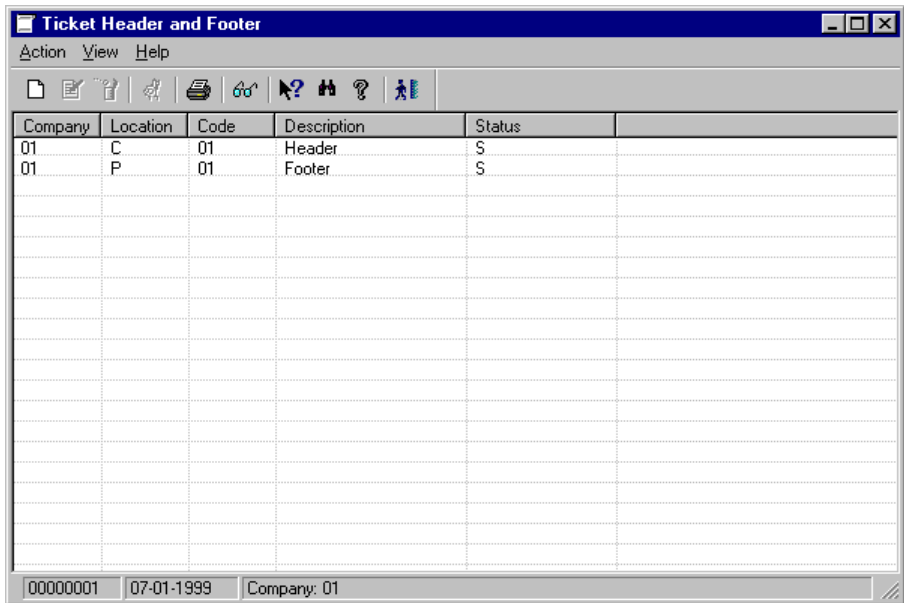
Fig. 2.45 Main window of the company ticket header/footer definition application

In order to define the ticket messages, start the **Ticket Header and Footer** process, open the **Action** menu and select the **New** option. Update the default data in the dialog box shown.

Logical Names

The POST programs write and read data to and from physical files on the server. To avoid typing in the location of these files and their names in the terminal program, logical names are used to establish a link to the relevant physical file.

Logical name files therefore indicate to both the terminals and the server how they should act and the channels and ports needed for the application to operate properly.

Since all the terminals in a group are associated with the same type of keyboard, and each group of terminals has a single group of logical names, Logical Name Maintenance offers an option whereby the associated keyboard can be defined.

The process in charge of generating the file "termfisi.dat" takes data from the tables updated by Logical Name Maintenance. When this process is run, it stores the keyboard code in the "termfisi.dat" file so that the terminals can identify it.

When the terminals in a group carry out a data load, they take the keyboard code from the relevant file so as to be able to construct the name of the hot-key file they need to open and load from. This name is formed by replacing the xx in the "teclraxx.dat" file with the code of the corresponding keyboard.

 Example: If the keyboard code defined in Logical names maintenance is 01, the POST needs the file "teclra01.dat".

As explained, a logical name must be defined for each of the terminal groups. The keyboard file will therefore have a reference in the file "exxxxx.nam", where xxxxx represents the code of the group that the terminal belongs to.

When the terminals start the file loading process, they read and load into the memory the logical names contained in the file "exxxxx.nam".

Launch Logical Name Maintenance from its icon in the **Terminal Settings** folder.

The main screen of the application will appear, where you will be able to see all the groups of existing logical names, together with the file under which they will be generated.
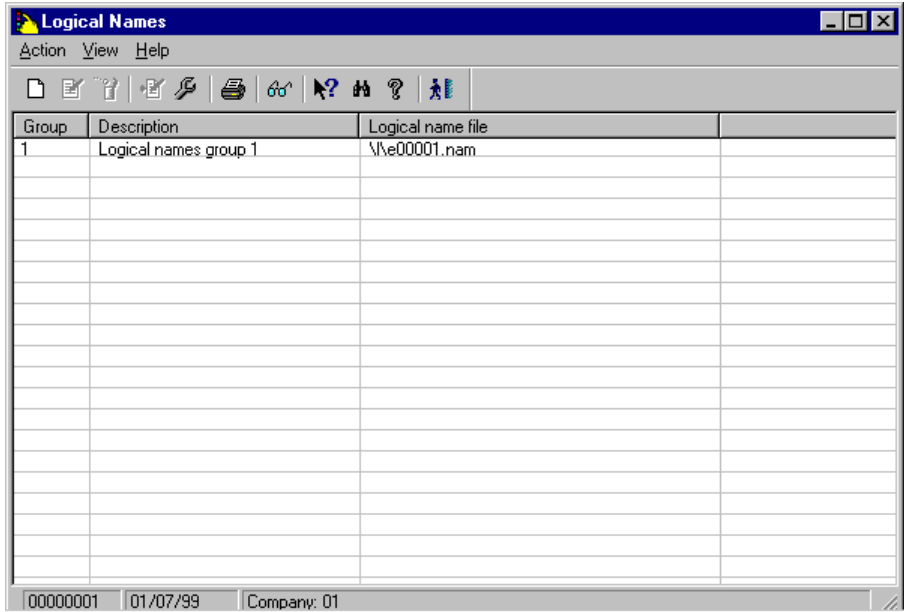
Fig. 2.46 Main screen of the "Logical names maintenance" process.

From this screen it is possible to perform the following actions:

- Register a new group of logical names
- Modify an existing group of logical names
- Discontinue a group of logical names

It will only be possible to carry out these actions if the user has sufficient authorization.

Registration of a group of **logical names:**

1. Select the **New** option from the **Action** menu.
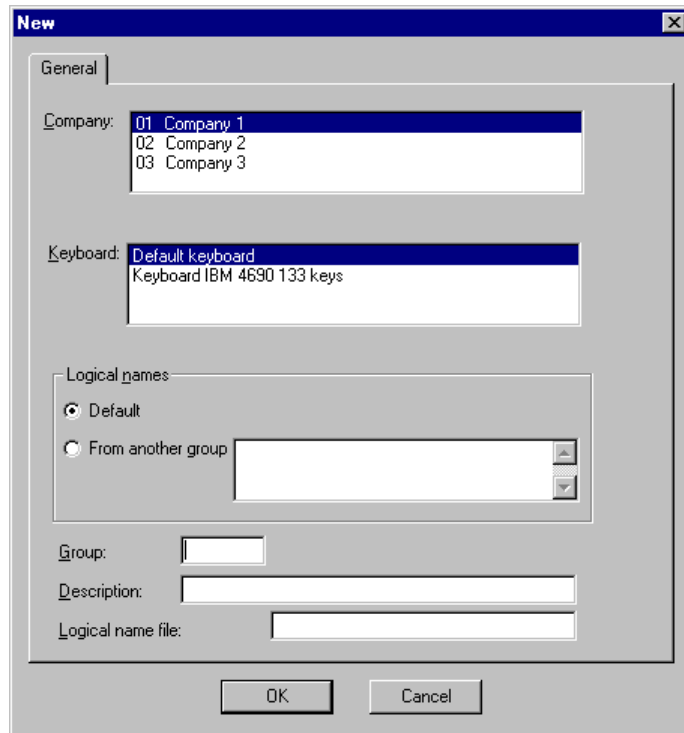
Fig. 2.47 New logical names registration screen

2. Enter the data needed to create a new group:

- "Company": Select the company for which you are creating the group.

- "Keyboard": Enter the code of the keyboard on the POST from which the data is going to be loaded.

- "Logical Names": Specify where you want to load the initial group of logical names from.

  - "Default": Useful when registering the first group of logical names.

  - "From another group": When you want to create a new group based on another which already exists.

- "Group": Enter an identifying code for the group that you are creating.

- "Description": Enter a descriptive text for the new group.

- "Logical name file": Filename and path for the file with which it will be generated.

3. When all the data has been entered, confirm with "OK". The system will then automatically verify that all the fields contain the necessary information and that the group does not exist already. In each of the two cases above the system will inform you via an on-screen message. If no message is given, the new **logical names** group will have been created successfully.

Logical Names

This dialog box allows you to access the system's logical name maintenance functions. To enter the program select the **Logical Names** option in the **Action** menu or click on the icon on the toolbar.
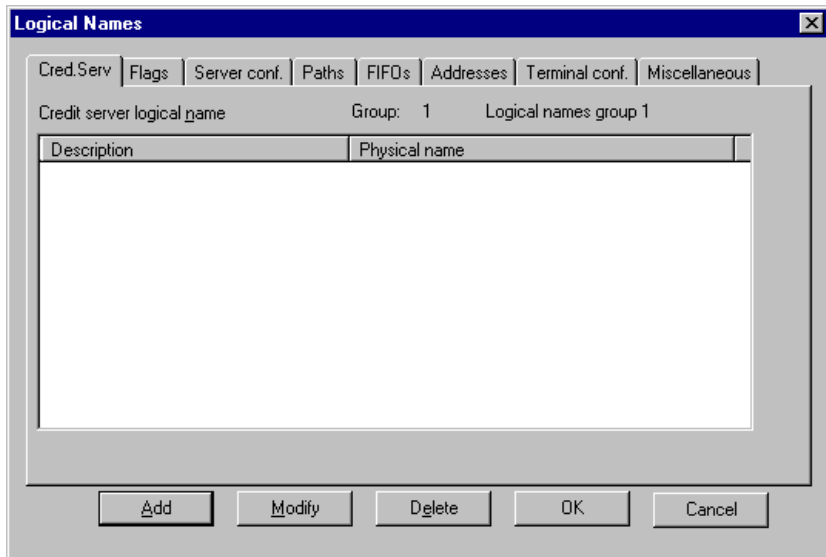
Fig. 2.48 Logical name maintenance dialog box

This screen has a number of tabs, each of which groups together a different type of logical name.

This program allows the following operations to be carried out:

- Registration of a logical name
- Modification of an existing logical name
- Deletion of an existing logical name

Registration of a Logical Name

Access this option by clicking the on "Add" button on the **Logical Names** screen. The following screen will appear:
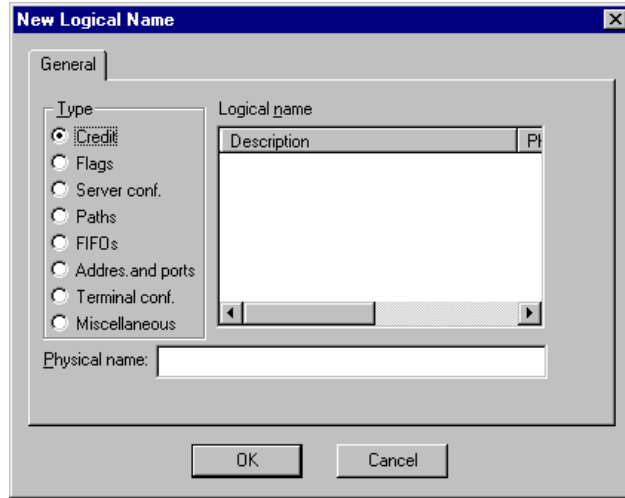
Fig. 2.49 Logical name registration dialog box

To register a logical name:

1. Select a type of logical name from among those shown on the screen.

2. Next, choose a logical name from the list located to the right of the dialog box and modify the associated value, if required.

3. When you have finished, click on the "OK" button to apply the changes.

Default Logical Names
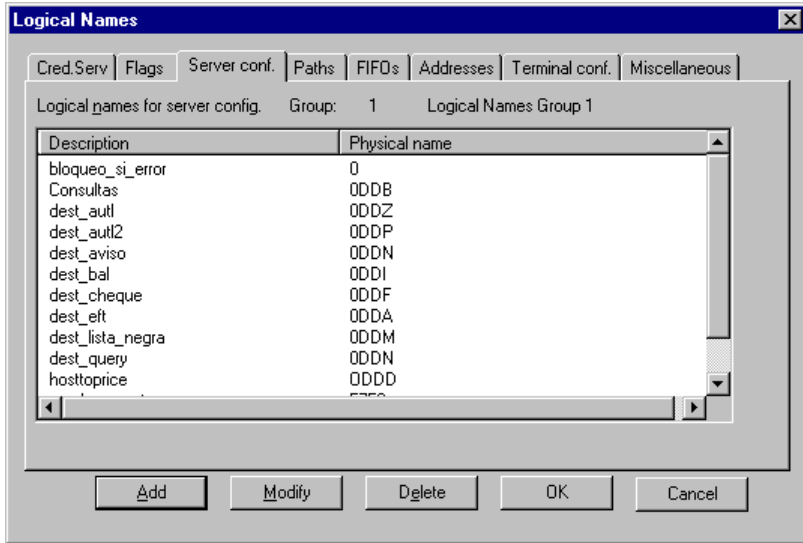
Fig. 2.50 Default logical names set-up dialog box

All existing logical names must be present in the maintenance function, and if a new one is created, it first has to be added before associating it with any group of logical names.

Registration of Default Logical Names

The operation of this program is similar to that of the logical name registration process. The only difference lies in the fact that here there are three attributes that are not handled in the other module.

- Logical name code
- Logical name type
- Logical name description
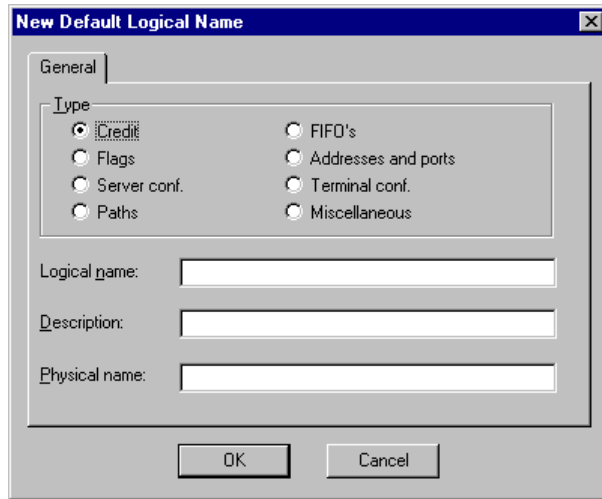
Fig. 2.51 Default logical name registration dialog box

To register a default logical name:

1. Choose a type of logical name from among those that appear in the dialog box.

2. Enter the logical name that you are going to register and its description.

3. Enter the physical name that you want to associate with this logical name.

Once the fields have been completed, confirm by clicking on the "OK" button. The system will check that this logical name is not already in use and will add it to the list in the default logical names dialog box.

Registering Terminals

Once aspects such as the environments, the delivery methods, the means of payment and the POST functions have been defined, you need to associate the existing terminals with their respective environments. This association will normally depend on the characteristics of the company department where the terminal is located, the people that have access to it, or the most common operating mode used (i.e., cashier mode or salesperson mode, for example).

To register and configure a new terminal:

1. From the **Terminal Configuration,** group, start the **Terminal** process.

2. Select the terminal registration screen.

   The terminal registration box will appear.
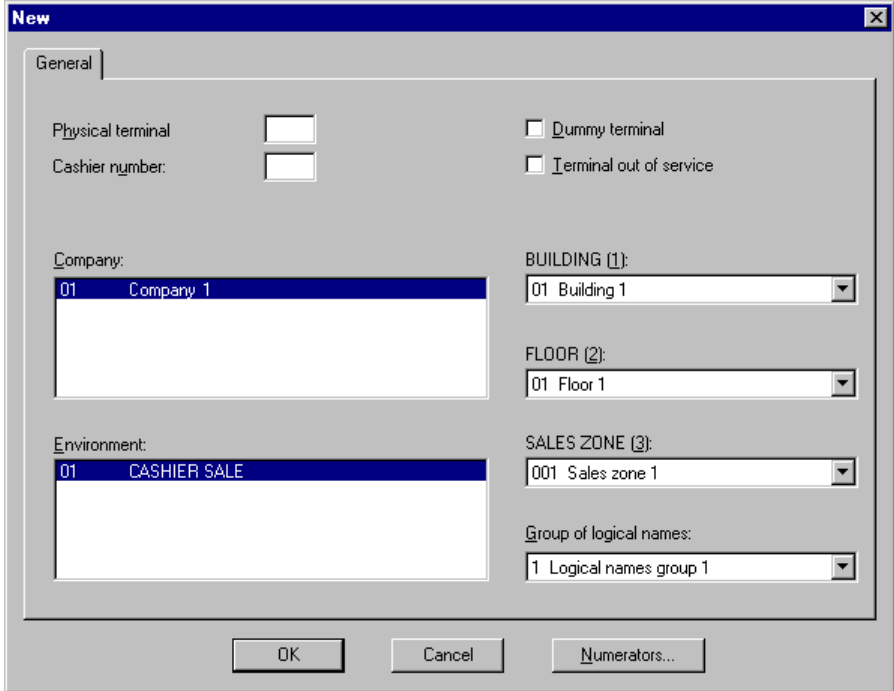
Fig. 2.52 New terminal registration dialog box

3. Complete this box as follows:

   - "Physical terminal": Internal terminal identifier (4 digits).

   - "Cashier number ": Physical address of the terminal on the server (4 digits).

   - "Company": Company that it belongs to.

   - "Environment": 2-digit code for the environment.

   - "Dummy terminal": Check this box to register a terminal that exists on the system for accounting and organizational purposes, but does not physically exist in the store. For example, in a retail outlet that has an outdoor ice-cream stand, this could be defined as a dummy terminal (it will not have access to the general functions of a standard terminal, but its total amount can be transferred to the system at the end of the day via one of the center's terminals).

- "Terminal out of service": Check this box to take a terminal temporarily off the system. Although active, it will not be possible to carry out any operations at the terminal.

- "Group of logical names ": Select the group of logical names you want to associate with the terminal.

- "BUILDING (1)": Select the building where the terminal is located.

- "FLOOR (2)": Select the floor where the terminal is located.

- "SALES ZONE (3)": Select the area that the terminal belongs to.

- "Numerators": This opens a dialog box where you can set numbering range (start number and upper limit) for each type of external document that can be printed at the POST.

4. Click on "OK".

Types of Document

Only some of the operations available from the terminals in the store generate hardcopy documents. One example is sales tickets.

By default, SF-GV offers nine types of documents, therefore this process is normally used to configure the predefined types. The aspects that can be configured or modified include:

- The name they are given
- The number of copies that are printed
- The payment document used
- Whether an invoice is to be generated for the document

To register a new type of document:

1. From the **Terminal Settings** group, start the **Document Types** process.
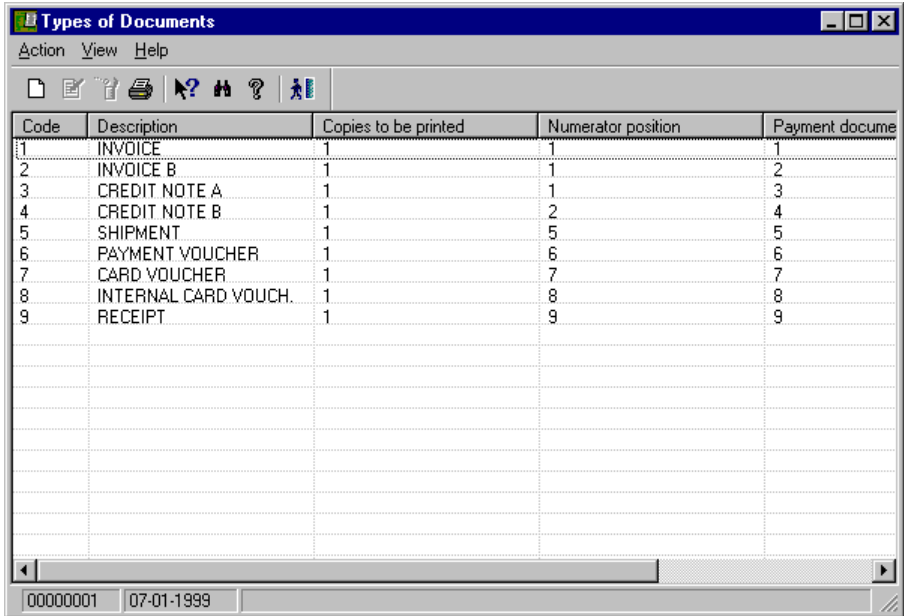
Fig. 2.53 Main window of the document type configuration and registration process

2. Access the new document type registration dialog box.

The document configuration dialog box will appear.
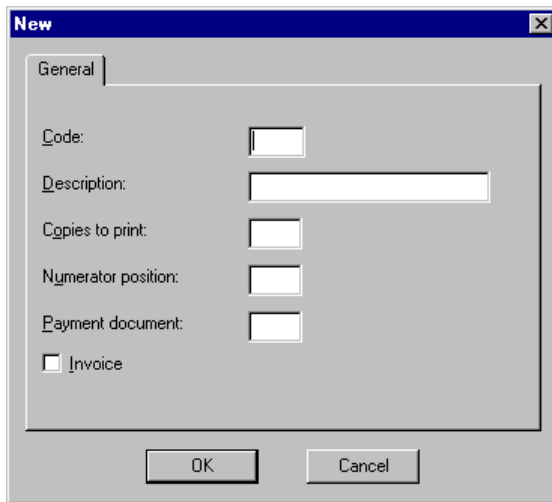
Fig. 2.54 Predefined document type configuration dialog box

3. Complete the dialog box shown as follows:

- "Code": Key in the character identifying the type of document.

- "Description": Brief reference text about the document.

- "Copies to print": Number of copies that will be printed when the document is used

- "Numerator position ": Position, within an internal table, where the number of printed documents of the document type will be stored.

- "Payment document": Document-type code that will be used in the item return/refund field.

- "Invoice": Check this box if you want to associate the document type with an invoice.

4. Click on "OK".

Restricted Sale

A restricted sale is a limitation on the hours certain products can be sold. It applies in some countries and a typical case would be the hours during which sales of alcoholic drinks are prohibited.

The configuration of restricted sales in SF-GV allows you to define various predefined timetables. Subsequently, when registering a product, you can associate it with whichever restricted sale timetable you prefer.

To configure the restricted sale timetables:

1. From the **Terminal Settings** group, start the **Restricted Sale** process.

Fig. 2.55 Main window of the restricted sale timetables configuration process.

2. Access the restricted sale timetable parameters registration dialog box.

Fig. 2.56 Restricted sale timetable registration dialog box

3. In the dialog box shown, select the "Company" where the restricted sale timetable will be applied, a 2-digit code identifying the type of restricted sale, and the times when sales begin and end. The time can take any value between 00:00 and 23:45, and the possible values for the minutes are 00, 15, 30 and 45.

4. Click on "OK".

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The new timetable is now defined and it will be possible to use it when registering items.

Payments/Receipts at the Terminal

This phase of the configuration process allows you to define how POST numeric function 11, called **Payments/Receipts**, is to work.

Function 11 appears in those cases when payments or receipts are necessary other than as a direct consequence of a commercial transaction. For example, a payment for an unexpected repair in the store may make it necessary to take cash from the terminal and so to use this function. The operating parameters are configured by using **Payments/Receipts at the Terminal** , found in the **Means of Payment** group in the Basic module.

The basic parameters you need to configure are:

- Whether the operation concerns a payment or receipt.

- Whether additional information is requested at the time of executing the function from the POST.

To set up the receipts and payments by terminal:

1. Select the process icon from the **Means of Payment** group. The main screen of this process will appear.

Fig. 2.57 Main window of the "Payments and Receipts at Terminal " process

2. Access the **New** window, which will allow you to register the payments and receipts made from the terminal.
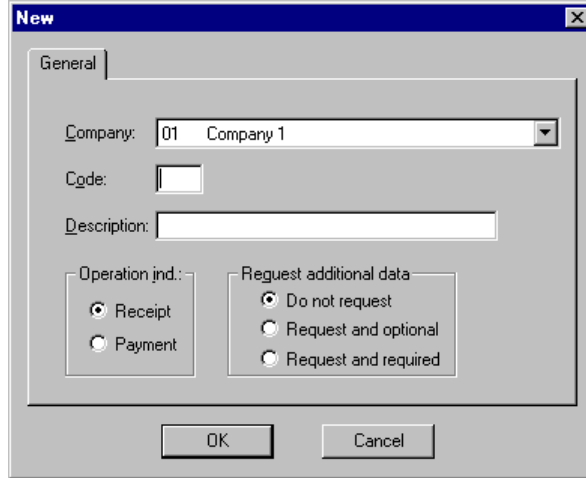
Fig. 2.58 Payment/receipt registration dialog box

3. Select the company that you are configuring and enter a code and a description for the operation that you are registering.

Select the operation type, i.e., whether it is a payment or a receipt, and check the necessary boxes according to the additional data that you want the system to request at the time the operation is carried out.

4. Confirm by clicking on "OK".

When cash is taken from the terminal it is shown on the cash register reports produced periodically by Administrative-Financial Management. The procedure is similar to that described for other processes described previously.

Terminal Data Loading

This program allows the terminal data loading process to be launched from a client station and all the entities existing on the system to be maintained, together with their configuration data.

The following functions are therefore carried out from this process:

- Launching selective loading of specified entities

- Launching initial loading of all entities

- Controlling the load operations carried out, showing the status and the date of the most recent load

- Carrying out maintenance of the existing entities and the process used to generate them

Performing Loads

Access the program by double-clicking on the **Terminal Data Loading** icon in the **Terminal Settings** folder of the Basic module. The main screen of the process will appear.
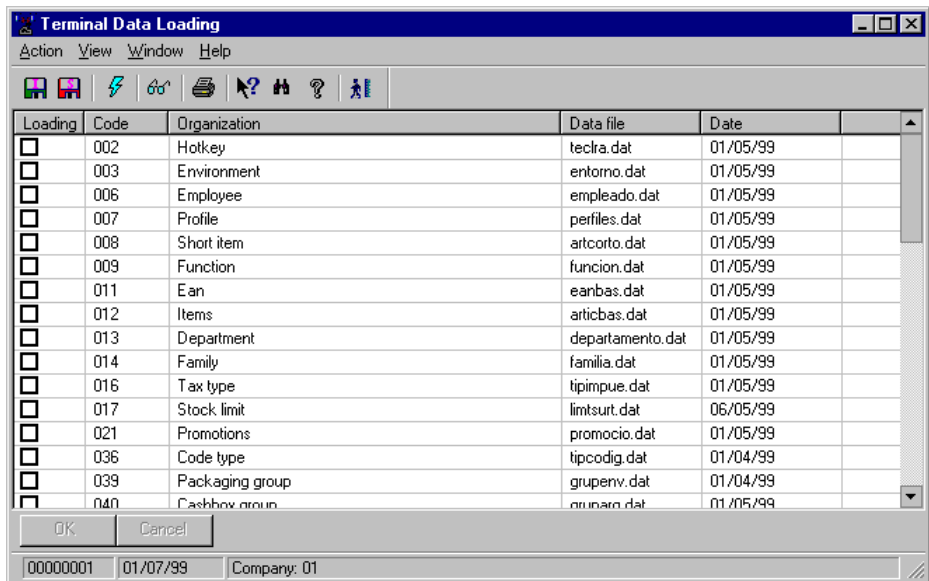
Fig. 2.59 Main window of the data load process

To load data:

1. Select the entities that you want to load on the POSTs by clicking on the checkbox next to the entity code. This selection process will be accompanied by the highlighting of the line and the entity's load status changing to "Selective".

2. To carry out an initial data load, select the corresponding option on the **Action** menu.

3. Confirm any of the actions listed above with the "OK" button.

The initial load has priority over the selective load. Therefore, when an entity is selected for initial load, it will not be possible to select it to carry out a selective load. However, the opposite is allowed.

When an entity has selective or initial loads pending, you will not be allowed to delete it. This has to be the case in order to avoid interfering with the download process running on the server, which cannot be controlled from the application.

Entity Maintenance

To access this program use the **Configuration** option in the **Action** menu of the main screen of the **Terminal Data Loading** process. The following dialog box will appear:
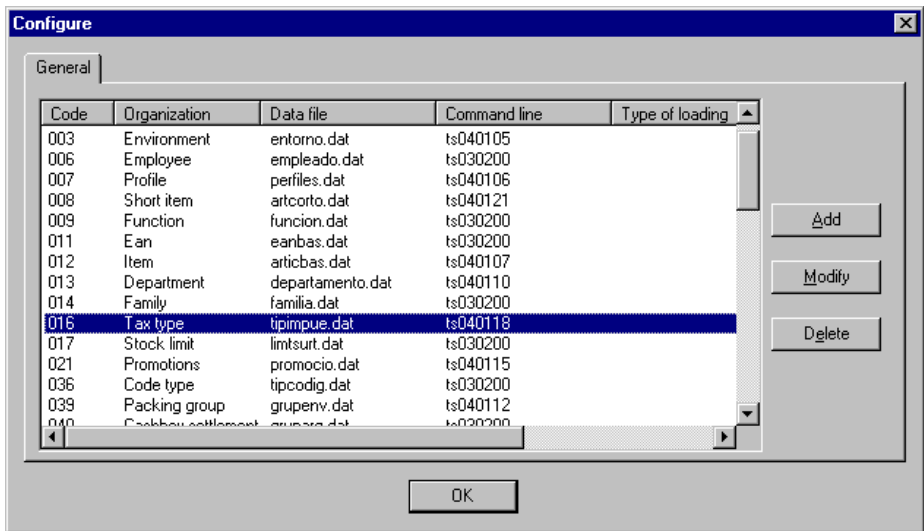
Fig. 2.60 Data load to terminals process set-up dialog box

The following actions can be performed using this program:

- Creation of a new entity
- Modification of an existing entity
- Deletion of an entity

Creation of a New Entity

Click on the "Add" button displayed in the previous dialog box. The following screen will appear.

Fig. 2.61 New entity registration dialog box

Enter the following data:

1. Select the company that you are configuring

2. Select the type of organization that you are registering from the list shown in the dialog box.

3. Enter an identifying code for the entity and a description of it in the "Code" and "Organization" boxes, respectively.

4. Type the name of the data file that will be used to load the information on the entity.

5. Finally, enter the name of the process responsible for launching the entity load in the "Process/Command line" box and confirm using the "OK" button.

Associating General Entities

Defining and configuring profiles, groups of client stations, environments, etc., are general tasks which have to be carried out prior to operating SF-GV. Once this has been done it is also essential to set up other associations that give specific content to the defined profiles, groups and environments. These tasks include, for example:

● Associating functions with the available profiles. Thus, if new profiles have been defined, you will have to assign various POST functions to each of them.

● Associating functions, means of payment and delivery methods with the existing environments. Every environment, and therefore the terminals located in it, will thus be fully configured with its own operating characteristics.

● Associating the client station groups that have been registered with the folder groups existing on the system. In this way the client stations will have available a series of processes according to the interface configuration they take.

● Associating items with groupings and with the grouping details. This association operation is described in the chapter ☞ "Item Maintenance". Consult the section ☞ "Configuration of the Commercial Structure" in this chapter for more details on how to create groupings.

Associating Functions with Profiles

The chart below shows the sequence of operations which limits the functions available to any employee of the company from a given POST.

COMPANY CREATION: G_1

PROFILE DEFINITION: P_1 P_2 ... P_n

EMPLOYEE CREATION: $E_1 \in P_n$

REGISTERING ENVIRONMENT and POST: $POST_i \in H$

ASSOCIATING PROFILES to FUNCTIONS: $P_n = F_1 + F_2 \ ... \ + F_j$

EXECUTABLE FUNCTIONS by the EMPLOYEE

in the $POST_i$: ($POST_i$ Functions) $\cap$ (E_i Functions with P_n Profile)
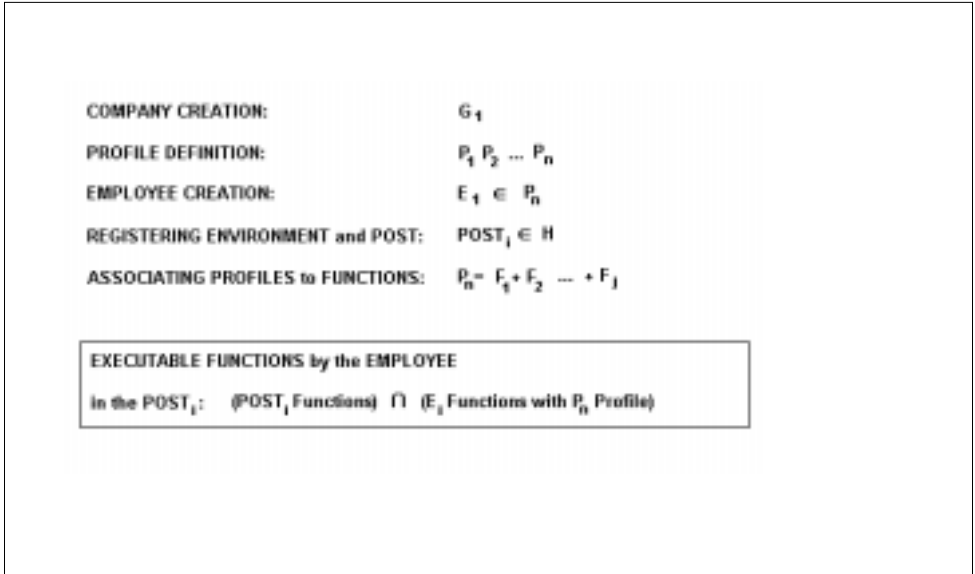
Fig. 2.62 Steps leading to the definition of the functions available
for a company employee on a point of sale terminal

The first step is to create the company and a series of profiles, which may either be chosen from among the default profiles or the customized ones, or a combination of both, as required. Next, from among the functions available for a POST, select those that you think will be used in the company as a whole, and then during the creation of employees assign a profile to each employee. Finally, you have to associate a series of functions with each profile. Indirectly, these will determine the specific rights of each user.

The profiles predefined in Sales Management (Supervisor, Salesperson, Cashier, Operator and Cashier managed at the office) have already been assigned a set of functions (different in every case). The profiles that you create do not include any POST functions by default.

To associate functions with a user-created profile, or modify the functions associated with an existing profile, follow the procedure described below:

1. From the **Employees** group, start the **Functions by Profile** process.

Fig. 2.63 Main window of Functions by Profile

2. Open the **Action** menu and select the **Associate** option.

Fig. 2.64 Dialog box for associating functions with profiles

In the dialog box, select a "Company" and the "Profile" that you want to associate the functions with.

Select one by one all the functions the profile in question will have, and confirm with "OK".

From now on, all the employees with the selected profile will be able to use these functions.

Associating Various Parameters with Environments

As was explained in the section describing the definition of environments, an environment is a way of grouping together terminals with similar characteristics.

Imagine, for example, one or more duty-free stores and a hypermarket. Both companies belong to the same store. You may want the terminals in the duty-free stores to have the following characteristics:

- Allow payment in foreign currency
- Not accept checks
- Longer opening hours for sales (for example, until the early hours of the morning)

On the other hand, the hypermarket terminals might only allow:

- Payment in the national currency
- Normal supermarket opening hours
- Checks accepted
- Optional home delivery

These characteristics could be used to create two different environments in SF-GV. Each new terminal on the system could then easily be assigned to the relevant environment.

Once the environments have been created and terminals assigned, it is necessary to associate three particular characteristics with each environment:

- Means of payment
- Available functions
- Delivery methods

The procedure for assigning these aspects to a terminal is very similar in all three cases. We will therefore only describe the most general case, i.e., associating functions.

In order to associate specific functions with an environment:

1. From the **Terminal Settings** group, start the **Functions by Environment** process.

Fig. 2.65 Main window of the process used for associating functions with environments.

2. Double-click to select any of the previously created environments from the list.

   The function association dialog box will appear.
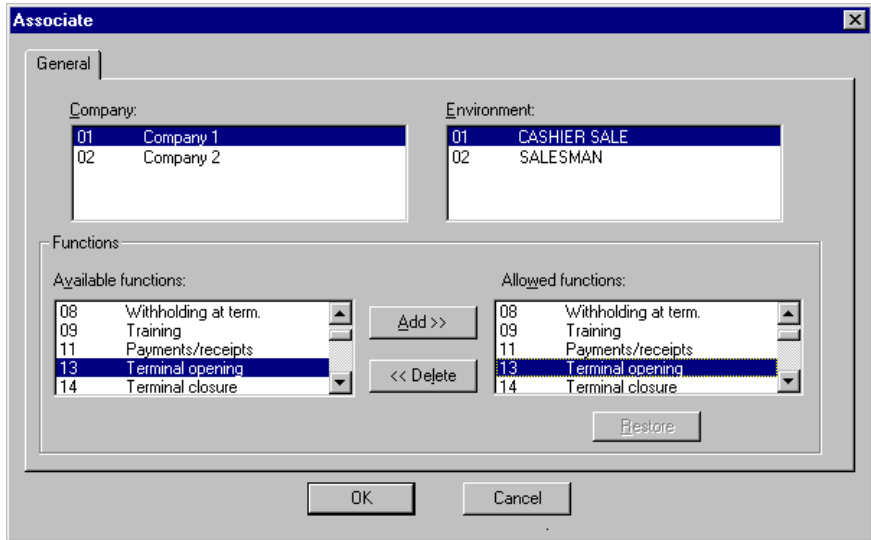
Fig. 2.66 Dialog box for associating functions with environments.

3. In the top part of the dialog box, select the company and the environment that you are going to associate. The "Functions" box at the bottom shows the functions available for this environment.

4. In "Available functions", select the ones that you want to include in the environment and click on "Add".

5. Click on "OK" to confirm your selection.

Repeat the process described for the means of payment and the delivery methods to be used for each of the environments that you have defined.

Associating Client Station Groups with Folder Groups

Earlier in this chapter, client stations and the effective client stations existing in each group were configured (➤ "Configuration of Groups and Client stations"). The result is that similar client stations will be placed in a same group, even if they are physically far apart from one another in the store.

To really give these groups different possibilities it is necessary to set up an association. For simplicity, this association is made between client station groups and folder groups, since it would be extremely laborious, given the number of processes existing in SF-GV, to carry this out at the process level.

The association procedure is similar to the one described for associating parameters with environments.

In order to associate a client station group:

1. From the **Folder Organization** folder, start the **Client Station Groups/Folder Groups** process.

Company	Station Grp	Folder Group	Description
01	001	01	Basic
01	001	02	Financial Admin.
01	001	03	Utilities
01	001	04	Loyalty
01	001	05	Weighing Scales
01	001	06	Merch. Management
01	001	07	Labels
01	001	08	E.F.T.
01	001	09	G.I.S.
01	002	01	Basic
01	002	02	Financial Admin.
01	002	03	Utilities
01	008	02	Financial Admin.
01	008	04	Loyalty
01	009	01	Basic
01	009	02	Financial Admin.
01	009	03	Utilities
01	009	04	Loyalty
01	012	01	Basic
01	012	02	Financial Admin.
01	012	07	Labels

Fig. 2.67 Main window of the client station group association process

2. Open the **Action** menu and select the **Associate** option.

The client station group association dialog box will appear.
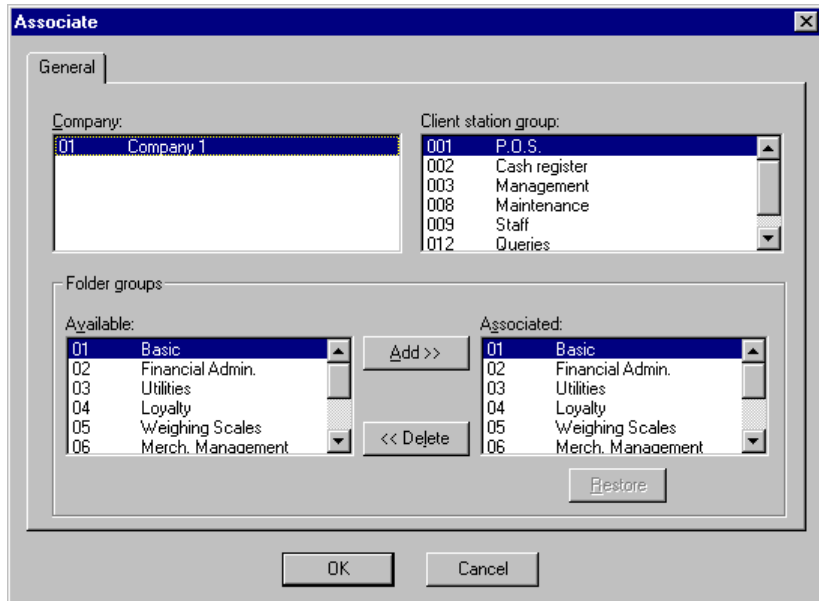
Fig. 2.68 Client station groups and folder groups association window

3. In the top part of the box select the company and the group of client stations that you want to associate. In the box at the bottom headed "Available", the existing groups of folders are shown, including both the predefined folders and those that have been created.

4. In this box, select the folders that you want to associate with the client station group and click on "Add". Once added, they will appear in the "Associated" box.

5. Click on "OK" to confirm your selection.

This operation completes the associations needed for the configuration.

Transaction Configuration

The two configuration operations described in this section are necessary in order to use and query the transaction log. This is a binary sequential file where the basic data of all transactions taking place on the store's POSTs is kept.

The TLOG file stores the following data:

- Company code
- Code of the terminal where the transaction was carried out
- Transaction number
- Salesperson code
- Transaction status
- Type of transaction
- Function carried out by the terminal
- Card number (if a card is used for the operation)

The problem lies in the fact that a terminal can perform a relatively large number of operations (around 40). Thus, to simplify the TLOG process and subsequent queries on the data, transaction types are created and associated with the POST functions required.

Types of Transaction

This stage involves the creation of the types of transaction with which all the functions available on a POST will be associated. Note that, unlike other configuration processes described earlier, the types of transactions that you define in this step will be applied to the entire group of companies.

To define the different types of transactions to be associated whit POST functions.

1. From the **Transactions** group in the Basic module, start the **Transaction Types** process.

Fig. 2.69 Main "Transaction Types" window

2. Access the transaction type registration screen.

   The corresponding dialog box will appear.

Fig. 2.70 Transaction type registration dialog box

3. Assign a code to the transaction type and enter a reference text in the "Description" field.

4. Click on "OK".

Repeat this process as many times as necessary until you have created all the transactions needed to cover all the terminal functions. In the next stage you will notice that there are quite a few functions that are difficult to place. It is therefore useful to create an **Other functions** type where you can include all the functions which are difficult to classify.

Associating Function Types Created

Once the types have been created, you must place every function available at the terminal in one of the existing types. Remember that no function can remain unassigned. This would cause situations where indeterminate states arise for SF-GV, resulting in operation errors.

To associate POST functions with the types:

1. From the **Transactions** group in the Basic module, start the **Transaction Type Detail** process.

Fig. 2.71 Main window of transaction type detail maintenance.

2. Access the transaction detail registration screen.
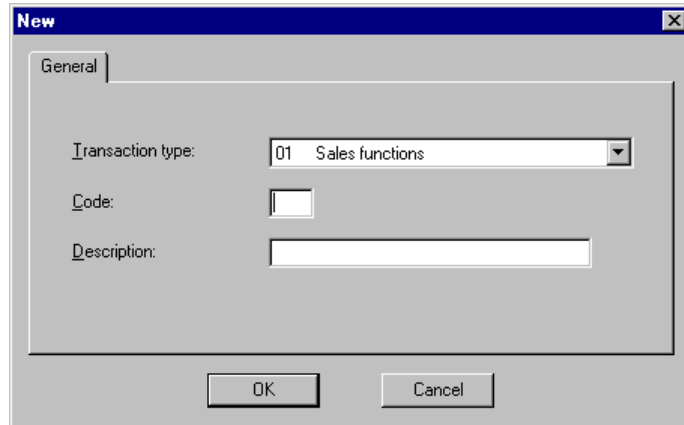
Fig. 2.72 Transaction detail definition dialog box.

3. Complete the dialog box shown as follows:

    - "Transaction type": Select the type of transaction in which you want to place the function from the list.

    - "Code": Type in the code of the function that you want to associate with the chosen type. The original function codes are shown in the table below.

    - "Description": Type in the name of the POST function that you are associating.

4. Click on "OK".

Repeat this process until all the functions available at the POST have been associated, so that none are left unplaced and thus cause errors when the transaction log is created.

The following table shows the standard POST functions.

Function code	Description
01	Basic sale
05	Operation cancellation
06	Fund withdrawal
07	Fund provision
08	Card withheld at terminal
09	Training
11	Payments/receipts
13	Terminal open
14	Terminal closing
15	Off-line closing
17	Sales query by department
18	Sales query by center
19	Sales query by cashier
20	Sales query by shift
21	Sales query by POST
22	Sales query by area
23	Price query
24	Foreign currency quotation
29	List of means of payment
30	Cashbox settlement group
31	List of functions
33	POST totals query
34	Deferred sale
35	Block / unblock
39	Change password
40	Restock consumables
41	Reprint ticket
44	Register item EAN
45	Inventory capture
47	Price change
48	Container return/refund
49	Change of numerators
50	Security warnings
51	Stock movements
52	Cashier connection
53	Cashier disconnection
57	Calculator mode
79	Confirmation of withdrawal
98	Reload files
99	End of application

Configuration of Customers and Credit Cards

The customer and credit card configuration process comprises the following stages:

1. Definition of the types of customer

2. Definition of types of credit cards and how each of them will be treated

3. Registration of the cards accepted by the system

4. Registration of customers on the system

Of these, the first three phases are short and need to be carried out during the initial configuration of the system. However, the fourth stage, although it is a part of the configuration, is carried out periodically whenever a new customer submits his or her details to the store.

These configuration stages are explained in detail in the section ☞ "Customer Management" in chapter 4.

Configuration of the Commercial Structure

The *commercial or merchandise* structure is the internal hierarchy into which the items sold in the store are organized. The organization of items is hierarchical, as it includes a range of levels, the lowest of which is the item level. This organization is internal, i.e., it is transparent to the customer. Nevertheless, it may be reflected in some aspects of the structure of sectors or departments. However, the organization observed by the customer does not have to be the same in all respects as that set up in the Sales Management configuration.

Moreover, we can consider other aspects affecting the sales of items to be *related* to the merchandise structure, such as taxes applicable to an item, returnable containers, and restricted sale conditions. These aspects are associated with the merchandise structure, as the applicable taxes (for example, different VAT rates), returnable containers and restricted sale conditions all depend essentially on the European legislation affecting the item in question.

Thus, the configuration of the company's commercial structure changes more often than, for example, its initial configuration.

The hierarchy is very important as a way of locating items and for producing listings and statistics on items with similar characteristics. The hierarchy described above is shown in the following figure.
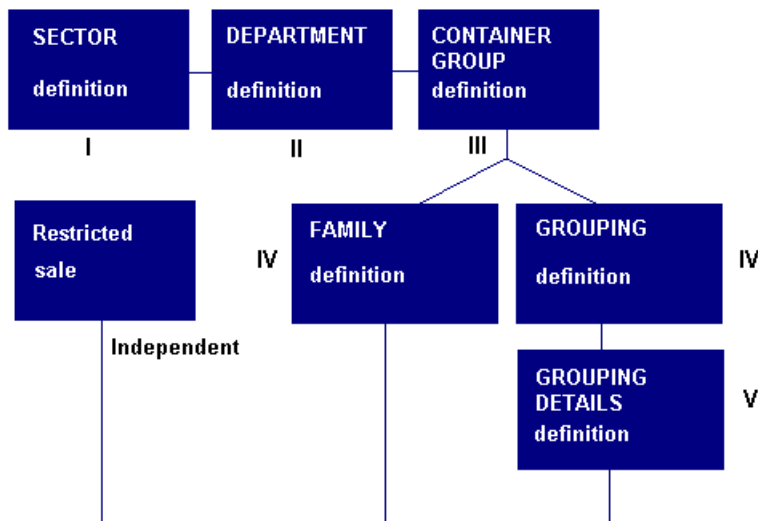
Fig. 2.73 Configuration of the center's commercial structure

Below we will examine the configuration process for the commercial structure through to the item registration stage. Registration of items and EAN codes is described in detail in the section "Item Maintenance" in the relevant chapter of this manual.

First we will create the structure of a hypothetical company. This will require the following phases:

1. Definition of restricted sale conditions

2. Definition of sectors

3. Definition of departments

4. Definition of container groups

5. Definition of families of items

6. Definition of groupings of items

7. Definition of grouping details

Following the same top-down methodology as in the other cases described so far, first the global levels are created and then in stages 5, 6 and 7 the families, groupings and grouping details are added. All of these are usually set up before any items are registered for the store. However, creating groupings is not obligatory, as items do not have to belong to a grouping.

The subsequent phases of item registration and the association of items with groupings are described in the chapter ▶ "Item Maintenance".

Sectors

Sectors are the level of the company hierarchy immediately above departments. Thus, following the **top-down methodology**, it is necessary to define them before departments. This level of definition is frequently used in two different ways:

*   Associating sectors with the company's physical areas (parts of a floor, for example) where the departments are located.

*   Associating sectors directly with departments. Thus, an establishment might consider *Leisure* to be a sector (identified by a numerical code) including the *Music*, *Video* and *Books* departments.

Standard practice is to identify each sector by a number and for each to include several related departments.

To define a new sector:

1. From the **Item Management** group, start the **Sector Maintenance** process.

Fig. 2.74 Main window of the sector process

2. Access the new sector registration screen.

Fig. 2.75 Dialog box for registering new company sectors

3. Complete the sector registration dialog box as follows:

- "Company": Select the company where the sector is to be located.

- "Code": A 2-digit code which identifies the sector.

- "Description": Reference text for the sector, up to 20 characters.

4. Click on "OK".

Remember that you must register all of the store's sectors before you can define departments.

Departments

In Sales Management, the term "department" is used in the colloquial sense of the word. Thus, in a hypermarket, any of the food sections could be treated as a department, as could the sports or DIY sections. Before defining the departments you must first create:

- The company's sectors
- The applicable tax types

It is essential to configure these two aspects, as each department will be included in a sector where a different VAT rate (or equivalent tax) will be applied depending on the type of products sold. Restricted sales, which are not included in the list above, apply only rarely. It is therefore usually sufficient to enable the **00** mode, i.e., unrestricted sale.

In order to create a company's departments:

1. From the **Item Management** group, start the **Departments** process.

2. Access the department registration screen.

   The new departments registration dialog box will appear.
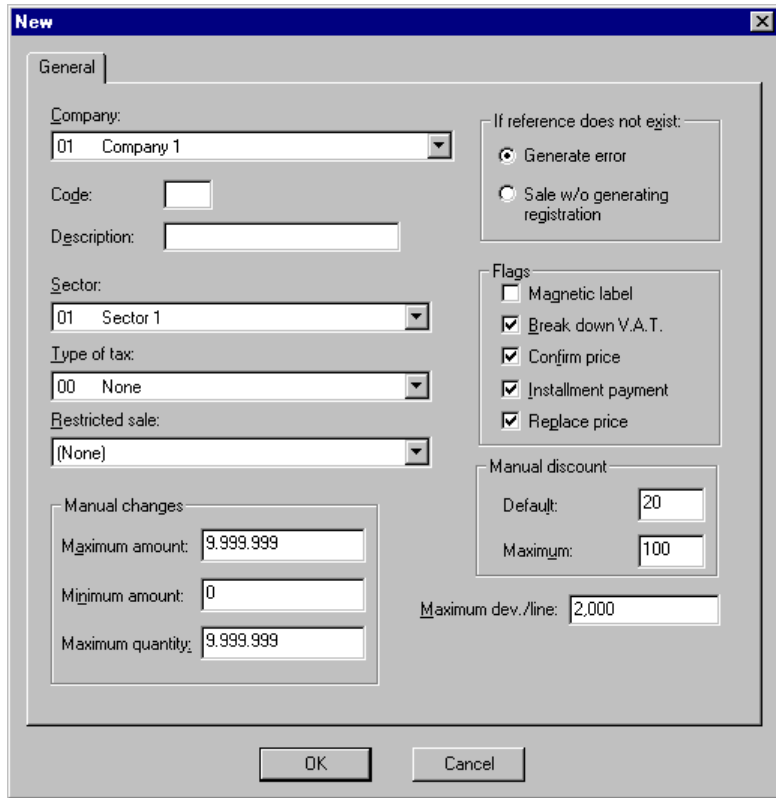
Fig. 2.76 Department registration dialog box

3. Note that the elements in this box are similar to others used in previous configuration phases. We will therefore not describe them individually. However, the following deserve special attention:

- "Maximum dev./line": Enter a number comprising 9 integer digits with 2 decimal places. This is the maximum sum that can be returned from a POST in a single transaction against an item in the department.

- "If reference does not exist" box: Specify here the action that the POST should take if the operator enters the code for a non-existent item.

- "Flags" box: This allows you to enable a series of general department parameters. The check boxes included are:

  - "Magnetic label": If this box is checked ALL the items in the department will carry a magnetic security label, which will have to be removed during the transaction. The POST warns the terminal operator of the presence of the label.

- "Break down VAT": If this box is checked the VAT is broken down on the sales ticket.

- "Confirm price": If this box is checked the operator must confirm the associated price, so as to avoid using prices which have not been updated or causing errors that the system is unable to recognize.

- "Installment payment": If this box is checked, payment by installments is allowed.

- "Replace price": If this box is checked the operator will be able to change the price of the item from the POST. If this box is checked, the "Manual changes" box will be enabled so you can set the maximum and minimum amounts permitted.

- "Manual discount" box: This option is associated with department sale operations. It allows a manual discount to be set that an employee can apply when making a sale (3 integers and 2 decimals). It includes two check boxes:

  - "Default": The discount as a percentage that will be applied by default to the value of a sale in the department or to the sale of an item in the department.

    If the employee performing the department sale at the POST presses the discount key without having first entered the percentage discount, the program will automatically apply the percentage shown in the "Default" box.

  - "Maximum": Maximum percentage discount that can be applied by the terminal operator during a department sale.

4. Click on "OK".

> Remember that departmental promotions are one of the forms of promotion or special offer allowed by SF-GV. This type of promotion is not registered during the department configuration phase, but from the **Promotions** process in the **Item Management** group. Nevertheless, when you access the **Departments** process to maintain or modify it, the system will check that the departments associated with a particular promotion show the "Special offer data" button in the modification and registration dialog box, so as to enable the parameters of the current promotion to be looked up (promotion type and code, associated discount, etc.).
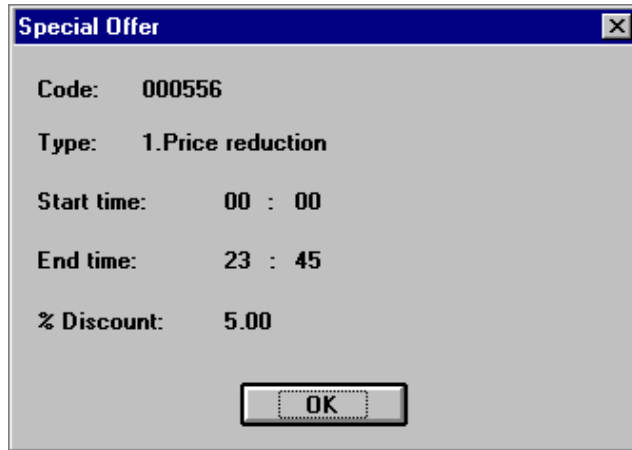
Fig. 2.77 Data query box for an active department promotion

Container Groups

In SF-GV, container groups refer only to returnable packaging and containers marketed by the company and whose value the system needs to know in order to handle returns and refunds. A container group is usually associated with a specific department and is defined at the company level. In this way, when a customer returns a container, the POST shows the amount of the refund to be given and this sum is recorded for management and accounting purposes.

To register a new container group:

1. From the **Item Management** group, start the **Packaging Groups** process.

Fig. 2.78 Packaging groups main window.

2. Access the packaging groups registration screen.

    The registration dialog box will appear.
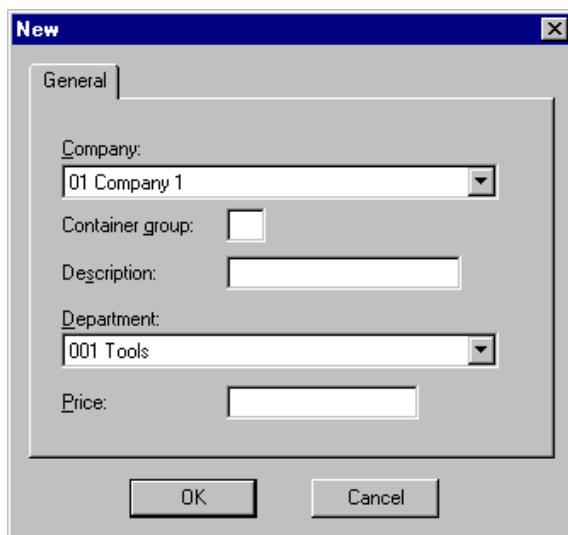
Fig. 2.79 Packaging groups registration dialog box

3. Complete the box as follows:

- "Company": Company for which the type of container is being registered.

- "Container group": Obligatory 2-digit numeric code.

- "Description": Descriptive text of up to 20 characters, obligatory.

- "Department": Choose the department that the container group belongs to. Departments group together items of similar characteristics and are managed by the **Departments** program.

- "Price": Price of the registered container.

4. Click on "OK" to complete the registration.

Item Families

A family is a group of articles belonging to the same department in the company. Families should not be mistaken for groupings. The difference between them is that groupings can take in items belonging to different departments, whereas families only permit items from the same department. Groupings are more useful when producing reports or internal sales listings (☞ see the "Sales Reports" section in the "Administrative-Financial Management" chapter).

To register a family of items:

1. From the **Item Management** group, start the **Families** process.

Fig. 2.80 Main window of the family management process

2. Access the family registration screen.

   The family registration dialog box will appear.

Fig. 2.81 Family registration dialog box

3. Complete the dialog box according to the following criteria:

   - "Company": Select the current company.

   - "Department": Select the department that the family will belong to.

   - "Code": Type in a code of up to 3 digits with which to identify the family.

   - "Description": Enter a brief reference text for the family.

4. Click on "OK" to register the new family.

The family registration process is not actually as independent of the item registration process as this section might suggest. Here we have assumed that all the existing families are known beforehand and that items are added later. In fact, it is normal for the store to register articles in such a way that over time they come to form a family which did not originally exist. This family therefore has to be created and the items need to be taken out of the families to which they were originally assigned and then assigned to the new one.

Item Groupings

Items groupings are independent of item families, not only from the organizational point of view, but also as regards the order in which they are defined, i.e., they can be defined before or after.

Apart from the fact that groupings often include items from different departments, another difference between groupings and families is that the former are often subdivided into subgroups known as "grouping details".

Groupings are basically used to generate internal reports and listings.
Thus, you can create, for example, groupings including:

- Items of the same brand
- Items of the same price
- Items whose sale is interesting in some way

The procedure for registering groupings is the same as that for families, except that the identifying code can have a maximum of two digits. Use the **Grouping Maintenance** process from the **Items Management** folder.

Register all of the company's groupings before proceeding to define the grouping details. Groupings are normally queried on-line and then printed out for more detailed analysis.

Grouping Details

The registration procedure for grouping details is the same as that for families, except that the identifying code can have a maximum of two digits. Use the **Grouping Detail** process from the **Item Management** folder.

The registration procedure is similar to that used in the case of groupings. The identifying code for grouping details is also two digits long.

Configuration Conflicts and Priorities

During the laborious process of configuration it may happen that some of the operations will give rise to situations which will apparently cause contradictory results being produced during the operation of the system. In SF-GV this problem is solved by prioritizing the processes.

Thus, let us imagine for instance that a special customer is going to pay for an item in a given department. A maximum discount of 20% has been defined for this customer (**Customers** process from the **folder of the same name**). At the same time, the department in which payment for the transaction is to be made has been configured for a discount of 10% (**Departments** process, **"Item Management"** group). What discount is applied to the transaction in this case?

The general rule followed by SF-GV when this type of situation arises is to apply an AND between the conditions that have given rise to the conflict. Thus, the discounts or the points obtained on transactions during loyalty-building campaigns and suchlike, are cumulative.

The only way to avoid this rule is to define a promotion as being incompatible with other active special offers and promotions when setting it up (see "Special offer and promotion overlap" in the ☞ "Item Maintenance" chapter).

StoreFlow Integration with SA/GSA

This section describes the developments built for enabling the coexistence of two sales applications, SA/GSA and StoreFlow, within the same company, and explains the processes developed for transferring information from SA and GSA to SF-GV:

● Transfer of new registrations (for instance, of items) from the SG and GSA applications to SF-GV

● Transfer of transactions performed in SF-GV to SA and GSA

● Joint company closing for both applications (SA or GSA and SF-GV)

Grabaart

This program is used for collecting the changes made by the Windows maintenance processes in StoreFlow and updating the data files of the SA and GSA applications.
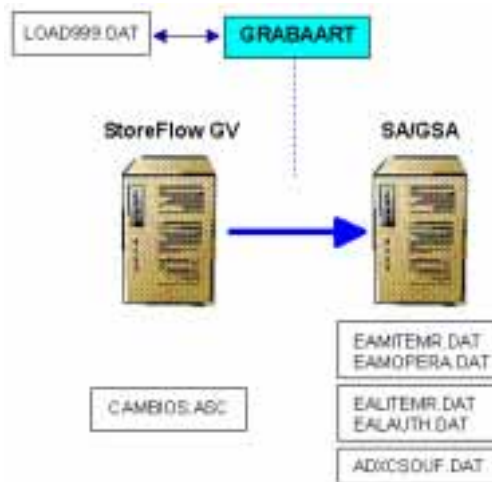
Fig. 2.82 Work environment of the GRABAART integration program

The operation can be summarized as follows. When this program is started, it awaits the receipt of the order sent by StoreFlow indicating the existence of new changes in the file CAMBIOS.ASC. Once the program has received this signal, it reads the offset up to the last record read in the file LOAD999.DAT and loads all the changes that exist from that offset to the end. The offset is reset each time an update takes place. This avoids having to repeat the process should the program end abnormally.

The maintenance of items, bar codes, on-line price changes, container groups and employees is processed on-line by the program. It also processes the initial and selective loading of reference, EAN, container group and employee files.

These initial and selective loads will immediately become effective both in SA and in GSA. Therefore, if StoreFlow terminals exist, they must be reset immediately in order to prevent the terminals of the various applications from temporarily selling items at a different price.

Special offer processing is also included, although not all the types supported by StoreFlow are available. The special offer data is included in each record for the items received from the file CAMBIOS.ASC. What follows is a description of how the StoreFlow data should be configured in order to process special offers in SA and GSA, bearing in mind that in StoreFlow special offers are broken down by types, whereas in SA/GSA they are broken down by methods:

- By using price reduction: method 4 in SA should be used (price adjusted to quantity).

- By using price reduction for quantity: if the maximum quantity is equal to 99, the ceiling is less than 99 and the ceiling is applied from the first item (maximum = 99, ceiling <99, ceiling application from the 1st item), method 3 of SA and GSA should be used (price adjusted to the group).

- By using A*B: if the maximum quantity is equal to 99 and the qualifying product and free gift units are greater than or equal to 1 (maximum = 99, qualifying product units >= 1, free gift units >= 1), method 2 of SA and GSA should be used (price on the group above the ceiling).

The rest of the special offers supported by StoreFlow cannot be adapted to those existing in SA and GSA.

The following points should also be taken into account:

- The start and end times of the special offers are not used when the offers are sent to SA/GSA.

- In SA/GSA, EAN codes are updated without the control digit.

- EAN codes are handled as references in both SA and GSA. They are sent after the references and no identical references and EAN codes can exist. Moreover, in GSA EAN codes are not linked to references.

- Containers are handled as references in both SA and GSA. Therefore, if they are used in StoreFlow, no references or EAN codes included between the numbers 1 and 99 can exist. In SA, containers are linked to the reference.

- If a linked item and a container exist in the same reference, the linked item will be updated in SA. The linked item's code sent to SA must have a maximum of 4 digits.

- In order to be able to perform employee maintenance tasks, operator models need to be registered in SA and GSA, which must correspond to the StoreFlow user profiles. In SA, the operator models are included between *1 and *9, and in GSA between 99999991 and 99999999; in StoreFlow, the user profiles are included between 1 and 9. The relation between user profiles and operator models is as follows:

User profile StoreFlow	Operador model SA	Operador model GSA
1	*1	99999991
2	*2	99999992
...	...	...
8	*8	99999998
9	*9	99999999

- All the employees registered in SA/GSA must also be registered in StoreFlow.

- When a profile is modified in StoreFlow, the operator model must also be modified in SA/GSA, and all the operators who have that profile must be sent from StoreFlow so that they can be updated by SA/GSA.

- The changes sent to SA/GSA will be those corresponding to the company defined in the logical name company_gsa.

- The terminal 999 cannot be defined in StoreFlow, since the load file for this terminal is the one used for sending the updated data from StoreFlow to SA/GSA.

- No process exists for updating in StoreFlow the data or changes made in SA/GSA.

- The SA/GSA item and operator entities must contain the same data as those in StoreFlow, and vice versa, so that both applications generate the same sales information, since otherwise the results would be unpredictable.

The GRABAART program must be running at all times, but should it stop running for any reason, the offset will be retrieved for the last movement that was updated by the controller, and the movements that took place while it was halted will be processed. In this way, the movements made through StoreFlow's Windows maintenance process are not lost.

Leetran

This program generates the transactions in the StoreFlow log based on the transactions contained in the SA or GSA log, so that they can be processed by means of StoreFlow.
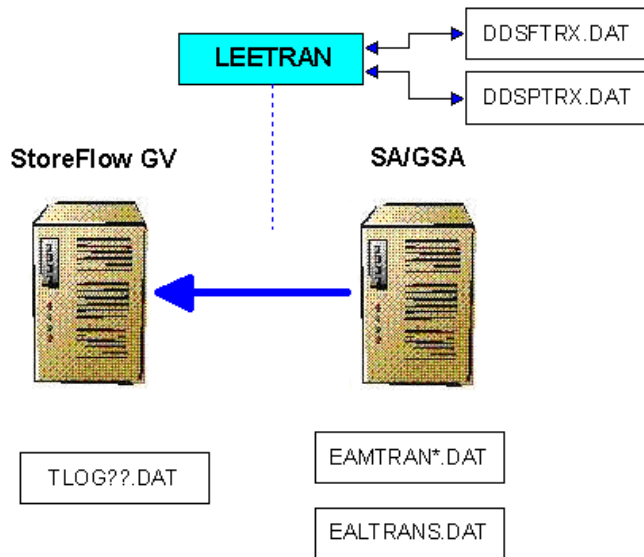
Fig. 2.83 Work environment of the LEETRAN integration program

When this program is started, it reads the offset in the file DDSPTRX.DAT and points to the record position that needs to be processed in the file called EAMTRAN*.DAT (in the case of SA) and EALTRANS.DAT (in the case of GSA). This avoids having to repeat the process should the program end abnormally.

The following points should be taken into account:

- The SA/GSA transactions will be added to the active "tlog" file for the company that has been defined in the logical name company_gsa.

- The EAN codes used in the SA/GSA terminals are sent to StoreFlow without the control digit.

- The EAN codes of the items sold will not be sent to StoreFlow if they are linked in SA; only the reference will be sent.

- The containers sold in GSA are sent to StoreFlow as references.

- StoreFlow only processes the containers sold as items linked to a reference. Therefore, it does not manage the container return operations carried out in SA or the miscellaneous item sale operations (payments/receipts) also carried out in SA.

The LEETRAN program must be running at all times.

Cierre

This program manages the opening and closing orders sent from StoreFlow to SA and GSA. The store opening order is ignored in SA, since this concept does not exist in this application.
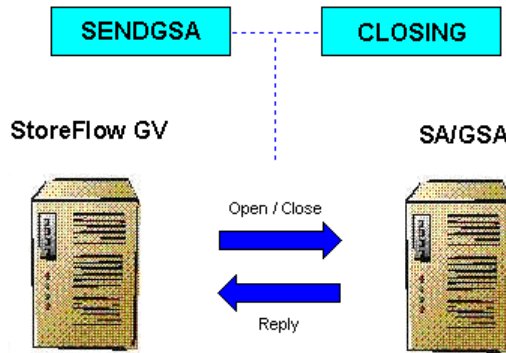
Fig. 2.84 Work environment of the CIERRE integration program

It also collects the opening and closing indications generated in StoreFlow and sent by the program SENDGSA.EXE. Once the instruction to be performed has been collected, the corresponding process is launched, depending on the application that is active at that time. Once the required operation has been performed, the reply resulting from the execution of that instruction is sent to the program SENDGSA.EXE so that it can report the result to StoreFlow. The available requests are: Opening, Closing and Forced closing.

In order to execute the store opening and closing process in GSA, you need to define an automatic procedure called CIERRE where the files to be processed must have been defined. Next, the bookkeeping closing option and the terminal disabling option are enabled.

In order to execute this program in SA, it is not necessary to define the "PROCEDURE 1" for bookkeeping period closings in the store customization options.

The CIERRE program must be running at all times.

3

Item
Management

- Basic Concepts
- Item Maintenance Processes
- Special Offers and Promotions

StoreFlow GV

This chapter covers those aspects of SF-GV related to item maintenance. This includes both the initial tasks carried out when setting up the store, and which appear in the configuration of the commercial structure, and tasks which were not included in the configuration chapter and so have been included here for greater clarity. These tasks include registering item identification codes and associating items with groupings, for instance. This chapter also describes a number of frequent tasks, such as registering items when they are received in the store, generating labels, changing prices, etc.

Finally, promotions and special offers are described. These are subjects of great importance in the running of a modern store.

Basic Concepts

The figure below shows the item-maintenance tasks which can be performed from SF- GV.
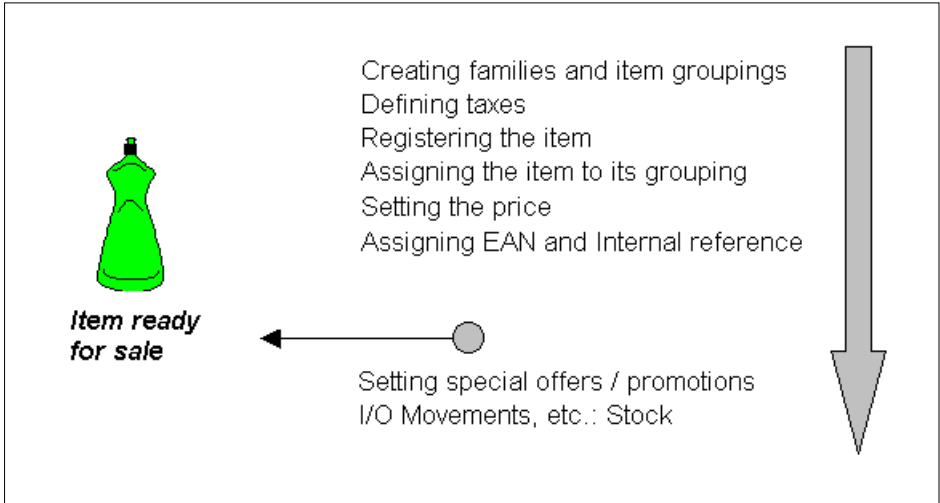
Fig. 3.1 Operations directly related to items

In SF-GV, the life cycle of an item can be considered to consist of three basic phases:

- *Initial tasks* before registering the item, particularly in relation to its configuration. These are necessary to create the company's commercial structure and be able to start registering items. These tasks include:

    - Definition of tax types

    - Definition of families of items and departments

    - Definition of packaging groups and units of measurement

- *Item registration*, whereby its identification code, characteristics, etc., are defined.

- *Subsequent* tasks following item registration. These include associating items with groupings, launching special offers and promotions, requesting label prints, changing the price or looking up items by their identification codes. Discontinuation of an item and its removal from the database may be considered to be the final step in its life cycle.

This chapter will describe the processes involved in dealing with items, following the chronological sequence described, and will therefore focus on the last two phases. The definition of families of items and groupings is explained in the section "Configuration of the commercial structure" in the "System Configuration and Customization" chapter.

Most of the items present in the store are identified by numerical or alphanumerical codes or bar codes. These are an essential part of stock control, for monitoring the levels of sales or performing any kind of query. In SF-GV, reference codes are assigned to items during the registration procedure. Bar codes are associated with references at a later stage. The bar codes are captured via the POST optical reader at the time of paying for the transaction. Alternatively, they may be entered manually at the POST. It is frequently the case that different bar code standards coexist in the store, and these have to be taken into account by both the POST and the SF-GV client programs.

Items are commonly identified in two different ways.

- *External identification*, by means of a bar code, basically -but not exclusively- intended for items that are marketed between different countries or companies. This identification allows the entire range of codes described in this section. This item identification is commonly referred to simply as the "code".

- An *internal identification* in numerical format, which is unique to the store and may be constructed at will. This is used for managing business aspects such as sales, the level of inventory, etc. This item identification is usually known simply as the "reference".

The term *alias* is used to refer to different bar codes associated with the same article. Aliases are used, for instance, when the store receives the same item from suppliers in different countries.

Multiple items refers to those items consisting of a set of units that are sold together (for instance, a 6-pack of beer cans).

Among the bar codes supported by SF-GV, the most commonly used ones include:

- **EAN-13:** Made up of 13 digits. The first 2 describe the item's country of origin, the next 5 the manufacturer, and the next five the product. The last is a control digit which is calculated from the other twelve by using a special algorithm.

- **EAN-8:** A shortened version of the EAN-13 which is used in particular for perishable goods with a precise sale period (tobacco products, for example).

- **UPC-A and UPC-E:** Similar to EAN-13 and EAN-8, their use is more widespread in the United States and Canada.

- **EANI (Internal EAN):** Similar to the EAN, with the distinguishing feature that the first digit is always a "2". This is reserved for products which do not leave the commercial circuit of the store.

- **Code 128:** A variable-length code, normally for internal use, distinguished by the fact that it allows the ASCII character set to be used. This is used in particular with goods that may have different sizes or colors, as for example in the textiles sector.

- **PDF-417 code:** A two-dimensional, or more precisely, multi-row code (the previous codes are single row) which allows up to 2 Kbytes of data to be included.

In addition to the above codes, SF-GV can also manage other, less commonly used codes currently present on the market.

Item Maintenance Processes

Item Registration and Look-Up

Registering items and looking up their characteristics are the operations most commonly carried out in the system. The registration operation is a part of the system's commercial configuration, prior to the full operation of SF-GV, but it is also described in this section. Both operations can be carried out on the system using the **Item** process.

The general procedure for registering items is as follows:

1. From the **Item Management** group, start the **Item** process.

    The following main process window will appear.

Fig. 3.2 Main item maintenance window

Each row corresponds to an item sold by the company. The columns show the following information: reference code, item description, code of the department

it belongs to, retail price and number of points awarded to customers buying the item when a loyalty-building campaign of the "PLU points" type is active.

2. Open the **Action** menu and select the **New** option.

   The **New** dialog box is displayed. This includes a number of tabs, each of which may be used to define different aspects of the item.

General Tab

Fig. 3.3 Registration of new items (General)

3. Fill out the details on the tab above as follows:

   - "Company": The company the item belongs to.

   - "Code": The identification given to the item for internal purposes within the Sales Management commercial structure (up to 14 alphanumerical characters).

- "Description": Short text describing the item.

- "Price": Retail price, including all applicable taxes. Allows a nine-digit integer number plus two decimal places.

- "Department": The department where the item is sold (always the one it belongs to).

- "Family": Family the item belongs to (if any).

- "Tax": Value-added tax applied. This is given as a percentage and is included in the price.

- "Measurement": Metric unit normally used to measure the item. This unit will have a direct influence on the way the item is sold at the POST.

- "Container unit": The unit of measurement (grams, kilograms, units, etc.) in which the item is stored in its container. For example, in the case of peppers, this parameter would indicate whether the can shows the number of peppers it contains, e.g. 12 units, or the weight, e.g. 340 grams.

- "Container quantity": In the case of a packaged product, this indicates the real quantity of the item contained in the packaging, expressed in the units above. Continuing with the previous example, we would enter 340 here in the case of the units being grams, and 12 if they are the number of units of the product.

- "Restricted sale": Sales mode applied.

- "Container group": The container group associated with the item.

- "Require" box: Parameters that may be set such that they are asked for at the POST at the time of the sale (price, size, color, design).

- "Flags" box: Actions allowed for the item sold ("Special Offer or Discount", "Item with weight", "Magnetic label", "Stock control").

  - "Special Offer or Discount": Enable this option if the item is going to be included in a special offer or promotion.

  - "Item with weight": Indicates whether the item is priced via the weighing scales, in which case the weight ticket must be obtained before taking it to the POST. This check box should be enabled even if the item is sold on a per unit basis if the ticket needs to be generated by the scales system.

  - "Magnetic label": If this is active the POST warns that it is necessary to remove the magnetic label from the product.

- "Stock control": Enables the stock of the item to be checked by clicking on the "Stock" button in the lower part of the window (when this box is checked the "Stock" tab appears).

- "Permit" box: Enables you to define whether the operator can make refunds, discounts, article sales or price changes from the POST.

  - "Refund"

  - "Discount"

  - "Sale"

  - "Replace price"

- The "Quantity" box is used to define aspects of the item's form of sale.

  - "Optional": The operator can sell the item without specifying the quantity, in which case that of the item will be taken by default.

  - "Not permited": Quantities of the item may not be entered from the terminal. By default the quantity associated with the reference will be taken and so must be entered as a transaction as many times as necessary.

  - "Required": The quantity must be entered at the terminal in order to make the sale.

  - "By pieces": The item may be sold as pieces, regardless of the weight.

- "Linked item": References the following item in the series, in the case where it belongs to a linear sales sequence.

- The "Horizontal stock" check box appears when the Implementation and Stock Management module is installed, and indicates that stock checks will take into account whether the items belong to the store.

4. Clicking on "OK" at this point confirms the data entered so far and completes the registration.

Miscellaneous Tab

5. In order to continue defining the characteristics of the item, select the
    "Miscellaneous" tab from the **New** dialog box. All the data displayed in
    this section is optional, so this step can be skipped.

Fig. 3.4 Registration of new items (Miscellaneous)

6. Fill out the details on the tab above as follows:

    - "Label descriptions": Text that appears on the shelf labels. The box contains
      five descriptors, numbered 1 to 5, which can be combined to form descriptors
      which are longer, of different size or in different positions on the label.

    - "Message": Code for the display message shown on the POST when the item
      is sold.

    - "Number of points": Points which accrue when the customer buys this item
      and a "points-per-item" type loyalty-building campaign is active.

- "No. of copies by label": Number of copies of the ticket to be printed each time a sale or refund transaction is carried out with the item.

7. Click on "OK" to confirm all the data entered in this tab.

Grouping Tab

8. To include the item in a grouping, select the "Miscellaneous" tab from the same **New** dialog box. As in the previous case, all the data displayed in this section is optional, so this step can be skipped.

   In any case, the association of items to groupings is described in this chapter under the heading of the same name.

Stock Tab

It is possible to monitor the stock of an item if the company to which it belongs has been configured to enable this and the check box "Stock control" has been enabled in the "General" tab for the item.

9. To define the stock parameters, select the "Stock" tab from the **New** dialog box.

Fig. 3.5 Registration of new items (Stock)

The upper part of the dialog box shows the company where the operations are being carried out, the item reference code and its description.

10. Fill out the details on the tab above as follows:

- The "General data" box contains the following fields:

  - "Maximum stock": Maximum level of stock that will be allowed. When the company orders items on the basis of the maximum stock criterion, the quantity ordered is that required to reach the maximum stock from the current level of stock.

  - "Normal stock": Also called minimum stock. This is used as a threshold or restocking level at which the order will be placed.

  - "Current stock": Shows the current quantity and number of units on stock for that item.

- The "Automatic order management" box contains the following options:

  - "Automatic restocking": Enable this check box to reorder the item automatically whenever the stock falls below the threshold. The following types of automatic restocking will then become available: normal, by sale or by transfer date.

  - "Units pen. restock. by sale": This indicates the units pending restocking by sale. When the store closes, all daily sales are calculated and accrued in this counter.

  - "Units pend. issue": This indicates the units pending issue, i.e., it displays the number of units requested on order proposals which have still not been issued.

  - "Units pend. service": This indicates the units pending service, i.e., those requested on orders that have already been issued.

- The "Suppliers" box shows a few details about the catalogs where the items are located.

Transfer Order Tab

This tab only appears when you indicate in the above tab that the item's orders are to be managed automatically according to the "Restocking by transfer date" type.

This type of restocking is typical of very slow-moving items, and the dates when orders should be generated are set on this tab.This is the only type of order that is generated automatically when the store is opened, and the system date matches the item's transfer date; also, the item's current stock is below the minimum level.

11. Click on "OK".

The item has been included in the item table with all its identifying details. The user can add a new item to the database, look up the details of an existing item or modify/delete them, provided there is no dependent information. Every time the table is modified, the data is sent directly to the POST so that the information is updated in real time.

Association of Item Groupings

In order to improve item management, groupings and grouping details are created so as to lump together items of similar characteristics. These groupings can be used subsequently for orders, promotions, special offers and inventory counts involving all the items associated with these classifications, thus eliminating the need to select the references one by one.

The **Grouping** and **Grouping Detail** processes carry out the maintenance of the groups and subgroups into which the items are classified (the use of these processes is described in detail in the "Configuration of the commercial structure" section in the "System Configuration and Customization" chapter) and the program **Grouping /Items** allows items to be associated with these groupings when used by other sales management system modules for orders, inventories, promotions and special offers.

This association can be created at the time of registering an item from the item Maintenance process ("Grouping" tab), or by using the specific association process. The latter provides greater freedom of action and efficiency. We shall therefore use this approach when describing the operating procedure.

The procedure for associating items with groupings is as follows:

1. From the **Item Management** group, start the **Groupings/Items** process.

   The main process window for process will appear. This contains a list of all the items classified and the grouping in which they are included.

   Each of the lines in the table contains the following information: company code, the codes identifying the grouping and detail with which the item is associated, and the item reference.

Fig. 3.6 Main window of the item association process

2. Open the **Action** menu and select **Associate** or double-click on any of the lines of the table to bring up the **Associate** dialog box.
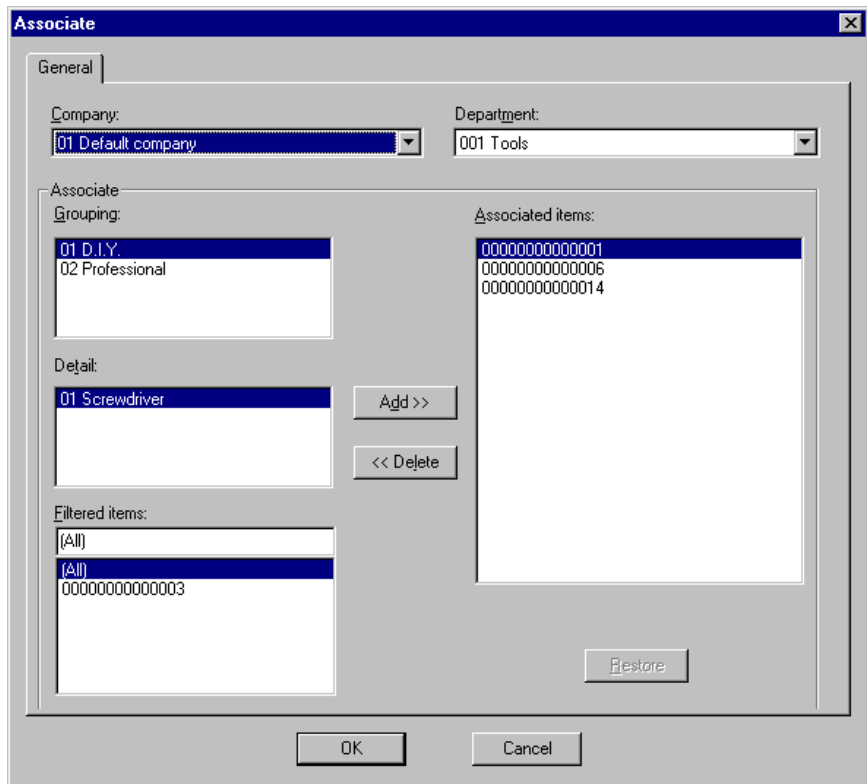
Fig. 3.7 Item and grouping association and grouping detail dialog box

3. Using the dialog box shown, proceed as follows:

- Select the company and department whose items you want to associate and which will join the list of "Associated items".

- Select a grouping. The "Detail" field shows those defined in the configuration of this grouping. Select the detail in which you want to locate the item.

- The "Filtered items" box shows a list of the items existing for the selected company and department. Select the item that you want to associate with the current grouping-detail and click on "Add".

- The "Associated items" box shows all the items that have been associated with the group and date so far. If you no longer want the item to be associated, select it on the list and click on the "Delete" button, or double-click on it to perform the same operation.

• The "Restore" button is enabled when you make or delete an association. If you click on this button the dialog box and the information contained in its fields will return to their initially displayed state when it was accessed; any changes made will therefore not be recorded.

4. Click on "OK" to confirm the associations made.

> Remember that as items are associated with groupings at company level, it is perfectly possible to have two different groupings with the same code, one for company 1 and the other for company 2.

Association of Manufacturer Codes with Internal References

An EAN (European Article Number) is a manufacturer's code assigned to items by a company in accordance with international standards.

The **Manufacturer Codes** program permits these manufacturer and distributor codes to be associated with internal item references. It also allows you to define the sale format and specify whether the item is multiple.

The general procedure for registering EAN codes is as follows:

1. From the **Item Management** folder, start the **Manufacturer Codes** process. The following main process window will appear.

Fig. 3.8 Manufacturer Codes main process window

The window shows a table containing all the EAN codes associated with different items in the company.

Each of the rows contains the following information: identification code or item reference and description, EAN assigned to it, number of units included in the sales format, and whether it is a multiple item or not.

Double-clicking on any of the lines of the table will bring up the **Modify** dialog box.

2. Open the **Action** menu and select **New**. The following dialog box will appear.
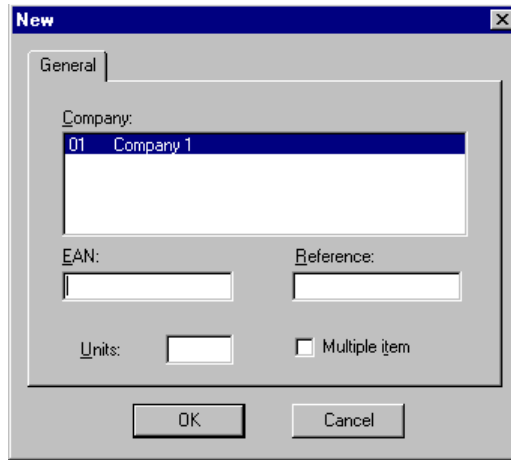
Fig. 3.9 Basic EAN registration box

3. Select the company with whose items you want to work and enter an EAN code which meets the standards specified for this type of code and is not already associated with another item. It is not possible to modify these values later.

    Type in the reference for the item corresponding to the EAN code you have just entered.

    Enter the number of units in the item's sales format.

    Finally, select the "Multiple item" check box if you want it to be possible for the item to be sold in more than one department.

4. Click on "OK" to confirm the association.

If you want to assign several EANs to a single reference, first choose the reference and then successively type in the corresponding EANs. Remember that this is only possible if the article has been registered as multiple ("Departments" field assigned the value "All").

Price Change

This program allows prices of items to be changed and the changes made to be transmitted to all point of sale terminals in real time.

In order to modify the price of an item, select the **Price Change** process from the **Item Management** group.
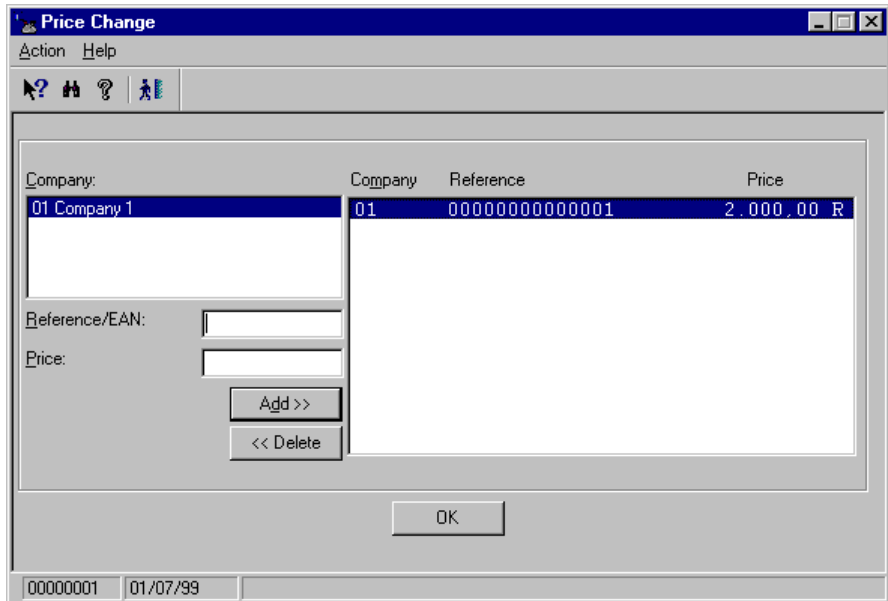
Fig. 3.10 Main price modification window

Enter the item's reference or EAN, its price (up to 9 integer digits and 2 decimal places are allowed) and click on "Add". The new price appears on the list located at the right of the window with the details of the company, the reference and the specified price. If you want to delete a price from this list, select it and click on the "Delete" button; alternatively, simply double-click on it.

When the "OK" button is clicked, the updated price files are automatically sent from the server to the POST. Price updating depends on how quickly the POST can load the files. Thus, if it is off-line it will continue to use the old prices.

Prices of special offer items cannot be modified.

Short Codes

Short codes are abbreviated item references that the point of sale terminal operator can use for convenience instead of the full reference when performing sales, refund or query transactions, etc.

The general procedure for registering short codes is as follows:

1. From the **Item Management** folder, start the **Short Code** process.
   The following main process window will appear.

Fig. 3.11 Main window of the short code process

The table shows a row for each short code record. The following information is shown in the columns: code of the company carrying out the operations, short code, item reference it stands for and the description of the item.

Double-clicking on any of the lines of the table will bring up the **Modify** dialog box.

2. Open the **Action** menu and select **New**. The following dialog box will appear.

Fig. 3.12 Short code registration dialog box

3. In the box shown, select the company and type in the new short code and the reference with which it will be associated. This correspondence is one-to-one; each reference can have only one short code.

4. Click on "OK" to confirm the association.

Special Offers and Promotions

Special offers and promotions are two of the most powerful commercial weapons that store managers have at their disposal to increase sales and so the profits of their businesses.

There are a number of similarities and differences between promotions and special offers. Thus:

- The fundamental difference lies in the nature of the "advantage" obtained by the purchaser. Special offers usually involve a reduction in the unit price payable for the item, depending on criteria determined by the retailer. In the case of promotions, other products may be offered, such as exchangeable coupons, or cash off other items in the store.

- Both are associated with levels of the company. Promotions can be associated with three levels: departments, articles and environments. Offers may be associated with just two: departments and articles.

- Both go through the same basic states from registration to expiry.

  - "In progress": After being created from SF-GV.

  - "Validated": The promotion or special offer has been checked to ensure that it is valid and properly defined, but it has still not been activated because its start date has not yet been reached.

  - "Active": State corresponding to the period between the start and end dates of the special offer/promotion.

  - "Completed": The validity period has ended and the offer/promotion has ceased to be applied, although it is still held on the database for information purposes.

Promotions and special offers can coexist in a company and be applied together at the time of paying for the transaction. If required, at the time of registering promotions and special offers which are valid simultaneously, it is possible to define incompatibilities between them. However, it is not possible to define an incompatibility between two promotions or special offers that apply to the same item.

Defining Special Offers

Special offers are reductions in the unit price of an item, or gifts of the same item offered to the customers when they buy it under certain circumstances.

There are 7 types of special offers: 5 are associated with the "Item" level and 2 with the "Department" level, namely:

- **By items:**

    - Price reduction: A percentage reduction in price.

    - Price reduction for volume purchase: Percentage reduction in price if the customer buys a certain number of units.

    - A x B: The customer pays for B units of the item, but purchases A units.

    - A + B: When the customer buys A units of the item he or she is given B.

    - Batch: The customer buys a set of items for which he or she pays a single sum less than the total of the individual prices of the items in the batch.

- **By departments:**

    - Price reduction: The price is reduced by a percentage if it is bought in a particular department.

    - Price reduction above a certain amount: The price is reduced by a percentage if the item is purchased in a particular department and the value of the purchase is greater than a certain amount.

The general procedure for registering a special offer is as follows:

1. From the **Item Management** group, start the **Special Offer** process.

    The following main process window will appear.

Fig. 3.13 Main special offer maintenance window

Each row in the table contains the code, description, type and current state of the offers created to date.

2. Access the offer registration screen, selecting the **New** option from the **Action** menu.

The following dialog box will appear.

Fig. 3.14 Special offer registration dialog box

3. Fill out the dialog box as described below (follow the order shown when completing the fields):

   - "Company": Select the company which is going to register the special offer.

   - "Code": Type in an identification code for the special offer (up to 6 digits).

   - "Description": Short reference text on the reason for the campaign (maximum 25 alphanumeric characters).

   - "Level" box: Choose whether the special offer will be implemented by department or by item. The choice made will affect the type of special offer available on the "Type of special offer" pull-down list box.

   - "Status" box: Shows the current status of the special offer being registered or queried. During the registration process this will always show "In progress".

- "Date" box: Type in the validity period of the special offer (start and end). The start date must be later than today's date.

- "Time" box: Type in the time of day the special offer will be active. If no value is entered, by default the program will enter "00:00" as the start time and "23:45" as the end time.

- "Report at POST": Choose how the special offer will be shown on the customer's purchase ticket: not shown, as a price difference, or as a percentage of the original price.

- "Type of special offer": Choose the type of offer you are going to create from the list showing those available according to the option selected in the "Level" box. Depending on the offer chosen, the contents of the "Special offer detail" box will be modified as follows:

Level	Type of special offer	"Special offer detail" box fields
Item	1. Price reduction	- "Max. units": Maximum number of units of the item on offer that the customer can buy in a single transaction (if you want this quantity to be limited).
	2. Price reduction for volume purchase	- "Max. units": Maximum number of units of the item on offer that the customer can buy in a single transaction (if you want this quantity to be limited). - "Units to apply ceiling": Number of units above which the price reduction applies. - "Ceiling application": Indicates if the price reduction applies to all the units purchased or only those above the ceiling.
	3. A x B	- "Max. units": Maximum number of times that a special offer can be applied. - "Qualifying product units": Number of units (A) of the item that have to be purchased in order for the special offer to apply. - "Free gift units": Number of units (B) of the item given to the customer by way of a free gift.
	4. A+B	- "Max. units": Maximum number of times that a special offer can be applied. If no value is entered, SF-GV will assume there is no limit. - "Qualifying product units": Number of units (A) of the item that have to be purchased in order for the special offer to apply. - "Free gift units": Number of units (B) of the item given to the customer by way of a free gift. ▶

	5. Batches	- "Items in batch": Quantity of items making up a batch. The value entered in this field will affect the format of the "Min. units per batch" field. - "Price per batch": Price per complete batch. - "Batches allowed": Maximum number of batches that can be purchased by the customer in a single transaction. - "Min. units per batch": Number of units of each item included in the batch. The same number of boxes will be shown as the number of items specified in the "Items per batch" field.
Department	6. Price reduction	- "% Discount": Reduction in price applied to items in special offers.
	7. Price red. over an amount	- "% Discount": Reduction in price applied to items in special offers. - "Amount": The minimum amount of the purchase above which the discount applies.

4. Click on "OK" to confirm the data. A different dialog box will appear for each type of special offer chosen:

- For special offers 1 to 3, the **Assign references** box, showing the company with which you are working, the special offer code and the special offer description. The list in the "References" box contains a breakdown by reference number of all the articles included to date in the special offer with their description, normal retail price and price applied during the campaign.
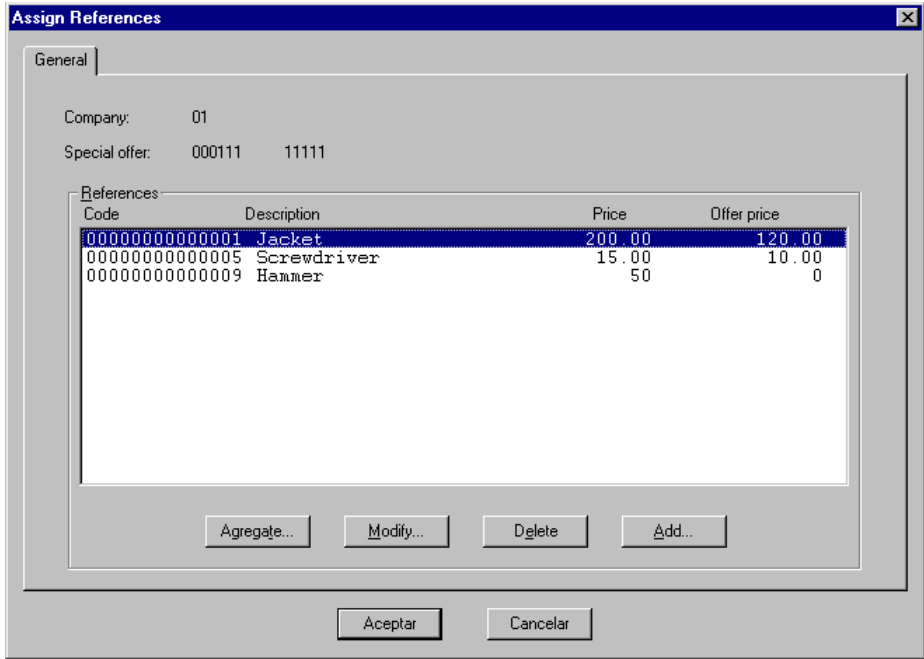
Fig. 3.15 Box for assigning items to a special offer

Click on the "Agregate" button. A dialog box will appear showing the reference of each item in the special offer and its reduced price. You can add complete lists of articles belonging to the same department or the same grouping by clicking "Add". The **Agregate** and **Add** dialog boxes are explained at the end of this section.

If you want to delete an item from the special offer, select it from the "References" list and click on the "Delete" button. This button will not be available unless you first add an item.

The "Modify" button will only be enabled when dealing with a reduced price offer. Clicking it opens the dialog box allowing the price of an item to be changed.

- For special offer 4, A+B, the box of the same name appears. This shows the code and company description for the company concerned and the special offer data for the special offer being created.

Fig. 3.16 Definition box for qualifying product units and free gifts

To fill in this dialog box, select "Group 1" in the "Select" text box, enter the reference for the qualifying product unit, and click on "Agregate". To indicate the free gift item or items, select "Group 2" and follow the same steps as described above. You can add complete lists of items belonging to the same department or the same grouping by clicking on "Add", as described at the end of this section.

To remove an item from the special offer, select it from any of the groups and click on the "Delete" button.

● For special offer 5, Batches, the box of the same name appears. This shows the code and company description for the company concerned and the special offer data.
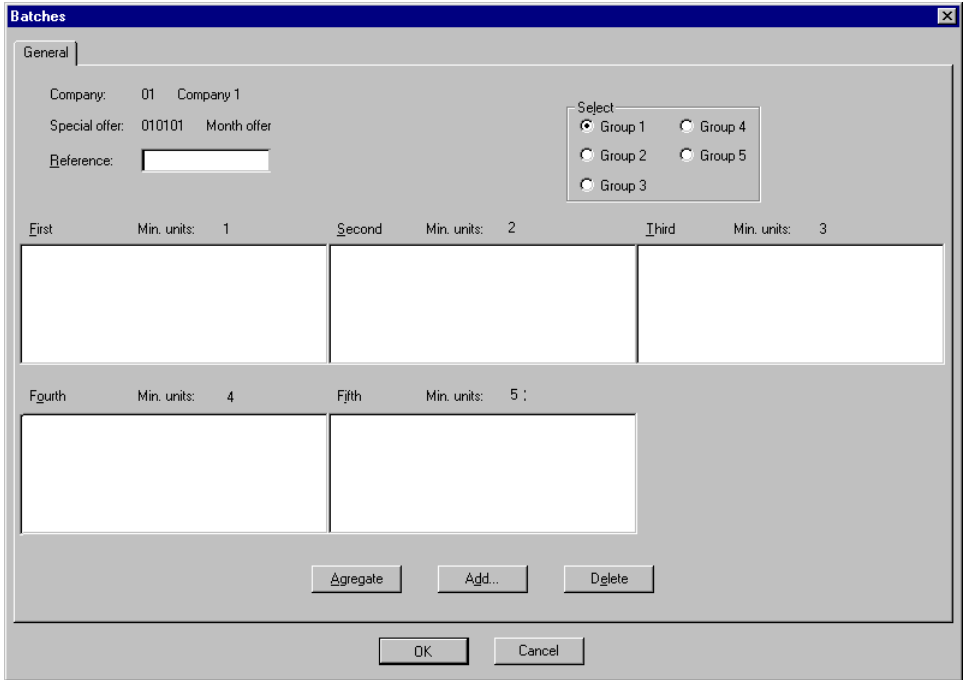
Fig. 3.17 Batch items definition box

Using the option buttons in the "Select" area, indicate the group to which the items are going to be added. This includes a combo box for each item in the batch (between 2 and 9 inclusive). Enter the reference of the item you want to include in the special offer. Once the item code has been typed in, its description will appear underneath the text box.

Click on the "Agregate" button to include the item in the group.

You can add complete lists of items belonging to the same department or the same grouping to the specified group by clicking on "Add", as described at the end of this section.

To remove an item from the special offer, select it from any of the groups and click on the "Delete" button.

● For special offers 6 and 7, Price reduction and Price reduction above amount, which are tied to departments, the **Associate departments** box appears, allowing you to add the items included in the special offer.
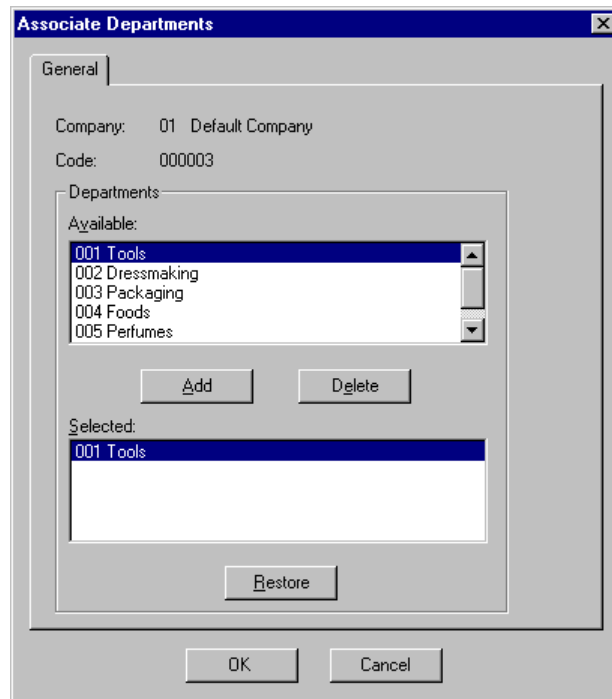
Fig. 3.18 Associate department dialog box

The dialog box shows the company you are working with together with the offer code.

Select a department from the "Available" list and click on "Add" to include it in the offer. Associated departments join the "Selected" list below.

Choose a department from the "Selected" list and click on "Delete" if you want to remove it from the campaign. If the "Selected" box does not contain any departments, this button will be unavailable (grayed out).

The "Restore" button allows you to undo all the changes made in the dialog box. It is not enabled until an add or delete operation has been performed.

When all the departments have been assigned to the offer, click on "OK".

Having defined this aspect of the special offer, the offer is complete and will appear in the main process window. It is now possible to validate it to check that there is no overlap with other offers. To do this, open the **Action** menu and select **Validate**. Once it has been validated, the process offers the option of activating the special offer so that it comes into effect.

Fig. 3.19 Special offer validation box

The Agregate Dialog Box

This dialog box belongs to the special offer definition process and enables all the references of the items that are to be included in the offer to be added one by one. To access this dialog box, click on the "Agregate" button in the **Assign references** dialog box.
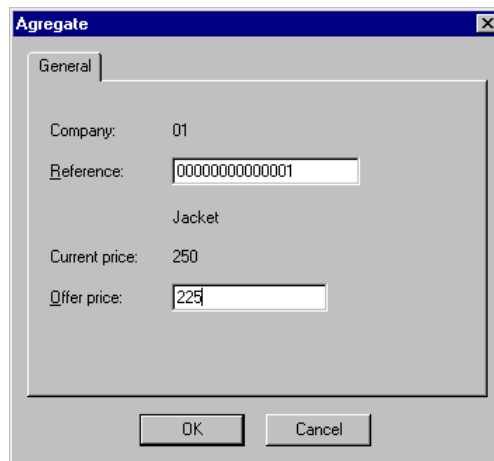
Fig. 3.20 Agregate references dialog box

The dialog box shows the code of the company you are working with.

To add references to special offer:

1. Enter the reference of the item you want to include in the special offer. The program will show the item description and its current retail price.

2. In the "Offer price" text box, enter the price at which the item will be sold during the campaign (9 integer digits and 2 decimal places). This field is only available when working with a reduced price offer.

3. Click on "OK".

> Those items whose container unit is expressed in meters, kilograms or liters cannot be included as items on offer.¤

The Add Dialog Box

This dialog box allows all the items included in a grouping or department classification to be added to a special offer. Access this dialog box by clicking on the "Add" button in the **Assign references and A+B** dialog boxes.

Fig. 3.21 Add references dialog box

Choose whether the selection will be made by grouping and detail or by department and family.

If the selection is by grouping, the program will show the "Grouping" and "Detail" pull-down lists and both values should be selected.

If, on the other hand, the selection is by department, the program will show the "Department" and "Family" pull-down lists. Choose the department and specify a family or leave the default value, "All", to include all the families in the selected department.

Finally, click on "OK".

> When items are to be included in this way in a reduced price offer, use their original price. They should then subsequently be modified from the **Assign references** box to set their special offer price.

Other Operations with Special Offers

The **Action** process menu contains the options needed to perform the maintenance of the special offer table. In addition to enabling registrations, discontinuations, modifications and queries, this menu also allows you to perform the following operations:

● **Validate**, to check that the items or departments involved in the special offer are not included in another special offer whose validity period coincides with any of the dates of the special offer you are validating. If the process detects incompatibilities, the validation will not be completed and the **Validate special offer** dialog box will be displayed. This dialog box contains a list with the code of the special offer where the error was found and the items or departments causing it. This option can only be used if the offer is in the "In progress" state.

● **Activate** or start the special offer campaign for the items or departments included in it. The process is immediate, activating the special offer signal on all the point of sale terminals. Only validated offers may be activated and their start date must be equal to the current date.

● **Deactivate** or terminate the special offer campaign immediately. As in the case of the "Activate" option, this is an on-line process.

> Active special offers may not be deleted or modified.

Defining Promotions

A promotion is a discount or gift made during a sales operation when the customer has bought more than a certain minimum amount. Unlike special offers, you can stipulate that the promotion should not allow other simultaneous offers to exist which could accumulate with it to produce an excessive discount when paying for the transaction.

Promotions can be associated according to three aspects:

- By department
- By item
- By environment

SF-GV allows five types of promotions:

- **Discount if the amount exceeds a certain quantity:** A preset percentage discount is applied if the value of the purchase exceeds a given limit.

- **Cash gift by intervals:** Each time the customer exceeds the preset interval, he or she is given a cash sum in the specified currency.

- **Gift item for purchases above a set value:** When the value of the purchase exceeds a set amount, the customer is given one or more gift items.

- **Cash gift above ceiling:** Each time the customer exceeds the preset interval, he or she is given a cash sum in the specified currency, provided that the purchase is above a set threshold.

- **Gift item above ceiling with interval:** Each time the customer exceeds the preset amount, he or she is given a specific gift item, provided that the purchase is above the set threshold.

The general procedure for registering a promotion is as follows:

1. From the **Item Management** group, start the **Promotions** process.

   The following main process window will appear.

Fig. 3.22 Main promotion maintenance window

Each of the rows in the table contains the following promotion-related information: code of the company where the promotion is registered, promotion code and description, promotion status and type (discount, gift, etc.).

Double-clicking on any of the lines of the table will bring up the **Modify** dialog box.

2. Access the promotion registration screen, by selecting the **New** option from the **Action** menu. The following dialog box will appear.

Fig. 3.23 New promotion registration dialog box

3. Fill out the dialog box as described below (follow the stated order when completing the fields):

- "Company": Select the company that is going to register the promotion.

- "Code": Type in an identification code for the promotion (up to 6 digits).

- "Description": Reference text about the promotion.

- "Exclude items with reduction": Check this box if you want those items with reduced prices to be excluded for some reason.

- Use the "Time" box (hh:mm) to limit the time the promotion is effective to specific times of the day. If no value is entered, the start time will default to "00:00" and the end time to "23:45".

- In the "Date" box, type in the promotion's validity period.

- "Type of promotion": Choose from the list the type of promotion you want to launch. Depending on the type chosen, fill in the different fields which appear in the lower part of the box according to the table below:

Promotion chosen	Fields in box
1. Discount promotion over a certain amount	- "Purchase amount": Amount above which the promotion is valid (9 integer digits and 2 decimal places). - "Percentage discount": Discount applied to retail price (3 integer digits and 2 decimal places).
2. Cash gift by intervals	- "Interval amount": Interval which entitles the purchaser to the specified amount each time it is exceeded (9 integer digits and 2 decimal places). - "Currency": Means of payment given as a promotional gift. - "Quantity": Amount of money given in the specified currency (4 integer digits and 2 decimal places).
3. Gift promotion, item over a certain amount	- "Purchase amount": Amount above which the promotion is valid (9 integer digits and 2 decimal places). - "Item": Internal code of the gift item. - "Quantity": Quantity of the gift item given (4 integer digits and 2 decimal places).
4. Cash gift over ceiling	- "Purchase amount": Amount above which the promotion is valid (9 integer digits and 2 decimal places). - "Interval amount": Interval which entitles the purchaser to the specified amount each time it is exceeded (9 integer digits and 2 decimal places). - "Currency": Means of payment given as promotional gift. - "Quantity": Amount of money given in the specified currency (4 integer digits and 2 decimal places).
5. Item gift over ceiling with interval	- "Purchase amount": Amount above which the promotion is valid (9 integer digits and 2 decimal places). - "Interval amount": Interval which entitles the purchaser to the specified amount each time it is exceeded. - "Item": Internal code of the gift item. - "Quantity": Amount of money given in the specified currency.

Those items whose container unit is expressed in meters, kilograms or liters should not be included in a promotion as free gift units.¤

- "Allocations": Click on one of the three elements with which the promotion may be associated:

  - "Departments": The following dialog box appears, allowing a promotion to be associated with all the items in a department.
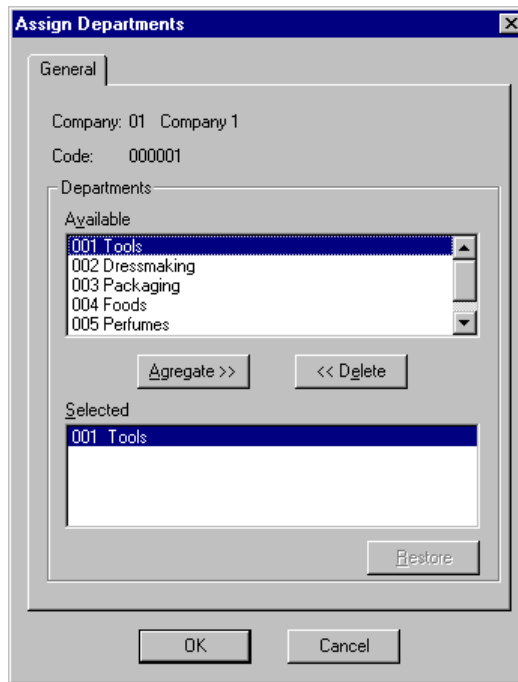
Fig. 3.24 Associate department with promotion dialog box

The dialog box shows the code and description of the company you are working with, together with the promotion code.

Select a department from the "Available" list and click on the "Agregate" button to include it on the "Selected" list below. It is now included in the promotion. If you want to remove a department from the promotion, select it from the "Selected" list and click on "Delete".

The "Restore" button is not enabled until a department has been added to or deleted from the promotion. Clicking on this button restores the dialog box's initial values.

• "Environments": The following dialog box appears, allowing a promotion to be associated with a specific terminal environment.

Fig. 3.25 Associate environments with promotion dialog box

The dialog box shows the code and description of the company you are working with, together with the promotion code.

Select an environment from the "Available" list and click on the "Agregate" button to include it on the "Selected" list below. It is now included in the promotion.

If you want to remove an environment from the promotion, select it from the "Selected" list and click on "Delete".

The "Restore" button is not enabled until an environment has been added to or deleted from the promotion. Clicking on this button restores the dialog box's initial values.

● "Items": The following dialog box appears, allowing you to define the items that make up the promotion.
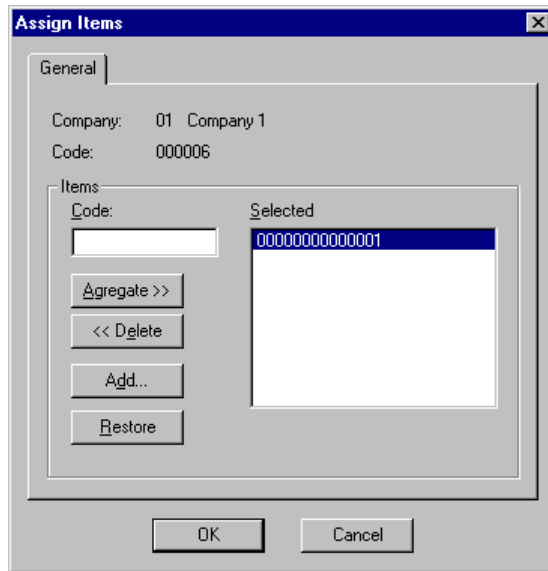
Fig. 3.26 Associate items with promotion dialog box

The dialog box shows the company you are working with together with the promotion code.

Enter the item reference and click on the "Agregate" button to include it in the promotion. Alternatively, click on the "Add" button to add all the articles within a group or department and family as explained in the section on special offers in this chapter. The "Selected" list shows all the items that make up the promotion.

If you want to remove an item from the promotion, select it from the "Selected" list and click on the "Delete" button. This button is not enabled if the promotion has no items associated with it.

Click on the "Restore" button if you want to undo all the actions performed in the dialog box. By default, this button is disabled. It is only enabled if an item is added to or deleted from the promotion.

4. Click on "OK".

The promotion is now defined and will appear in the main window in the "In progress" state. It is now possible to validate it to check that there is no overlap with other promotions. To do this, open the **File** menu and select **Validate**. Once the promotion has been validated, the process offers the option of activating it.

❗ Remember that the data for a promotion can only be modified when it is in the "In progress" or "Validated" state.

Notes on the Use of Special Offers and Promotions

As described in the section on special offers and promotions, special offers may be applied to departments or items, and promotions may be applied to departments, items or environments.

Criteria to be followed when more than one special offer and/or promotion overlap:

Item special offer (price reduction and AxB)

Department special offer

Item special offer (A+B and batches)

Promotion by item

Promotion by department

Promotion by environment

As regards the aforementioned overlapping, it is relatively easy to configure when registering the special offer or promotion, since specific flags exist for this purpose, but it is important to describe in detail its meaning and how the application behaves with regard to these flags.

When a promotion is registered, the "Exclude items with reduction" flag can be enabled to indicate that the promotion should not be applied to those items with reduced prices or on offer. Moreover, you should also bear in mind that the flag available for items, "Item with reduced price or on offer" is used by the point-of-sale terminal to determine whether the item's price has been reduced and, therefore, cannot be included in any special offer, since the flag is active.

The table below clearly illustrates how the application handles these flags:

Active flag	Special offer	Promotion
With no active flag	applied	applied
With item flag	not applied	applied
With item and promotion flag	Not applied	Not applied
With promotion flag	applied	Not applied

Therefore:

- 2 item special offers cannot overlap for the same item.

- 2 special offers can overlap for the same item when one has been registered at item level and the other at department level, by first applying the special offer at item level and then the special offer at department level, provided that it is not an A+B or batch special offer.

- 2 item promotions cannot overlap for the same item; 2 department promotions cannot overlap for the same department; and 2 environment promotions cannot overlap for the same environment.

Always check discounts carefully before applying them to an item.

4

Customer Management

- Introduction to Customer Management
- Card Handling
- Customer Handling
- Credit Handling

StoreFlow GV

This chapter describes the SF-GV processes related most directly to customer management. In particular it deals with aspects related to information concerning customers' personal details, customization of the system to suit the needs of each customer, and setting conditions for credit and personal cards.

Introduction to Customer Management

Unlike item management, not all companies have customer management systems and it is only essential under certain conditions. However, these conditions are common enough for it to be less and less usual to find businesses where customer maintenance is not a basic part of the commercial strategy.

In this context, SF-GV includes a series of related processes with three important aspects:

● The handling of customers, i.e., management of their personal details with a view to maintain loyalty-building campaigns, promotions, etc., or simply to study their purchasing habits.

● Management of the cards accepted, so that they can be used with the Electronic Payment System (SF-EFT) application, and for querying the card negative list supplied by the bank or financial institution responsible for the credit cards. SF-GV offers four predefined types of cards:

  ● *Credit card or similar*, identified globally as "means of payment".

  ● *Customer card*, when the card is issued by the store and is associated with internal loyalty-building campaigns.

  ● *Loyalty card*, when the card is associated with a loyalty-building campaign.

  ● *Employee card*, for cards issued to store employees, for example, for identification at the terminals.

● Credit management, for the definition of possible credit status and actions to take when confronted by preestablished situations, and also for specific plans.

All these aspects are managed from the **Customers** group, the **Cards** group or the **means of Payment** group. Configuration should be carried out in the order shown on the schematic, and this will also be the order in which the processes are described.

1. Card types
2. Cards
3. Customer types
4. Customers

5. Credit status

6. Credit activity messages

7. Credit activities

8. Credit plans

9. Customer (or check) negative list lookup

Card Handling

This section describes the card-management processes that can be used in the store. Card management includes a configuration part where the treatment given to the different types of cards accepted by the store is defined, accepted cards are registered, and negative list lookup to ascertain the credit status of a customer card is set up.

SF-GV allows the following types of cards:

- **Payment cards** (usually credit or debit). The difference between credit and debit cards lies in the way of paying the transaction for which they are used. Thus, in the case of credit cards the transaction is charged regardless of the state of the customer's account, as the bill is charged against the account at the end of a period agreed between the customer and the institution, and a percentage (usually zero or positive) is charged for the operation. In the case of debit cards, payment is usually made in real-time against the customer's account and the transaction is only carried out if this account has sufficient funds to pay for the transaction.

- **Customer cards**: These are cards issued to customers by the store so as to identify them when paying for their purchases. Used for internal loyalty-building campaigns.

- **Loyalty cards**: These are external cards, issued by institutions other than the company, which can be used to obtain discounts during external loyalty-building campaigns.

- **Employee cards**: These are cards issued by the store to its employees so that they can be identified rapidly at the terminal by reading the magnetic stripe.

Card payments are made at the POST in the same way as with any other means of payment. Assuming that your system has the SF-EFT application installed, you will have access to four possible electronic payment operations at the POSTs:

1. Payment/receipt for a transaction: The customer pays the amount owed for a sales transaction using his or her card (or another payment document). The payment is registered and charged to the customer's checking account.

2. Operation cancellation: A previous payment operation is cancelled from the POST. There can be various reasons for cancellation, for example, overcharging.

3. Refund: The amount charged for a previous transaction is reimbursed at the POST due to a return of a previously purchased item.

4. Refund cancellation: If the refund operation described in the previous section has been carried out incorrectly, it can be cancelled. One reason for cancellation could be, for example, that the returned article is in poor condition.

Types of Cards

This process only has any meaning in the case of stores with SF-EFT or a similar electronic payment application, which is normally located at the management headquarters.

This process enables you to configure a series of card types and, for each of them, to determine how the system will behave in the event of a payment request being made with the given type of card, in terms of payment mode, the document to be printed, negative list lookup, etc.

To configure the accepted types of cards:

1. From the **Cards** group in the Basic module, start the **Card Types** process.

   The main process window will appear.
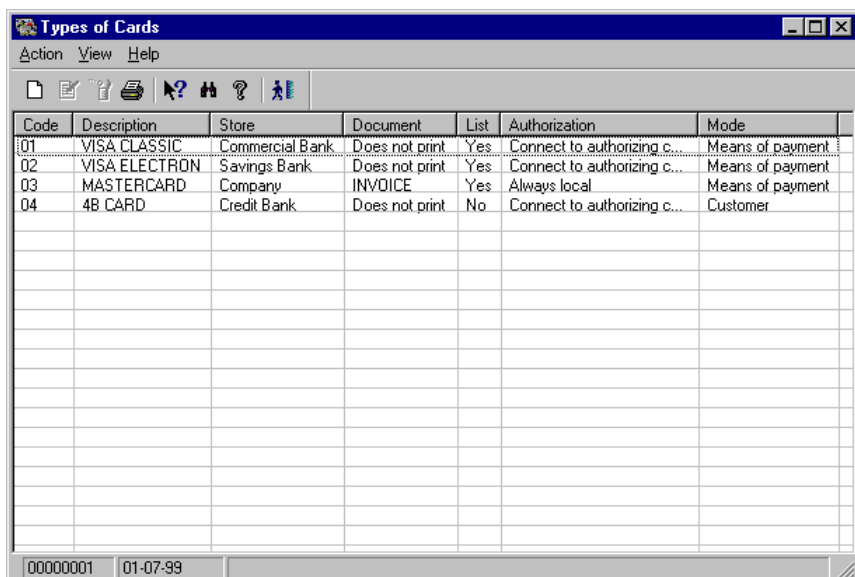
Fig. 4.1 Main window of the card type registration process

2. Access the new card type registration screen.

   The new card type registration box will appear.
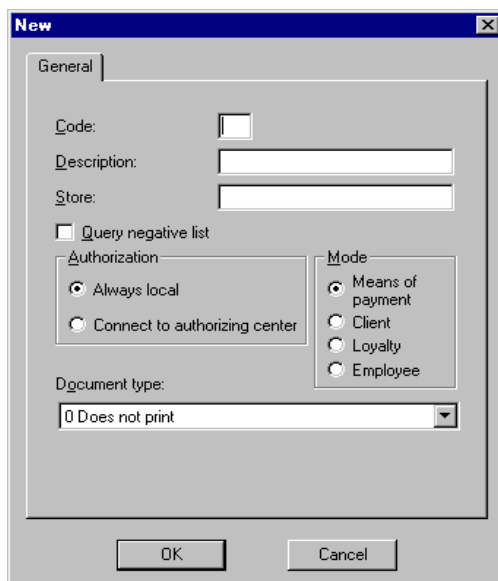
Fig. 4.2 Card type registration box

3. Complete the dialog box as follows:

- "Code": Numerical identification code for the type of card, between 00 and 99.

- "Description": Reference text for the card.

- "Store": Store or financial institution that provides the card service.

- "Query negative list": If this box is checked, the transaction will not be completed until the card has been checked to see if it appears on the negative list (restricted use, only for Argentinean version).

- "Authorization": Allows you to choose between local or remote authorization. Select:

  - "Always local ": Usually faster, but not always up-to-date. Local authorization is performed by querying the LISTA.DAT file, which is downloaded from the server when the POST is turned on together with other configuration files by means of an FLOAD operation. This LISTA.DAT file will be the latest version loaded on the system server.

  - "Connect to authorizing center": For each card, the AC is accessed and a check is performed to ensure that the card does not appear on the customer negative list. If it is not possible to access the center, a credit decision will need to be taken. This requires configuration of the "Credit Actions" process.

- "Mode": Choose the type that corresponds to the card that you are going to register. Credit and debit cards are registered as "Means of Payment". The other three options correspond to the remaining three types of cards described above.

- "Document type": Select the type of document that will be printed together with the transaction, or **0** to print none.

4. Click on "OK" to confirm your choice.

Repeat this process for all the types of cards that you are going to use on the system.

Card Registration

Once the types of cards have been defined, you can register the cards belonging to individual customers that will be used by the system.

To register a card:

1. From the **Cards** group in the Basic module, launch the **Cards** process.

Fig. 4.3 Main window of the card definition process

2. Access the new card registration dialog box.

   The new card registration dialog box will appear as shown below:

Fig. 4.4 New card registration dialog box

3. Complete the box as follows:

- "Company": Select the current company.

- "Code": Card identification code (maximum 10 digits).

- "Description": Card reference text.

- "Type": Choose a type from among those registered in the previous section, in the **Types of Cards** process.

- "Associated payment currency": Form of payment associated with the card. This does not appear when the selected type of card is a customer or loyalty-building card.

- "Processing function": Select one from among those available.

- "Card BIN data": Indicate the position of the card BIN on the magnetic stripe, using the start position and the length.

- "Card number location": Indicate the location of the account code on the card's magnetic stripe. This includes three fields:

- ● "Position": Position where the account number is located on the card's magnetic stripe.

- ● "Track": Track where the account number is located on the card's magnetic stripe.

- ● "Number of digits": Number of digits comprising the account number.

● "Flags": Configurable card operating parameters. Note that the check boxes vary according to the type of card. Their meaning is as follows:

- ● "Use service code": Indicates that it is necessary to contact the authorizing center in order to authorize payment with the card. This is independent of whether local authorization has been set or not for this type of card in **Types of Cards**

- ● "Request date": Indicates that the expiry date of the card is required when data is entered manually.

- ● "Card accepted": Indicates that the card will be allowed as a means of payment.

- ● "Print check": Indicates that a sales receipt will be printed for the customer.

● "Credit limit with off-line backing": Maximum amount that can be accepted as payment if connection to the authorizing center is not possible.

4. Click on "OK".

This process will be repeated periodically for each new card that you want to register.

Customer Negative List

The negative list is a file provided either by the bank or the card authorizing center (AC) or which can be looked up remotely with prior authorization. It includes a list of cardholders with a summary of their credit status, with a view to identifying questionable customers. Normally, the situations included when registering the **Credit status** are made to match those described on the negative list.

StoreFlow GV does not manage the card or customer negative list. It only provides support for adapting the interface to each electronic payment system (at present, only the plug-in required for the Argentinean version is implemented).

To look up the customer negative list:

1. From the **Cards** group in the Basic module, start the **Negative List Query** process.

   After filling out the user identification box, the **Include** dialog box appears.

Fig. 4.5 Dialog box for selecting the company and the range of cards to be looked up

2. From the list select the company you are working with. In the "Card" box enter the range of cards that you want to look up, according to the following criteria:

   - Look up a single card: Type its BIN in both the "From" and "To" boxes.

   - Look up a range of cards: Type the BINs of the first and last card in "From" and "To", respectively.

   - Look up all cards: Type a 1 in the "From" box and fill the "To" box with 9's.

3. Click on "OK".

The negative list query window will appear. This shows the codes of the selected cards together with a summary of their credit status.

Fig. 4.6 Card negative list query

It is advisable to keep this query window open when using this process and press F5 occasionally to update the contents or print it out every day so as to be able to look up a hardcopy.

Check Negative List

This process has been designed to look up the check negative list, which works in a similar way to the customer negative list. Check lookup uses the number printed on the check, verifying its validity against a bank check authorizing center similar to the card AC mentioned in the previous section.

This process is available for the Portuguese version of the application only, as check payments are in widespread use in Portugal.

To look up the check negative list:

1. From the **Cards** group, start the **Check Negative List** process.

   After the user identification dialog box has been filled out, the **Include** dialog box will appear.
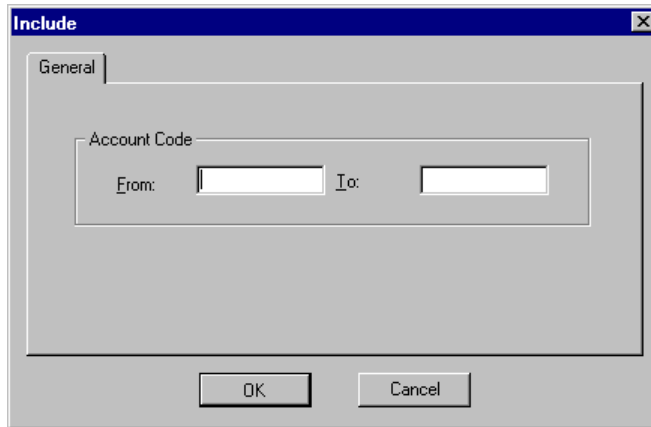
Fig. 4.7 Dialog box for selecting checks to be looked up

2. In the "Account code" box:

   - To look up a single check, write its number in the "From" and "To" check boxes.

   - To look up all checks, leave both boxes blank and click on "OK".

   The negative list query process window will appear.
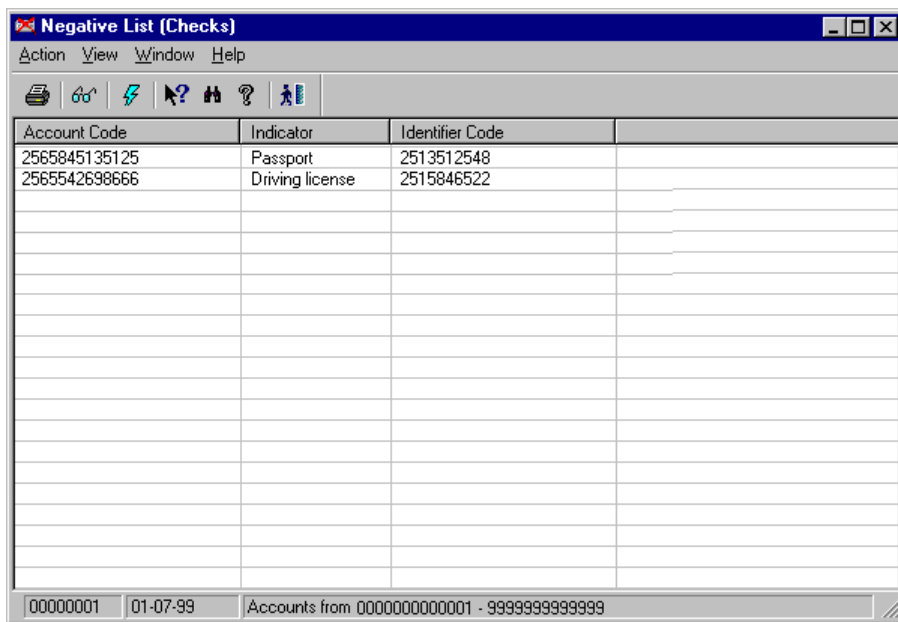
Fig. 4.8 Check negative list query window

In this window you can see:

- The bank account codes associated with the selected checks ("Account Code").

- The type of document the information refers to, whether taxpayer number, passport or driving license number.

- The code of the document indicated in the previous field ("Identifier Code").

Customer Handling

Customer handling and management consists of two basic parts:

- **Definition of types of customers:** This operation sets two aspects:

  - The type of document that will be printed during the payment operation.

  - Whether the customer wants the VAT to be shown or not (VAT breakdown for tax returns, the self-employed, etc.).

- **Management of store customers:** Entry and modification of all the data needed to manage customers. This includes bank details, customer types, maximum credit, accumulated points, etc. This data is essential for loyalty-building functions.

Types of Customers

To define a new type of customer:

1. From the **Customers** group, start the **Types of Customers** process.

   The main process window will appear.

Fig. 4.9 Main window of the customer type maintenance process

2. Access the customer type registration screen.

The new customer type registration dialog box will appear.

Fig. 4.10 New customer type registration dialog box

3. Complete the dialog box shown above as follows:

    - "Type of customer": A one-digit code identifying the type of customer.

    - "Description": Brief reference text for the customer type.

    - "Type of document": The type of document that you want to print when charging the customer for the transaction. These types must have been registered during the "Terminal configuration" phase described in the configuration chapter.

    - "Print VAT on invoice": Check this box if you want the value added tax breakdown to be shown on the transaction document.

4. Click on "OK" to confirm the type of customer.

Repeat this process for all the types of customers that you want to register.

Customer Registration

If the Loyalty module is installed, this process also allows the number of points accumulated by a customer in the loyalty-building campaigns to be looked up. To obtain more information, see the ➤ "Loyalty" chapter.

To register a new customer:

1. From the **Customers** group, start the **Customers** process.

    The window allowing the range of customers to be processed will appear.
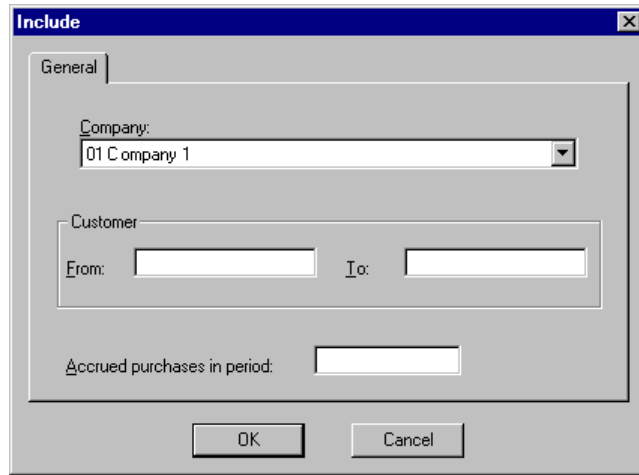
Fig. 4.11 Customer selection window

2. From the list select the company you want to work with, and in the "Customer" box type in the range of customers you want to look up according to the following criteria:

- Single customer lookup: Enter the customer's code (numerical code assigned to the customer during the registration process) in both the "From" and "To" boxes.

- Look up a range of customers: Type in the relevant customer codes in "From" and "To" (up to 19 digits per field).

- Look up all customers: Enter a **1** in the "From" box and fill the "To" box with 9's.

Enter an amount in the "Accumulated purchases in period" box. Only customers whose accumulated purchases are equal to or greater than the chosen limit will be selected. Remember that this accumulated total refers only to purchases in which the customer has been identified by means of a credit card, store card or similar.

3. Click on "OK" to access the customer lookup process.

The main process window will appear.
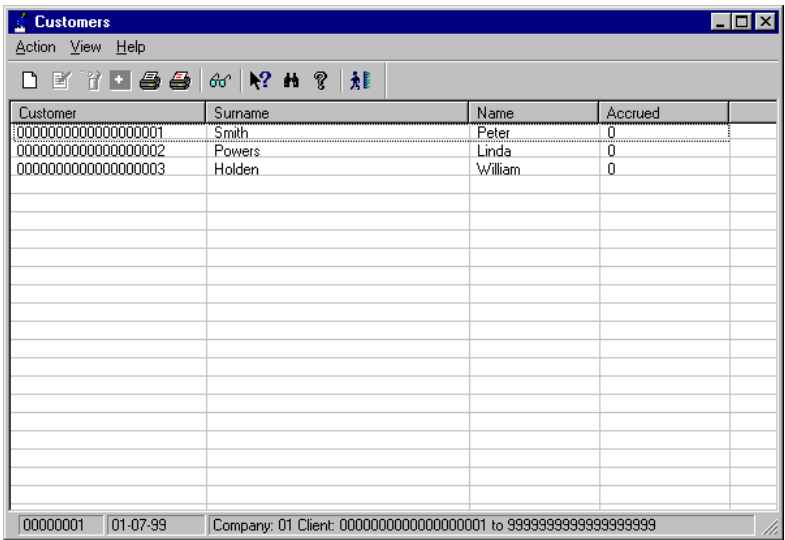
Fig. 4.12 Main customer management process window

4. Access the new customer registration screen.

The customer registration dialog box will appear.
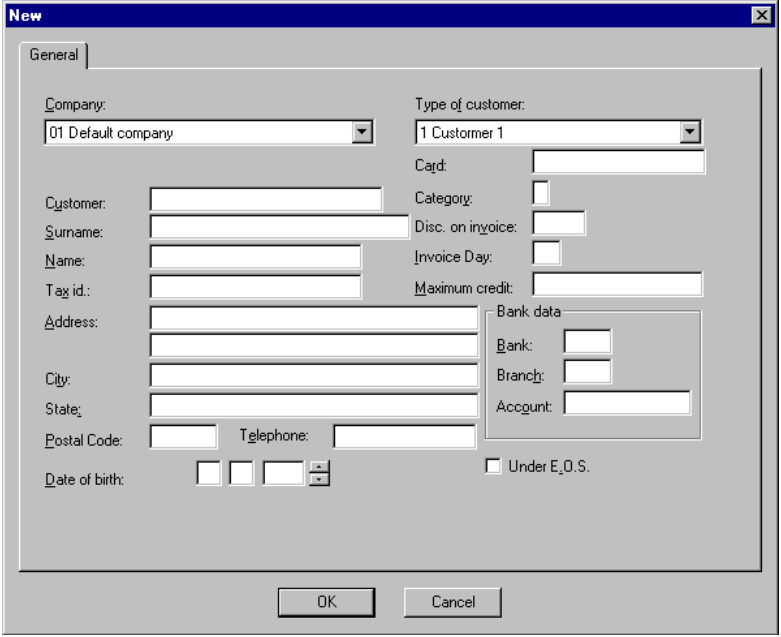
Fig. 4.13 Customer registration dialog box

5. Complete the dialog box shown as follows:

    - "Company": Select the current company.

    - "Customer": Enter the code of the new customer (up to 19 digits). This must be unique to each customer.

    - Personal details fields ("Surname", "Name", "Tax. id.", "Address", "City", "State", "Postal Code", "Telephone", "Date of birth"): Enter the relevant data in each field. All these fields are required, except "Date of birth".

    - "Type of customer": Select one of the types registered on the system previously.

    - "Card": Identifying code of the customer's credit card.

    - "Category": Type in a number between 1 and 9. The category is used for internal purposes and can be assigned freely according to the customer's level.

    - "Disc. on invoice": Discount that applies to the customer as a percentage of the price. This discount is applied automatically when the transaction is carried out, but it is not a maximum limit for each individual customer. Remember that, by default, this discount is added to other discounts or current promotions such as department discounts or loyalty-building rebates, for example.

    - "Invoice Day": Day of the month when the customer is billed for his or her card.

    - "Maximum credit": Maximum credit allowed.

    - "Bank data" box: Enter the full bank account number, i.e., "Bank" (5 digits), "Branch" (5 digits) and "Account" (15 digits).

    - "Under E.O.S.": Check this box if the customer is taxed according to the "objective assessment" regime, a special regime for the self-employed in Spain. Under Spanish law, customers taxed under this regime pay a surcharge of 3% on the price of the purchase at the POST. The customer later claims this 3% back on his or her quarterly tax returns.

6. Click on "OK" to confirm the registration of the new customer.

Repeat this process for every new customer you want to include in the system database.

Credit Handling

In SF-GV, credit management encompasses all operations in which payment is carried out by means of a card and implies deferred payment. Credit management includes the following main tasks:

● **Configuration-related tasks:** These define the main credit status in which customers may find themselves (with the purpose of handling them in an orderly way) and the messages shown on the POST display during card operations.

● **Operation-related tasks:** These are used to define the decisions to be taken during payment operations depending on the answer given by the AC when queried about a card. This also covers registering the credit plans applied to store card payments.

These tasks comprise the processes defined below:

Credit Status

The **Credit Status** process located in the **Cards** folder of the Basic module defines categories according to the different existing credit status. The customers registered by the store or who hold a credit card can have various credit status. These are frequently looked up in order to set up credit plans for customers, to allow them to use their card for payment without confirmation from the AC, etc.

To register a new **Credit status**:

1. Access the main screen of the process:
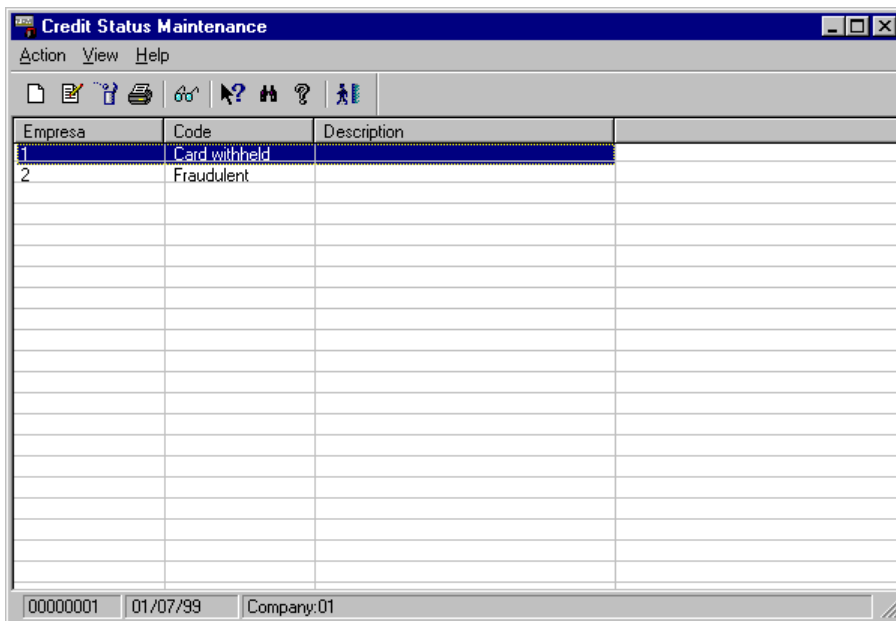
Fig. 4.14 Main window of the credit status management process

2. To register a new credit situation select the **New** option from the **Action** menu. The new credit status registration dialog box will appear.
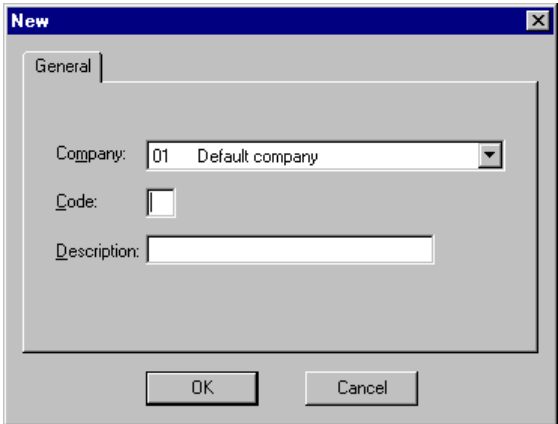
Fig. 4.15 New credit status registration dialog box

3. Select the company for which you are registering a new credit situation and then enter an identifying code and description.

4. Confirm by clicking on "OK".

4.22

Associated Messages

This process allows you to enter the messages that will be shown on the POST display when a credit card payment operation takes place. These messages are not aimed at the customer, rather they offer the terminal operator information about the process. Each message is associated with the code given to the credit activity when it was registered.
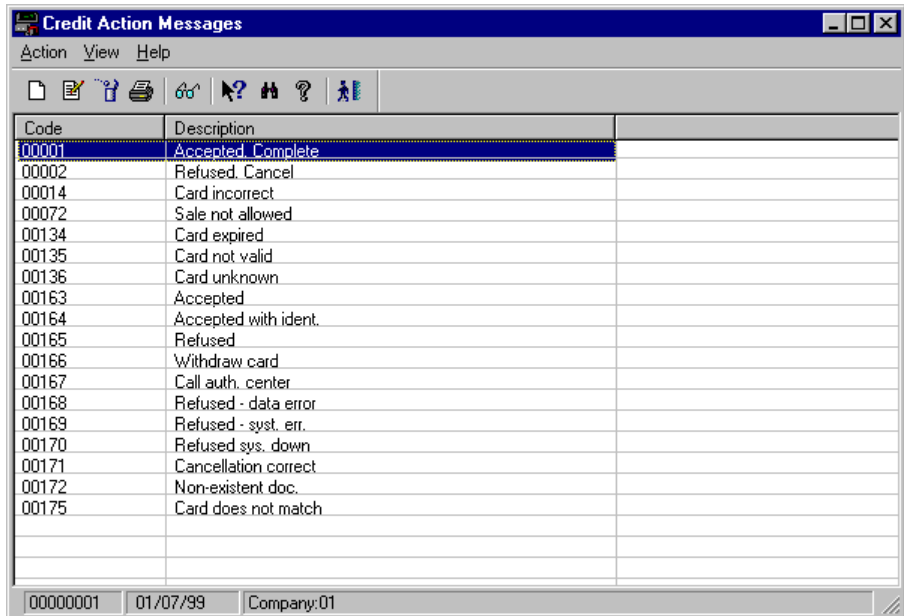
Fig. 4.16 Main window of the credit maintenance messages process

These messages are registered on the system in the usual way. An identifying code is associated with every message (4 digits) and the text of the message is typed in (maximum 20 digits).

Credit Actions

A credit action may be defined as the decision and subsequent action taken by SF-GV when it receives information from the card authorization center (AC). Thus, let us imagine that a customer uses a credit card to pay for a transaction and that after a certain period of time no confirmation is given as a result of a communications failure between the AC and the retail outlet. What decision should be taken in this case?

This decision (for example, requiring the customer to use an alternative method of payment) is set in this process.

A very restrictive credit activity policy can result in lost sales, whereas an excessively lax policy may result in losses through bad debts.

To define a credit action:

1. From the **Cards** group, start the **Credit Actions** process.

    The main process window will appear.
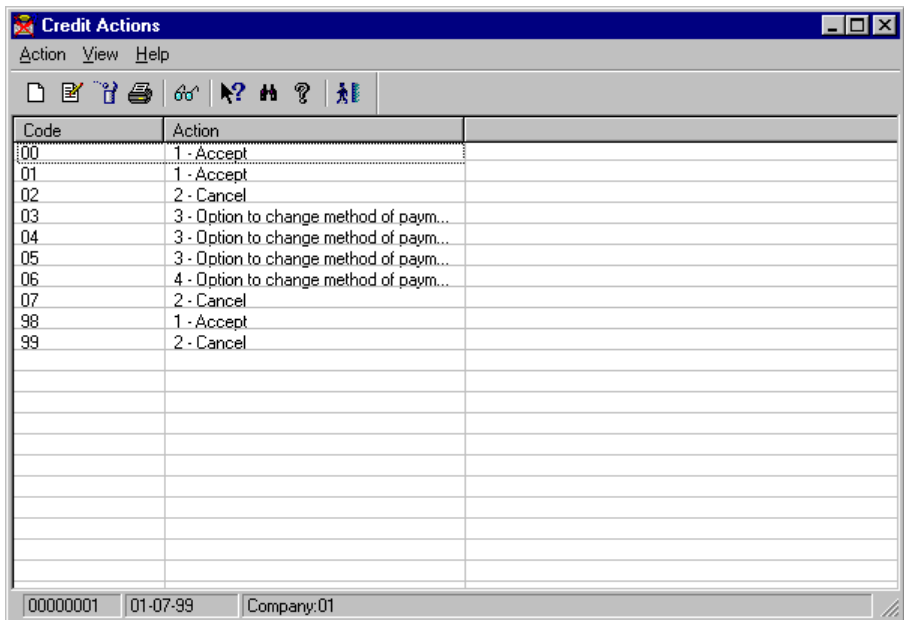
Fig. 4.17 Main window of the credit activity management process

2. Access the new action registration screen.

    The registration dialog box will appear.
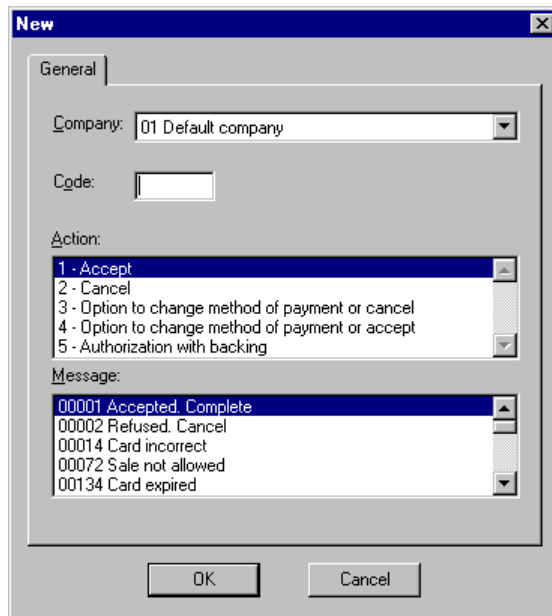
Fig. 4.18 New credit activity registration dialog box

3. Select the current company, the action code, the message that will be shown
    on the POST display when the chosen action is executed (see previous section)
    and the credit activity in the "Action" list.

The meaning of the actions is shown in the table below.

Credit Action	Situation Triggered by the Activity and Reason
1. Accept	The operation is accepted by the bank.
2. Cancel	The bank has not confirmed the operation and it should be cancelled.
3. Option to change method of payment or cancel	The bank has not confirmed the operation and it can either be cancelled or the form of payment changed.
4. Option to change method of payment or accept operation	The bank has not confirmed the operation, but it can be accepted anyway or the form of payment changed.
5. Authorization with backing	The bank has not confirmed the operation, but it can be accepted because the card used has a sufficient back-up limit.

4. Click on "OK" to confirm the configuration.

Credit Plans

The **Plans** process permits the definition of a series of plans that apply to customers choosing deferred payment terms (in Spain this can be carried out using a store card or credit card, if the credit card allows). These plans are predefined and their application entails nothing more than assigning the code for the plan at the POST when entering the transaction.

Also, if the operation is carried out from the POST, a large part of the payment can be charged (down-payment) in cash or using a credit card and the rest paid via the credit plan.

A credit plan is fully defined by four parameters:

- The minimum amount from which the plan can be applied (minimum price).

- The number of installments in the credit plan (these will always be monthly).

- The percentage annual interest applied to the plan.

- How the total is rounded off (first installment or last installment) in order to avoid fractional amounts being charged by the bank.

The value of each installment is calculated by means of the following formula:

$$\text{INSTALLMENT} = \text{PRICE} \; (1 + i/100)^{N} / \; n_{installments}$$

where:

> **PRICE:** is the retail price
>
> **i:** is the interest by which the price is increased as a result of deferred payment, expressed as an annual rate
>
> **$n_{installments}$:** is the number of monthly installments in the complete plan

Applying a credit plan to a card payment always requires that the defined plan be specified in the EFT sent to the financial institution backing the card.

> At present, the current European communications protocol only allows you to choose one of the following modalities:
>
> - 3 months
> - 6 months
> - 9 months
> - 12 months
> - 24 months

Keep this fact in mind when defining deferred payment modalities involving installments.

To register a new credit plan:

1. From the **Means of Payment** group, start the **Plans** process.

   The main process window will appear.
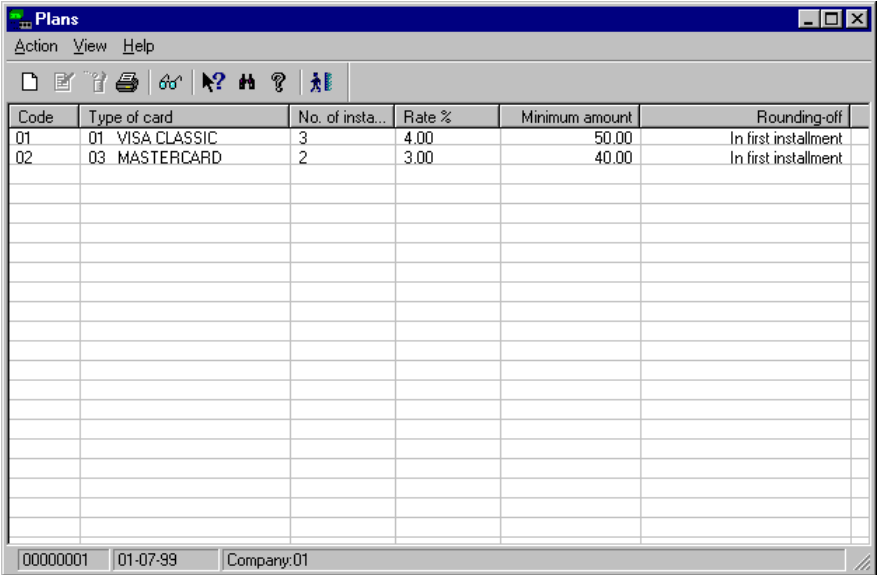
Fig. 4.19 Window of the credit plan management process

2. Access the new plan registration screen.

   The new plan registration box will appear.
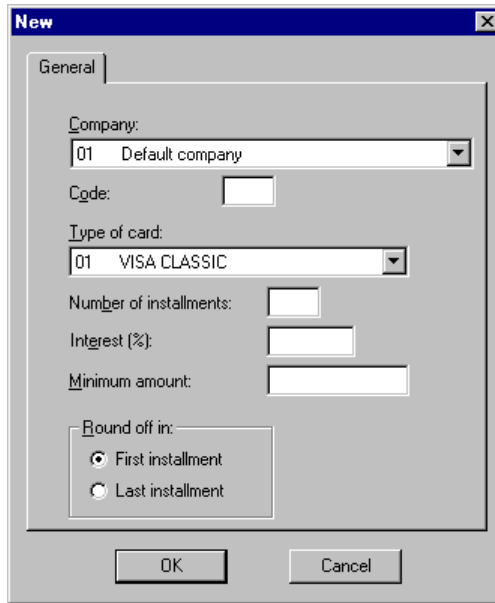
Fig. 4.20 New credit plan creation dialog box

3. Complete the dialog box shown as follows:

- "Company": Select the company where you want to apply the plan.

- "Code": Type a 2-digit identification code.

- "Type of card": Choose a type of card from among those registered previously during the card **Types of Cards** process. Remember that, in Spain at least, only store cards and credit cards can be used for deferred payments.

- "Number of installments": Enter the number of installments included in the plan.

- "Interest (%)": Type in the interest rate that will be charged on the item's initial sale price.

- "Minimum amount": Enter the minimum price of the item allowed for the credit plan.

- "Round off in": Choose the installment to which you want to apply the rounding-off if the installment amount results in a fractional value.

4. Click on "OK".

5

Terminal Management

- Store and Terminal Management
- Registering Terminals
- Terminal Status Query
- POST Events
- Cancelled Transactions Query
- Detailed Terminal Information Query

StoreFlow GV

This chapter deals with the subject of terminal management. Under this heading we shall consider the following aspects:

- Terminal processing as regards registration, modification and discontinuation of their general operating parameters.

- Global terminal status queries.

- Detailed queries of terminal and transaction information.

- Generating and sending warning messages to the security center.

Store and Terminal Management

In SF-GV it is possible to control and manage a multi-company shopping center at two levels at least:

- At *top management* level it is possible to analyze aspects such as total sales, sales by department and by company, estimated budgets, etc. This first level of analysis basically forms a part of the **Executive sales information** group.

- At the *detail management* level it is possible to analyze aspects such as sales by terminal and by operator, differences between terminals, and cash withdrawals. This second level of analysis is divided between various processes located in different application folders.

The management of the terminals in a shopping center belongs to the detail management level and includes the following basic tasks:

- Registration and modification of the operating parameters of the existing terminals

- Querying terminal status

- Querying canceled transactions

- Querying the hard total, or detailed information concerning specific terminals

- Definition and querying of security messages issued from the POSTs

To make the information easier to use, all the functions concerning terminal status include the option to print out a hardcopy of the results.

Registering Terminals

Of all the items in the store, terminals require the greatest number of steps before they can be brought into operation. This volume of work is augmented by their number, which is in some cases considerable, and the associated parameters.

The required operations can be divided into two types:

● Registration of new terminals in the store and their discontinuation

● Modification of a terminal's sales mode or operating parameters

The basic parameters for registering a terminal are described in the system configuration chapter in the ➤ "Terminal configuration" section.

Terminal Status Query

Terminals can go through a number of states, which means that it is necessary to know about various aspects such as:

- Whether a terminal is operating correctly
- If all of its data is up-to-date
- If it is blocked

In order to simplify the operation, SF-GV allows the status of terminals on the system to be queried together. In other words, you can query the status of one, several or all the terminals belonging to a company, building or sales area. All terminal parameters can be examined in this way.
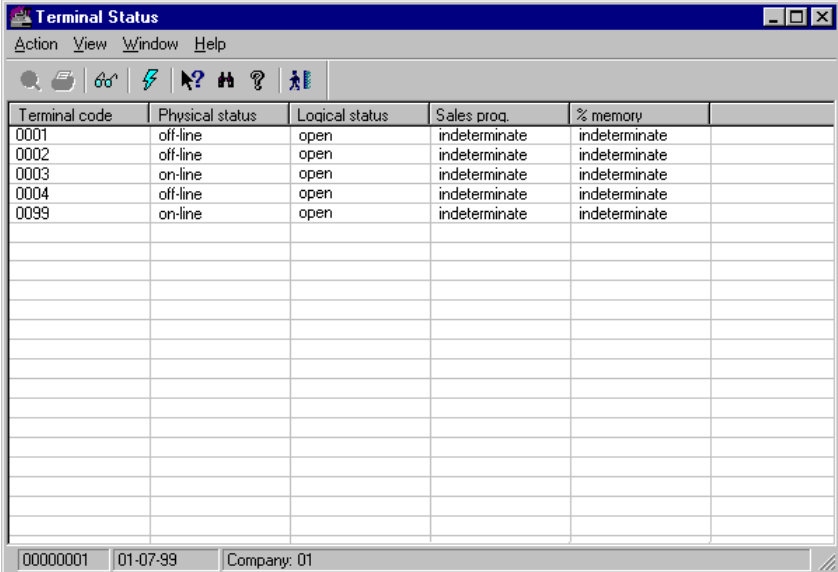
The procedure used to examine the terminal status is as follows:

1. From the **Terminals Query** group in the Basic module, start the **Terminal Status** program.

   The main process window will appear. The set of terminals is shown in the main area of the window. The most important parameters are shown for each, including:

   - Company and physical address
   - On-line or off-line
   - Whether a sales program is installed
   - Logical status (open/closed/blocked)
   - How up-to-date it is

Fig. 5.1 Main process window for looking up terminal status

2. Select a terminal in the main window and open the **Action** menu. Select the **Query** option.

   The **Query** box will appear, showing information on the operational parameters of the selected terminal.

Fig. 5.2 Detailed information box for the selected terminal

The parameters shown in the box include:

- "Logical name group": Indicates the terminal's group of logical names according to the definition included in the section of the system configuration chapter dealing with logical names.

- "Physical status": This can be either on-line or off-line.

- "Logical status": This can be open, closed or blocked. This will be "open" during normal operation, "closed" following closing (i.e., outside of normal store hours) and "blocked" when closed momentarily.

- "Sales pgm.": Indicates the status of the sales program: loaded, not loaded or indeterminate.

- "% memory": Indicates the percentage of the terminal that has been updated. This percentage indicates the coincidence between the status of the terminal and the server to which it is connected. As the terminal may have been operating without interruption, it may not have been fully updated with the information available on the server (prices, special offers, etc.). The degree of updating is measured by using an internal POST file which records the time devoted to the update.

POST Events

The store's POSTs include among their utilities a function which sends security messages to the server (operating code 50). When a POST is confronted with an abnormal situation (attempted robbery, fire, etc.), it is sufficient to use function 50 and type the message code the user wants to send. This message is received by the system in real time and can be known almost in real time, depending on the parameters defined in the **Event Recording System** process described below.

The normal procedure for using this function involves the following phases:

● From an SF-GV client station, the messages to which the POSTs have access are defined.

● When the POST operator detects an abnormal situation he/she types function 50. As part of the function's execution procedure the terminal asks the operator to enter the identification code for the event which has occurred.

● The client station defined in the store system receives the warning, almost in real time. This includes information relating to the terminal involved, the operator and the physical point in the company, which is set by the existing level descriptors.

● Security personnel are sent from the client station defined in the system, or the necessary steps are taken to solve the event that has occurred.

> **!** Terminal events should not be mistaken for process events. Both can be handled from SF-GV, but terminal events are launched by the operator, whereas process events originate automatically in case of error. Their operation is described in the chapter ➤ "Advanced Use of SF-GV".

The following sections describe the tasks associated with these phases.

Definition of Security Messages

The procedure for registering security messages available at the POSTs is as follows:

1. From the **Messages from POST** group, included in the Utilities module, start the **Messages by Terminal** process.

   The main process window will appear.
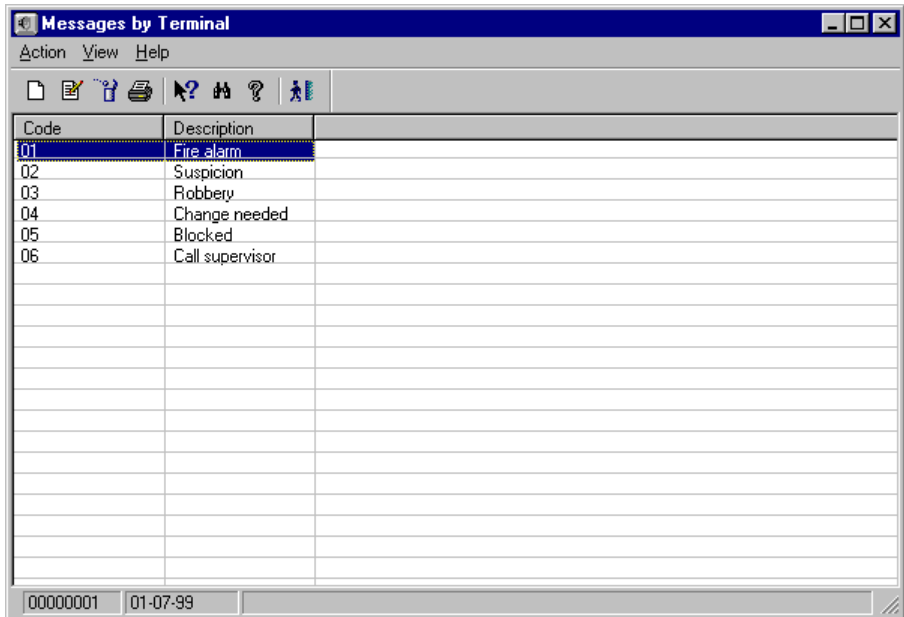
Fig. 5.3 POST security message definition process window

2. Open the **Action** menu and select **New**.

   The new message box will appear.
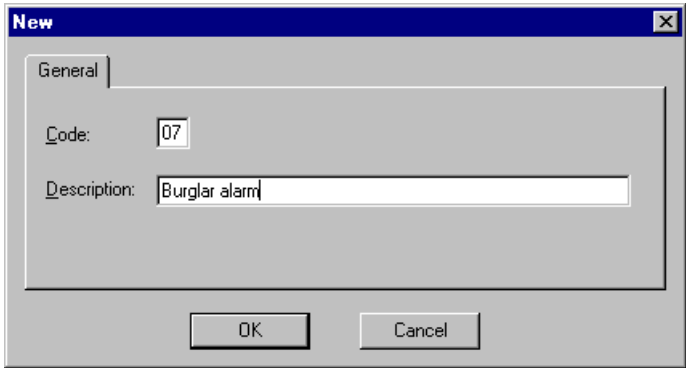
Fig. 5.4 Security message registration box

3. Type in the code used to identify the message at the POST (2 digits maximum) and a short description (25 characters maximum).

4. Click on "OK".

Repeat the process for the rest of the messages. These will be available to all POSTs in the group.

POST Event Query

The procedure for examining the events that have occurred at the POSTs is as follows:

1. From the **Messages from POST** group, included in the Utilities module, start the **Event Center** process.

   The main process window will appear.
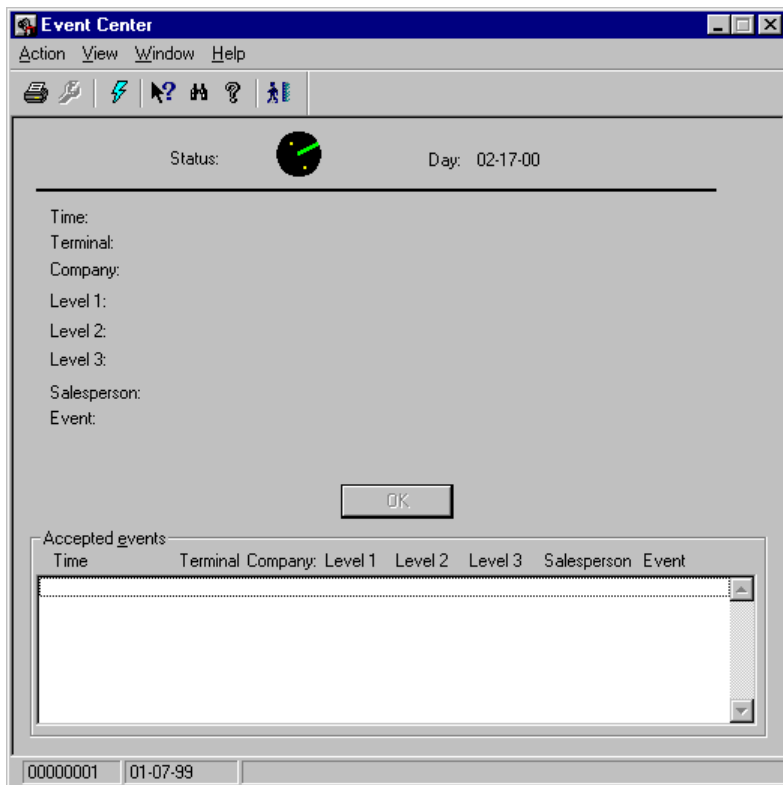
Fig. 5.5 Main process window for looking up events that occur within a particular period

2. The box in the lower area shows the list of events and their associated data.
    To look up the specific details for an event, select it and click on "OK".
    The following data is shown in the main window for each event queried:

    - Text for the event sent

    - Time when the event was sent, in minutes and seconds

    - Identification of the terminal which generated the event

    - Company to which the terminal belongs

    - Physical location of the terminal, indicated by its level descriptors

    - Salesperson who sent the security message

The **Event Center** normally starts at the beginning of the day and remains open while the system is in operation. SF-GV allows you to have this process open on as many client stations as are installed on the system (although it is normally activated on one, namely that which can take effective measures to solve the event which has occurred). When one of the client stations looks up the window, the rest of the client stations update the information in real time.

To ensure that this process is as efficient as possible, it is important to fine-tune the configuration values. To do this, open the **Action** menu and select **Configure**. The **Configuration** messages box will appear.
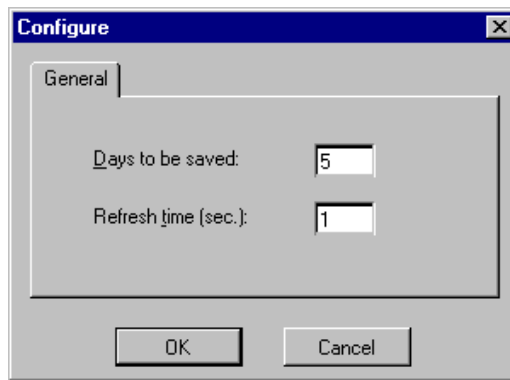
Fig. 5.6 Dialog box for configuring the storage and refresh periods
for the Event Recording System information

In the "Days to be saved" field, enter the number of days the event information should be kept, and in the "Refresh time" field specify how often the contents should be updated (in seconds).

Canceled Transactions Query

A canceled transaction is one that is invalidated either during execution or subsequently. The most common reasons for canceling a transaction include:

- Some kind of fault in the way it was carried out
- Incorrect data

A system in which a large number of transactions are canceled runs less efficiently and is a source of customer dissatisfaction. Therefore, a detailed study of canceled transactions, and in particular their distribution over time, by terminals and operators (depending on the type of store) can provide extremely useful information about aspects such as:

- The performance and training of the personnel in charge of terminals
- Possible terminal faults
- Work overloads during particular periods causing operation errors

In short, this is an additional tool for monitoring staff and an indirect parameter that indicates the proper operation of the system.

The procedure for looking up canceled transactions on the system is as follows:

1. From the **Transactions Query** group in the Basic module, run the **Canceled Transactions** process.

Fig. 5.7 Main window for looking up canceled transactions.

2. Select the transaction you are interest in and double-click on it. A window
    will open enabling additional information to be looked up. SF-GV provides
    the following information for each canceled transaction:

    ● The company and the terminal responsible for the transaction

    ● Its identification number

    ● The employee who carried out the transaction

    ● The amount and type of transaction (manual or automatic)

3. Click on "OK" to close the dialog box.

Detailed Terminal Information Query

Looking up terminal information is another frequent system monitoring and management task. Specific terminals can be queried on-line, or the results of a query for a customized range of terminals can be printed out.

SF-GV allows you to access detailed information about a terminal via the hard total feature. The hard total is a record held at each POST where the configuration parameters and the total results of the operations carried out during the day are stored (details of these operations can only be looked up in the transaction log of the POST's paper roll). Together with the **Terminal Status** process, this is the main source of specific data on terminals, and is therefore an essential query tool.

The basic data offered by the hard total record, and which can be accessed using this process, includes:

General Data

This provides information about the terminal number, the numerators of the operations carried out, update and closing dates, number of printable characters, total number and amount of cancellations performed, etc.

Terminal/Period

This provides global data on POST transactions for the current period. The current period is considered to comprise the time since the last opening operation and the current moment or the closing.

Cashier/Period

This provides information about the transactions carried out on the terminal by a particular operator.

Cashbox/Settlement

This provides a listing of the total amounts or the number of documents declared in the cashbox settlement function, broken down by cashbox groups.

Transaction Numbering

This provides a listing of the types of documents defined, the types of cards used and the general numbering sequence information. A numerator is offered for each. In this section, "numerator" refers to the sequential value of "n" digits printed on the ticket.

Hardcopy of Multiple Terminal Results

This provides printed information about any of the aspects listed above for a range of terminals chosen by their identification number.

The procedure for looking up a terminal's hard total is as follows:

1. From the **Terminal Query** group in the Basic module, start the **Total Query** process.

   The main process window will appear.
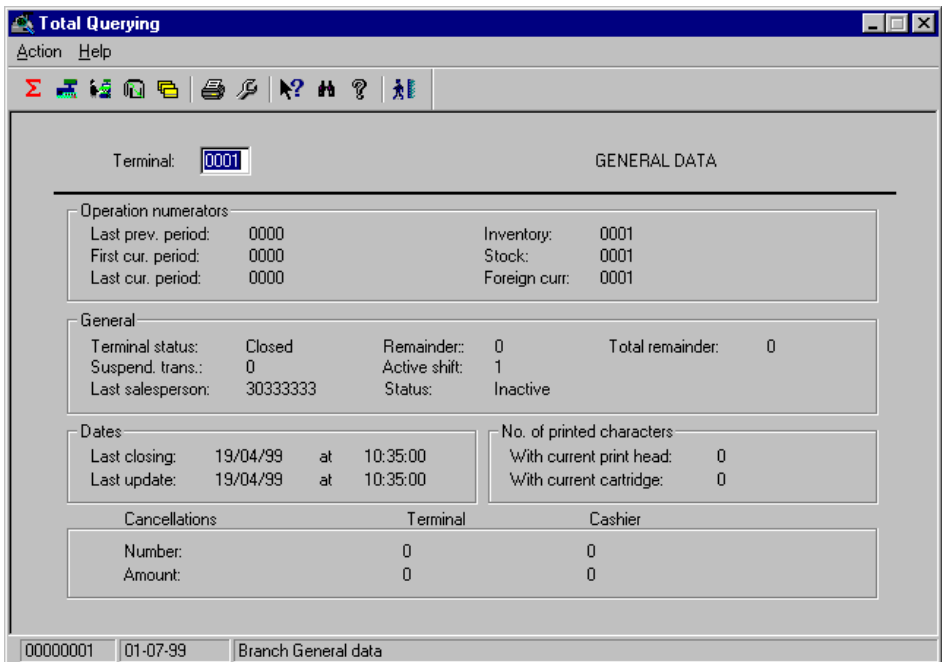
Fig. 5.8 Terminal hard-total query window

2. In the "Terminal" box, enter the internal terminal identification ("Official terminal ID" field in the terminal registration process) and wait for the screen data to be updated.

3. Open the **Action** menu and chose the option corresponding to the type of information you want to look up.

   - **General data**
   - **Terminal/period**
   - **Cashier/period**
   - **Cashbox/settlement**
   - **Transaction numbering**

If you want to print the results, select **Print**. If you want to choose the contents of the hard copy, select **Page setup**. In the box that is displayed, enable the item that you want to print and the range of terminals to which you wish to apply the query.
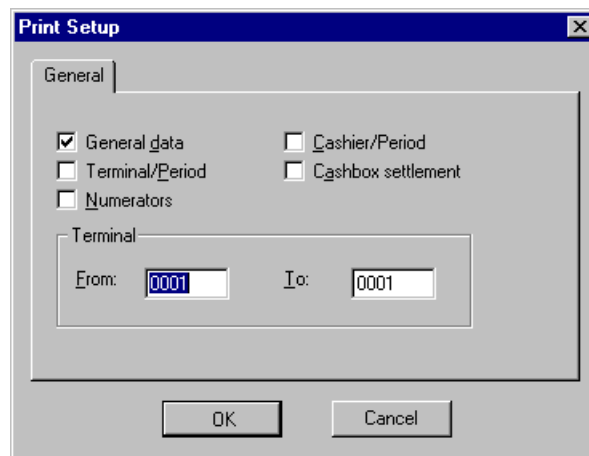
Fig. 5.9 Box for selecting the contents of the hard-total printout

6

Advanced Use of SF-GV

- Elements of SF-GV
- Daily Sequence

StoreFlow GV

This chapter covers advanced functions of SF-GV. In particular, this includes tasks reserved for users with an administrator profile, technical training and in-depth knowledge of SF-GV.

The following SF-GV functions are considered advanced:

- Management of processes and the files that comprise them.
- Definition of process strings.
- Management of events and groups of events.
- Associating actions with events, with a view to correcting errors that can arise during day-to-day operation.
- Typical daily operations and the sequence in which they are performed.
- Use of the **Center Monitor** process.
- Definition of the communications interface with headquarters.
- Query or management of the different types of logs (process log, transaction log, file receipt log).

Elements of SF-GV

So far, throughout the manual we have assumed that SF-GV is made up of a series of programs referred to generically as processes, which the user can access through the application interface. Judicious use of these programs allows all the functions needed for managing the store to be carried out. However, these processes can only be executed from the client station, and are actually processes that must be accessed from the server.

Most of the advanced-use programs are associated with the server, as it is the server which is responsible for providing the tools that are essential for SF-GV and the POSTs and running the support programs that are needed. These include processes for data integration, processing sales, controlling the store, etc.

So, the real situation is a little more complicated. There are also other elements, transparent to the average user, with which the experienced user can play to automate or improve the overall operation of the system:

SF-GV is made up of *processes* (represented by icons on the main SF-GV screen), which in turn are associated with *files* (which contain tables, general information, etc.). These programs are launched manually or automatically each time operations are carried out in SF-GV. It is also possible to associate series of processes started automatically or manually (usually overnight, after the store has closed) which are referred to as *strings*.

On occasions, errors may occur during the execution of the processes. In the context of SF-GV, these are called *events*. To solve these errors (if there is the option to do so), actions can be associated with a process and run in the event of an error arising.

Thus, the elements comprising SF-GV can be listed schematically as follows:

- **Processes:** Or SF-GV programs. Client processes are grouped together in folders and can be run independently from one another. Server processes are grouped together in areas. The client process executables have the format TB????, TC???? or T?????. Processes with TS???? format belong to the server.

- **Strings:** These are (normally predefined) processes that can be grouped together and launched automatically after the store has closed from the **Center Monitor** process. These strings carry out daily tasks such as generating sales reports, calculating accrued sales (daily, weekly, monthly) or producing listings of cancelled sales. They can also be executed manually.

- **Files:** Basic units of information that the processes use. A file can contain a database table, for example.

- **Events:** Events that arise in the system, frequently associated with errors. When an error occurs, the associated event generates a message. This can be looked up in order to correct the error.

- **Event groups:** The most common events and errors can be grouped together in order to improve their management.

- **Actions:** Can be associated with processes and be launched normally in order to correct an error.

In the following sections we will describe how these elements interact with the various management functions offered by SF-GV so as to enable more advanced use of the application.

It should be noted that not all SF-GV tasks are intended for the same user profile. Broadly speaking, process control is an advanced task intended for use by technically qualified personnel. It is usually the company's IT department which is responsible for controlling SF-GV application processes.

In this chapter we will take a tour around the most common tasks included in process management. These also include processes involved in day-to-day operation whose importance is such that they are reserved for the system administrator.

Processes

The **Processes** program provides information (and in some cases allows definition) of three points:

- The list of existing client and server processes.
- Files (of all types) used by a process.
- The strings in which a process is included.

Processes need to be registered in the maintenance program before each time they are started or stopped can be recorded in the process log. That is to say, all the processes involved in SF-GV must be registered here (both client and server environments).

> ❗ Note that although the **Action** menu includes the **New** option, it does not register the new processes created (except in the case of a custom SF-GV development). The same can be said for the string and file processes. Likewise, in order to delete a process it is necessary to first delete all references to the process in other databases.

To query or modify the files and strings associated with a process:

1. From the **Processes and Files** group of the Basic module, start **Processes**.

    The main process window will appear.
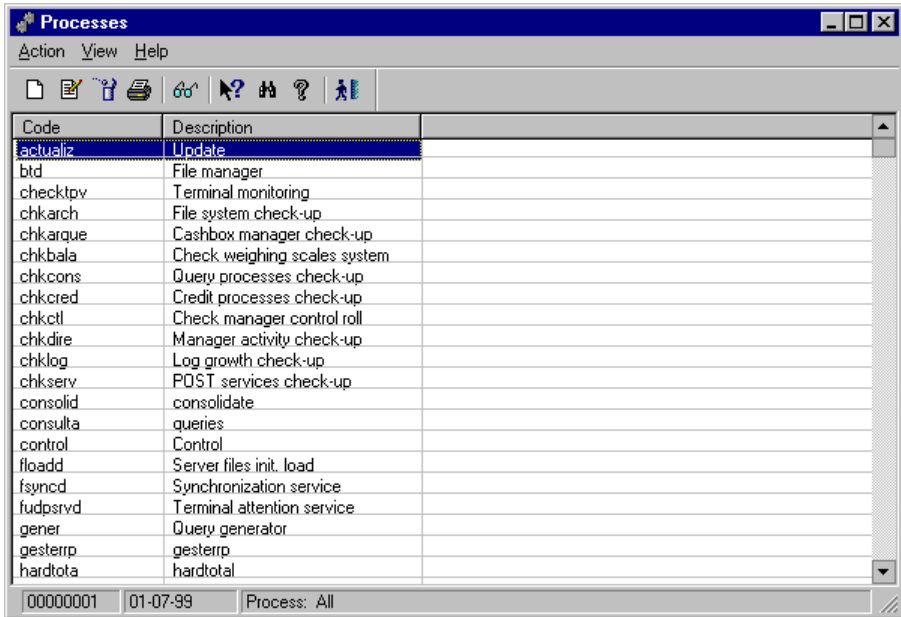
Fig. 6.1 Main process management window

2. On the process list, double-click the process that you want to query or modify, or else choose the **Modify** option for the **Action** menu.

    The following dialog box will appear:
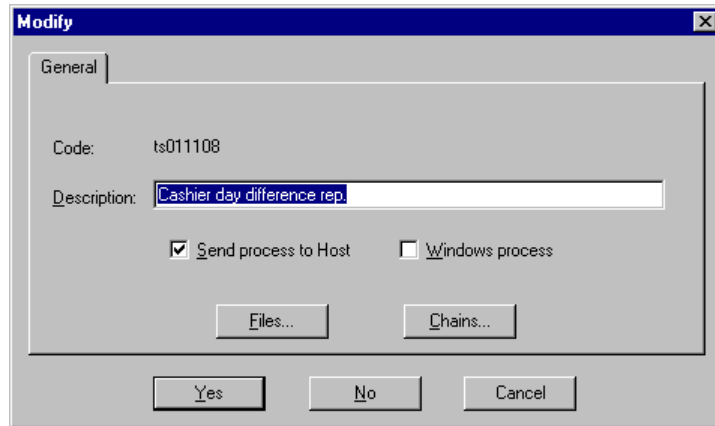
Fig. 6.2 Process characteristic modification box

3. Complete the dialog box shown as follows:

- "Description": Enter the name of the process. In the case of Windows processes, this description will be that appearing under its icon on the screen.

- "Send process to host": Check this box to send the warnings written to the message log to the host.

- "Windows Process": Check this box if the managed process is a Windows process (all the client processes other than POST processes are Windows processes).

- "Files": When this button is clicked, the dialog box **Modify (File)** will appear. If you are adding a new process, select the file or files the process uses in the upper "Archive" box (all files belonging to all SF-GV processes will be shown) and click on "Add" to include them in the process. Click on "OK" to close the dialog box.
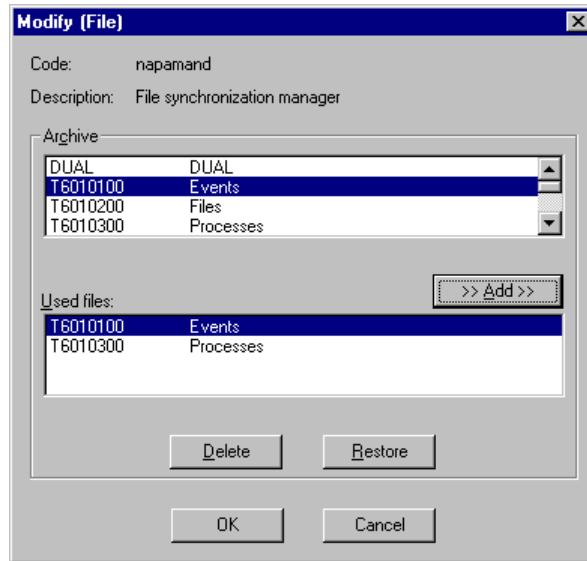
Fig. 6.3 Query box for files used by a process

- "Chains": Clicking this box brings up the **Modify (String)** box, similar to the one just described for process files. All the predefined strings existing in SF-GV are shown in the box at the top. The box at the bottom shows the strings where the process intervenes. To include processes in a string, select them and click on "Add" or "OK". Client programs cannot be associated with any string.

4. Click on "Yes" to confirm the changes made to the process.

Strings

A string is a series of processes working towards the same purpose, linked in such a way that each receives information from that preceding it, acting on the data as appropriate and passing it on to the next. Strings are usually launched automatically overnight after the store has closed from the **Center Monitor** client process. However, they can run at any time, even during the day.

Strings often perform periodic tasks (almost always daily), such as generating a variety of reports, accrued sales calculations (daily, weekly, monthly), mass data updates, etc.

The existing strings in SF-GV cannot "be created" (even though the string management process includes the **New** option), as they are predefined in the strings configuration file, CADENA.BAT. The **New** option is, however, often used during the SF-GV installation procedure to add strings developed by the customer. Thus, this process is mainly for information purposes.

To look up the processes that make up a string:

1. From the **Processes and Files** folder, start **Strings**.

    The main process window will appear.
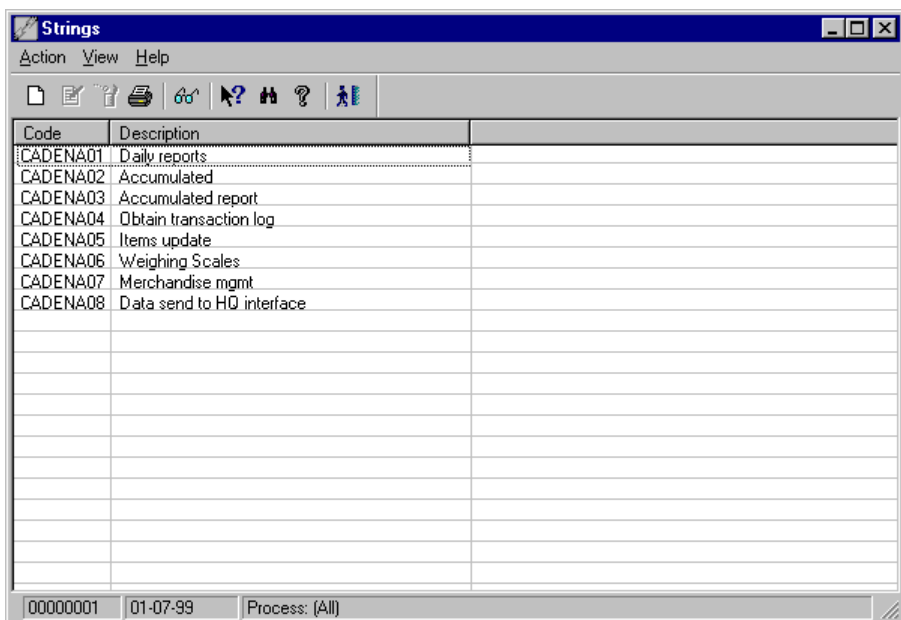
Fig. 6.4 Main window of the string management process

2. Select a string and double-click on it.

    The **Modify** dialog box appears.
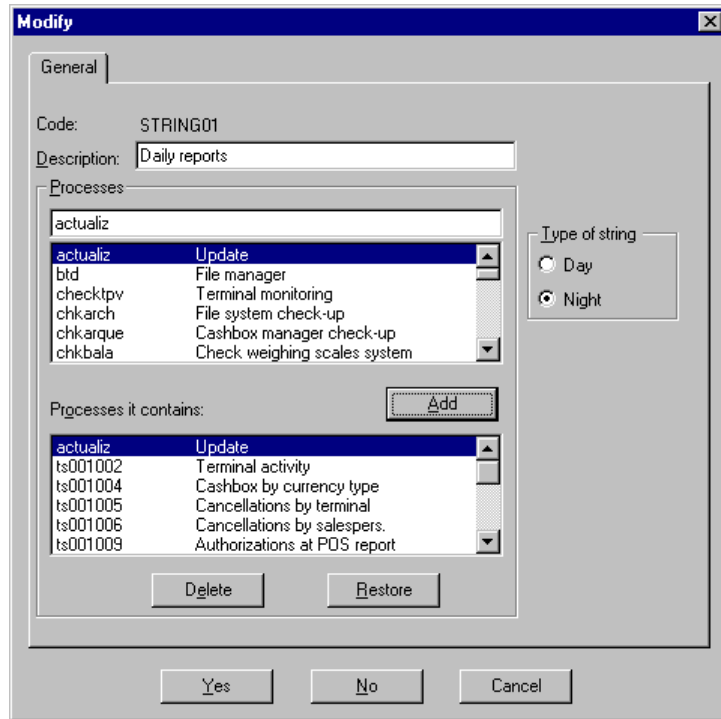
Fig. 6.5 Information box for the processes included in a string

The box shown gives the following information:

- The code and name of the string.

- Whether the string is run during the day or overnight.

- All the processes which do not have the Windows flag enabled and the processes included in the string.

From here you can add or delete processes to/from the string information, but not from the string itself.

3. Click on "Yes" to close the box shown above.

Predefined Strings

If you ran the process mentioned above you will have noticed that eight predefined strings appeared in the main process window (the sixth, "Scales", and the seventh, "Merchandise management", will only appear if the corresponding optional modules are included in your installation). On the list below, all the existing overnight strings and the processes they include are shown.

String 01: Daily reports

The purpose of this string is to list daily sales information.

1. Terminal activity
2. Closure by terminal / cashier
3. Cancellations ordered by terminal
4. Cancellations ordered by salesperson
5. Point of sale authorizations report
6. Card sales
7. Off-line transactions on server
8. Rejected transactions
9. Movements by item
10. Invoices by terminal
11. Zees by terminal (cash register closing)
12. VAT settlement
13. Closing by operator/aisle
14. Installments report
15. Reduced VAT sales report
16. Detailed reduced VAT sales report
17. Sales by check report
18. Supplier voucher sales report
19. Manual price change report

String 02: Accumulated

The purpose of this string is to store and accumulate the day's sales information consolidated previously by the Manager program.

1. Recording of the temporary table with storage periods
2. Recording of the temporary table for erasing obsolete historical information
3. Erasing obsolete historical information
4. Updating the batch control record
5. Accrued terminal operations
6. Accrued terminal/salesperson operations
7. Accrued sales by sector

8. Transfer to operation history by terminal
9. Transfer to operation history by terminal/salesperson
10. Transfer to sales history by sector
11. Sales operations and amounts loading
12. Salespeople error loading
13. Sales history by item
14. Accrued sales by packaging
15. Sales history by packaging
16. Accrued item sales
17. Transfer to packaging consumption history
18. Accrued payment/receipt movements
19. Accrued sales by department and family
20. Accrued transactions and operations by terminals
21. Company accrued figures by time interval
22. Accruals by units quantity special offer/promotion
23. Accruals by sale interval, special offer and promotion
24. Accrued sales with installments
25. Erasure of obsolete information
26. Accrued cash register and cashier difference
27. Terminal differences history
28. Differences history by cashier
29. Salesperson terminal use

String 03: Accumulated report

The purpose of this string is to list the daily and accrued sales information.

1. Terminal load per hour
2. Sales by department
3. Salesperson activity
4. Salesperson errors
5. Packaging movements
6. Payment and receipt movements
7. Sales by department reports

String 04: Obtaining transaction log

The purpose of this string is to run the "obttlog.exe" program, which transfers the data stored by the process "ts021003" in temporary tables to the final tables.

String 05: Item update

The purpose of this string is to update the special offers and promotions on items and departments and the stock of merchandise.

1. Activation and deactivation of special offers
2. Updating of special offers and promotions by department
3. Activation and deactivation of promotions
4. Updating of special offers and promotions by item
5. Updating promotions by environment
6. Updating item sales stock
7. Updating stock entries and exits
8. Information on merchandise entry and exit
9. Activation and deactivation of campaigns
10. Erasure of obsolete information on special offers/promotions and stock
11. Erasure of obsolete cashbox settlement information

String 06: Weighing Scales

The function of this string is to update and accumulate information related to the scales processes.

1. Updating of tickets pending marking
2. Erasure of obsolete tickets
3. Accrued history by salespeople and items
4. Updating of monthly movements history
5. Updating of used PLUs

String 07: Merchandise mgmt

The function of this string is to update the information related to merchandise management processes.

1. Updating delivery notes
2. Calculation of order point
3. Erasure of obsolete merchandise information

String 08: Data sent to HQ interface

This string creates the files that are sent to the central office.

1. Hourly sales interface
2. Item sales interface
3. Department sales interface
4. Operator sales interface
5. Inventory sending interface
6. Order sending interface
7. Delivery note sending interface
8. Merchandise entry and exit sending interface
9. Stock sending interface
10. Sale and cashbox settlement by terminal sending interface
11. Difference restatement sending interface
12. Special offer sales sending interface
13. Promotion sales sending interface
14. Card and detail points sending interface
15. Points exchanged for gifts sending interface
16. Raised for authorization interface

Files

SF-GV enables management of the files used by the system processes. These are basically of two types:

- Database tables
- Files

Normally, the procedure consists in choosing a file related to all the processes for which it is used and so on for all the files required.

To associate a file with an existing process, start the **Files** process located in the **Processes and files** groups. This process is mainly for information purposes.

To register a new file, run the standard new-element registration procedure.
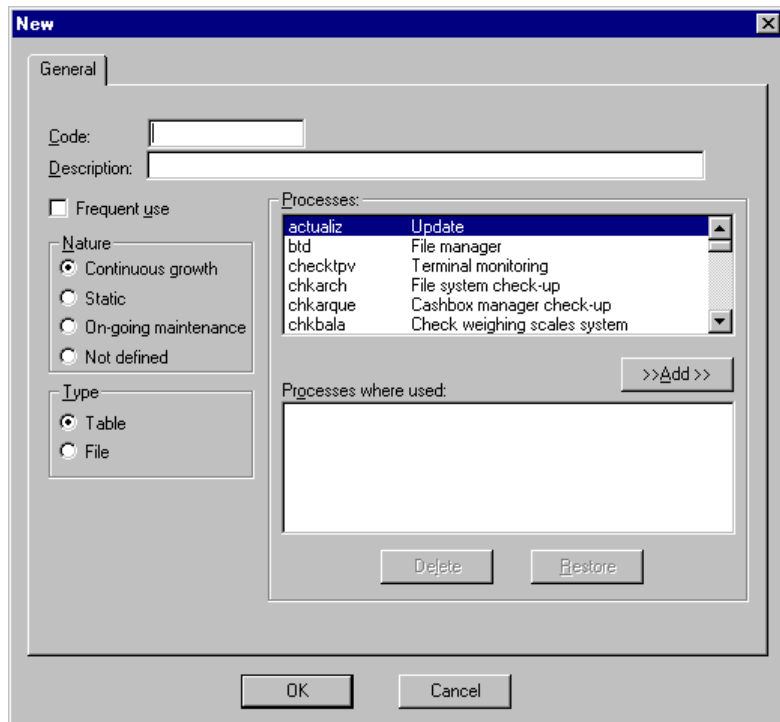
Fig. 6.6 Registration window for associating files with processes

In this box, indicate the code and description of the file, whether it is a table or file, whether it is frequently used, and its type. Files may be of the following types:

- Continuous growth: Records are always added.
- Static: Contains fixed, defined information.
- On-going maintenance: Constantly being updated
- Not defined: Can be of any type.

All the files belonging to both the client and the server will appear on the list and can be included on the list of "Processes where used" by selecting them and clicking on "Add".

Event Groups

The existing events are defined by taking into account the errors that can arise in the processes and their statistical distribution ($\blacktriangleright$ "List of error messages").

Following the top-down methodology described in the configuration chapter, before creating a specific event the basic event groups which will be associated with errors should be registered. To do so, start the **Incident Groups** process from the **Processes and Files** folder.

Access the registration dialog box by following the standard procedure, and define a code (up to five digits) and a name (up to 30 alphanumeric characters) one by one for each group into which the possible events are to be classified.
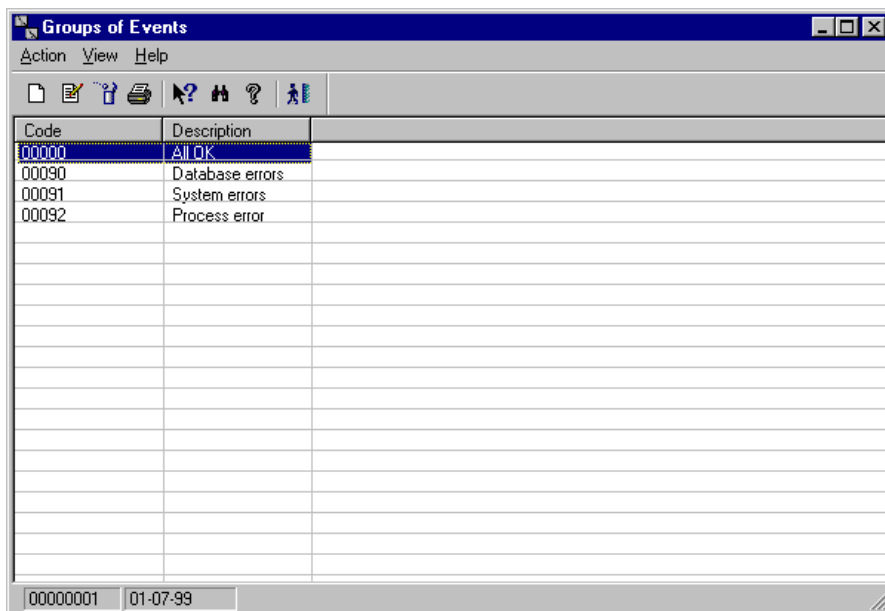
Fig. 6.7 Main window of the Event Groups process
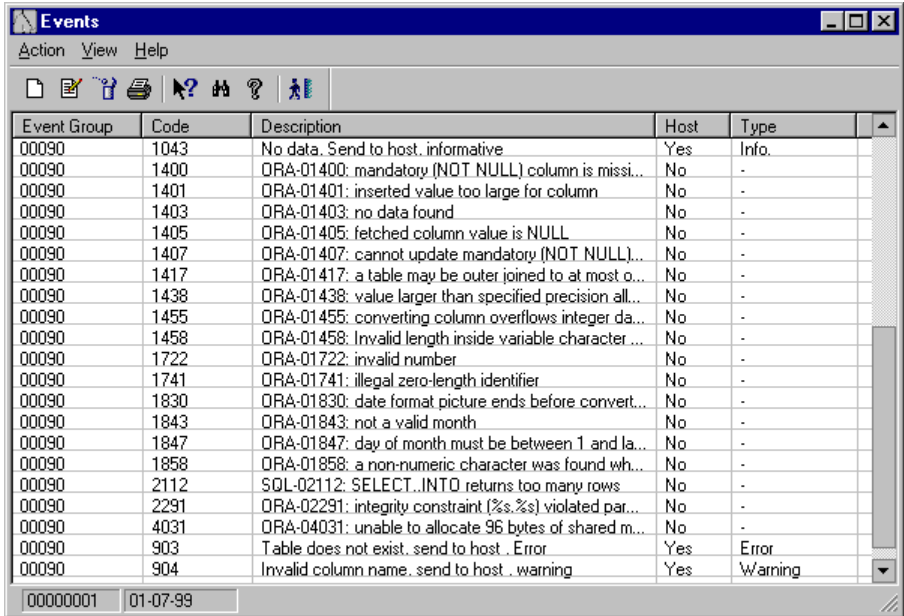
Events

Event means any error occurring during process execution, i.e., errors produced by the program itself and recorded in its event table.

Most of the common events are predetermined and are shown in the window of the **Events** process. These do not need to be "located" (i.e., associated with a given event group from among those described in the previous section). When SF-GV registers a new event, it is automatically registered in this process. Non-pre-defined events of this type do have to be registered in the process mentioned above.

To register an event:
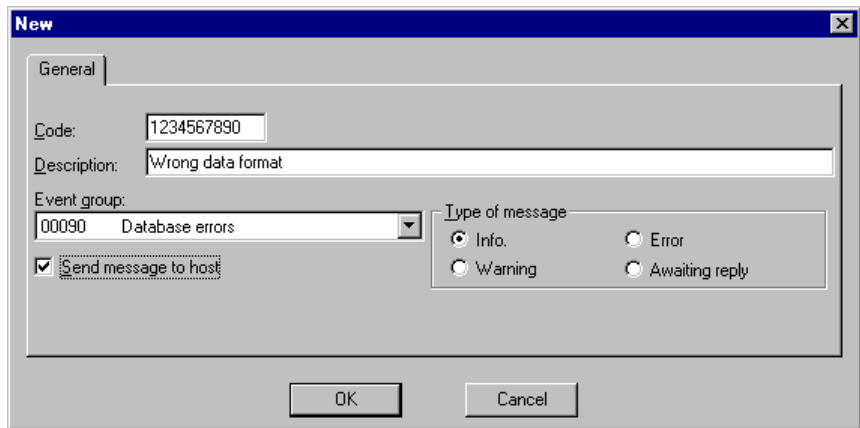
1. From the **Processes and Files** group, start the **Events** process.

Fig. 6.8 Main window of the event management process

2. Access the event registration box shown in the figure below.

The event association or new event box will appear.

Fig. 6.9 New event registration box

3. Complete the box with the following information:

- "Code": Free-text format code for the new event (maximum 10 alphanumeric characters).

- "Description": Reference text for the new event.

- "Event group": Select the group where the event is to be located from the pull-down list.

- "Send message to host": If enabled, when the process finishes a message will be sent to the host with the generated code. This applies regardless of whether the process finished normally or in an error state.

- "Type of message" box: Only active if the box above was checked. If active, choose the type of message the event will generate. All messages are for information only, except "Awaiting reply", in which case the process waits for the host to send a response action.

4. Click on "OK" to confirm the new event.

Actions

This process enables you to define the existence of a series of actions linked to the possible events that a process may cause. In other words, it defines what you should do in the event of a specific event arising. Thus, not only does the system notify the user that an error has occurred, but also says what to do to solve it.

When process execution terminates, a code is returned. This code is a message code. It may have certain actions associated with it. If, for example, the code returned on termination of a process is an error message code, this will be associated with the actions needed to recover from the error and continue with the operation in progress.

To carry out maintenance of the recovery actions which will subsequently be related with the errors, select the **Actions** process from the **Processes and files** folder.

The main process window will appear.
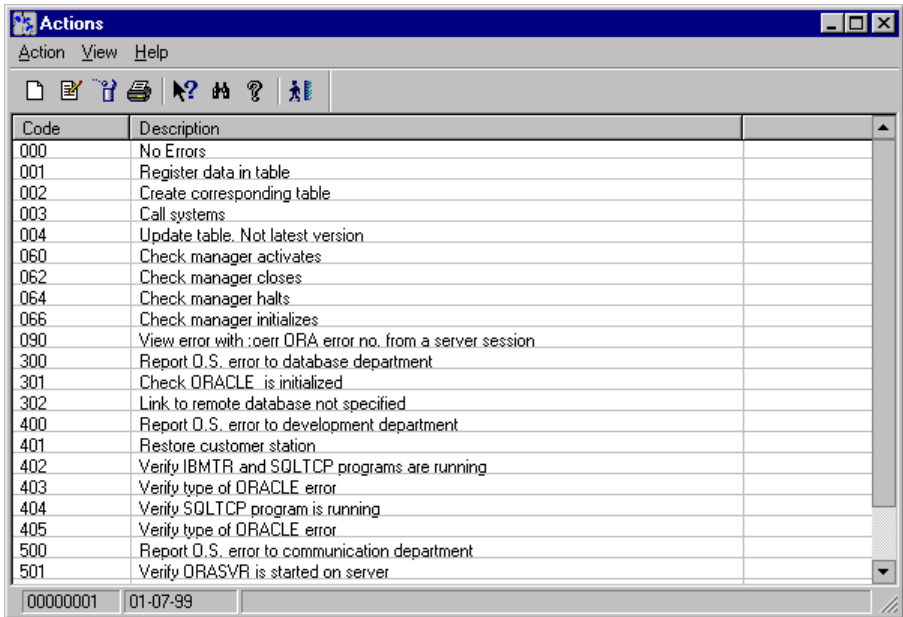
Fig. 6.10 Main window for action maintenance

Actions Associated with Processes

The actions available in SF-GV would have no meaning if they were not associated with processes. Thus, once they have been defined via the **Actions** process described in the previous section, they should be linked to the error they correct.

To associate an action with a process that has terminated with an error:

1. From the **Processes and Files** group, start **Actions by Process**.

   The main process window will appear.
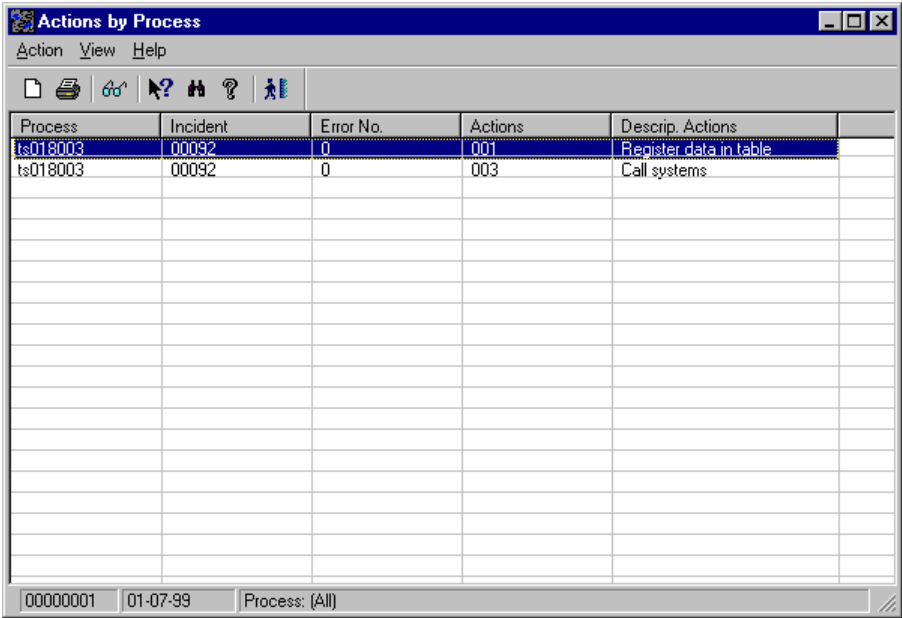
Fig. 6.11 Main window for associating actions with processes

The main **Actions by Process** window displays a list of associated actions, with the list of error or event messages produced by the action.

Several errors may correspond to a process, and each error may have several actions.

2. Open the **Action** menu and click on **Associate**.

   The Association dialog box will appear.
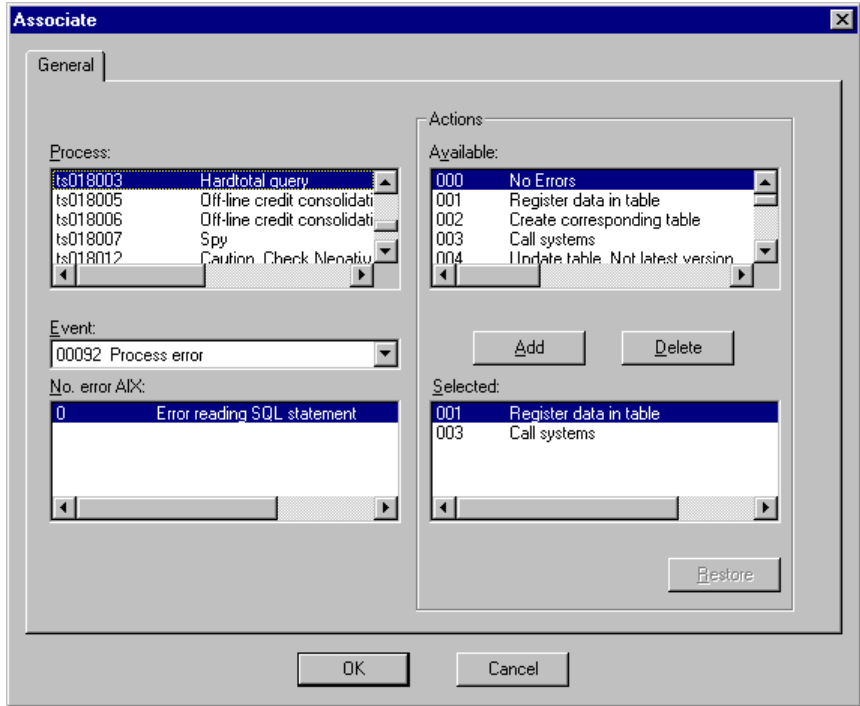
Fig. 6.12 Dialog box for associating processes with actions

3. Complete the dialog box shown as follows:

    - "Process": Shows the full list of existing client and server processes.

    - "Actions": Shows the actions that can be associated with a process.

    - "Event": Shows the existing groups of events.

    - "No. error AIX": Allows you to choose the error on which the selected action will be performed. This list shows only those errors in the group selected from the previous list (most of these errors only make sense with certain specific processes).

4. Select a process and associate it with a specific action by clicking on "Add".

Daily Sequence

For the description of the daily sequence we will assume that the system has been fully configured beforehand. In this sequence we therefore include those processes which need to be used every day, from start to close of day, in order for the store to operate smoothly. These processes are considered from the management point of view and so do not necessarily have to coincide with the trading day. We will also assume that the user running the sequence has system administrator status or similar.

A typical daily sequence would include the following phases:

1. Start the Windows client station.

2. Query the **Process Log** to check whether the overnight strings have been run correctly. If an error has occurred the relevant repair actions will be executed.

3. In the case of stores configured with headquarters, check the correct transmission of files from the central office. The processes **Initial Transmission Files** and **Headquarters File Processing Log** exist for this purpose.

4. Start the **Center Monitor** process.

5. From the Center Monitor, open the store and the companies.

6. Typical middle-office operations: The most typical would be starting the spy program on the server (the function of this program is to take into account the processes that are going to be monitored and start the rest of the modules; these modules are fully independent programs and each checks the state of a specific part of the system) and performing withdrawals from the point of sale terminals at the end of the day or when they exceed the maximum cash limit set. Apart from these, some SF-GV functions are so common that they can be considered to be part of the normal day. These include:

    ● Item management: All the processes relating to items, such as registration, price change, setting up special offers and promotions, etc.

    ● Management of customers and credit: Maintenance of existing customers and their characteristics, and managing credit (cards, discounts, etc.).

    ● Management of terminals: Maintenance and querying information on the terminals in the store.

- Management of merchandise and suppliers: Maintenance of the management of entries and exits of items, delivery notes, perishables, etc.

- High-level management: Querying and maintenance of aspects such as cash differences, withdrawals, sales queries, estimates of future sales budgets, etc.

7. Daily shop closing: From the Center Monitor, the companies are closed and the information stored in the transaction log is updated. The overnight strings for report generation, calculation of accrued totals, errors, etc., are launched.

Of the aforementioned tasks, only those directly related to the **Center Monitor** process will be described here.

Process and String Log Query

Each time a process starts, whether on a client or the server, this event is recorded in a table along with its details (date, time, user launching the process, etc.). When execution terminates, the record is completed with the relevant details (date, time, termination code, etc.).

Querying the process log is closely linked with the use of the **Strings** program, as it is common for the overnight process strings to generate errors or events and for subsequent analysis of the system to be carried out by querying the process log. Another common use arises when it is necessary to report error information to customer service, in which case it is very useful to be able to query the log in real time to provide more information.

For every process that has been executed on the system, SF-GV keeps a complete reference including the following data:

- Name, code and description of the process.
- Source terminal and user launching the process.
- Date and time the process began and ended.
- Indication of the error and event.

All in all, the process log makes it possible to look up various types of information about both running and completed processes.

To query the process log:

1. From the **Daily Operations** folder in the Basic module, start the **Process Log**.

   The main process window will appear.

Fig. 6.13 Main window of the process process log query

In the event of incorrect termination, the "Event C." column will show the event group to which the error, whose code is shown in "Error C.", belongs. Only in this case will there be a comment in the "Remarks" field.

2. Open the **View** menu and select the **Include** option. The following dialog box will appear:
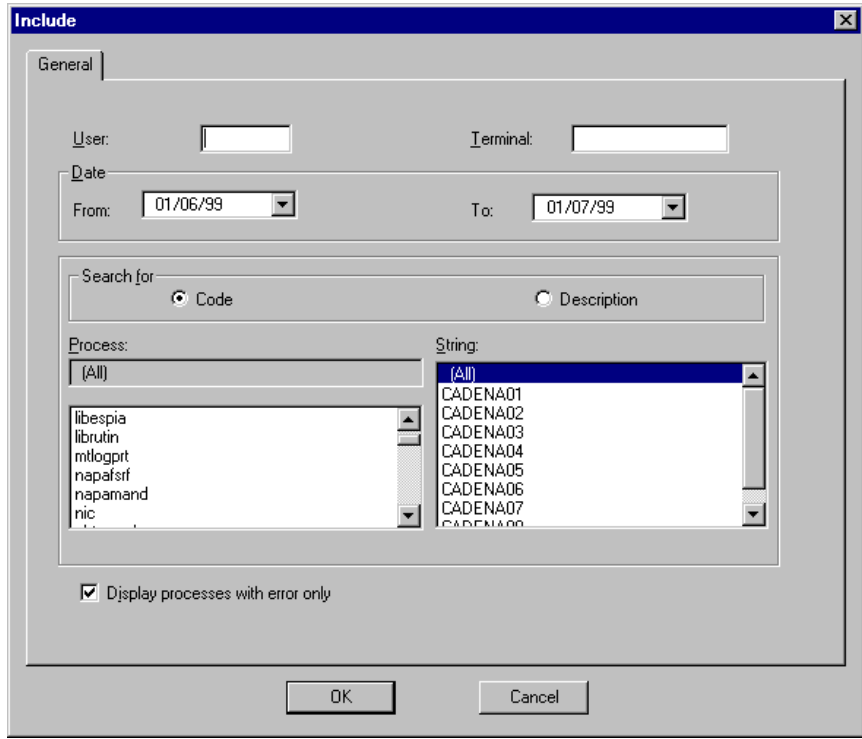
Fig. 6.14 Process/string selection criteria

From here you will be able to select the processes that will appear according to the following criteria: user, terminal, range of dates, specific types of processes and strings, etc.

3. Complete the dialog box shown as follows:

   ● "User": Code of the user who executed the process.

   ● "Date": Enter the range of dates for the query.

   ● "Search for" box: Select "Code" in order to show the alphanumeric identifier in the "Process" and "String" lists below ; otherwise, choose "Description".

   ● "Process" / "String": Choose the processes and strings that you want to query, or (All) for a general query.

   ● "Display processes with error only": Check this box to limit the query to those processes that have not finished correctly.

4. Click on "OK".

Maintenance of Transmission Files

There are many occasions when the server at headquarters needs to send information to the server at the store. This maintenance function allows you to define the interface to enable the server to understand the files which arrive from the central office and translate them into its own tables.

In short, this involves defining names for the files that can be sent from headquarters and associating them with the interface programs running on the server in order to be able to interpret them. For each type of file that arrives at the server, there exists an interface program that reads it and loads it onto the SF-GV database, i.e., a program that converts it into table format.

For example, whenever a file starting with "AR" arrives, it will be handled by the ts030305 process to convert it into the table format understood by StoreFlow.

To register a new type of file:

1. From the **Daily Operations** folder, start the **Initial Transmission Files** process. The main process window will appear.

Fig. 6.15 Main window of transmission file maintenance

2. Select the **New** option from the **Action** menu. The following dialog box will appear:
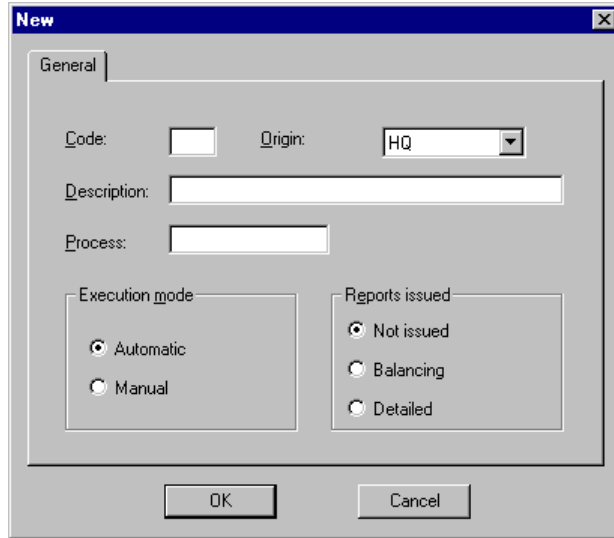
Fig. 6.16 Transmission file type registration

3. Complete the box as follows:

- "Code": Specify the initials that will identify the type of file being defined (maximum 2 alphanumeric characters).

- "Description": Enter a brief description of the type of file.

- "Process": Indicate the interface process that will handle files whose name starts with the initials given in the "File" field.

- "Execution mode": Choose "Manual" if the process indicated above should be started by the operator or "Automatic" if the process is to start automatically whenever a file of this type is received.

- "Reports issued": Indicates whether a listing should be produced on completing the process. If so, this listing will contain summarized or detailed information on the records processed.

4. Click on "OK".

Headquarters File Processing Log

As mentioned in the previous section, for each file arriving from headquarters the corresponding interface process is started so as to load the data into the system's tables. At the same time this event is recorded in the log.

To query the log, select the **Headquarters File Processing Log** process from the **Daily Operations** folder.
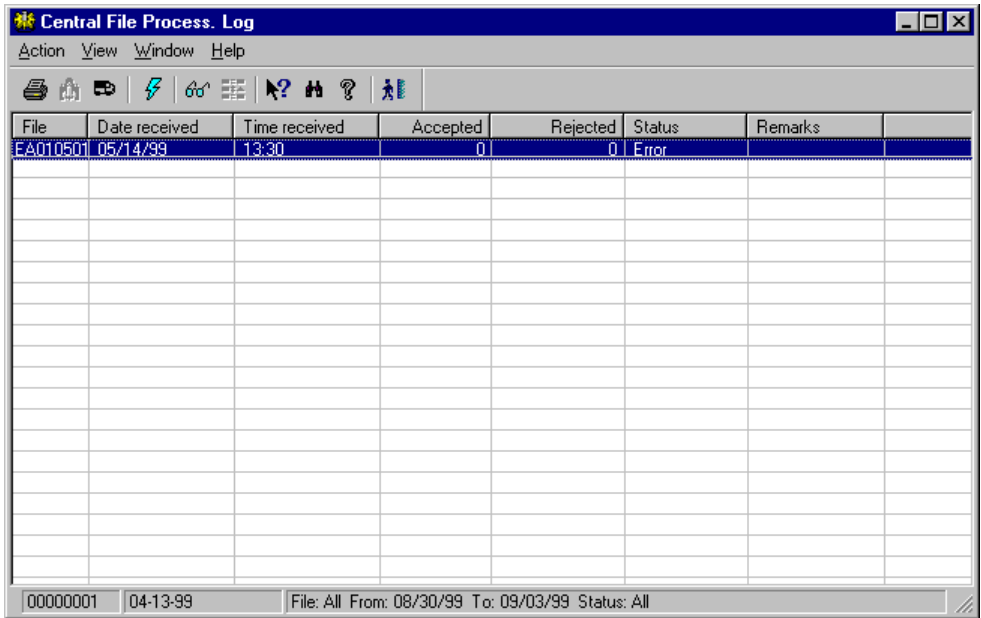
Fig. 6.17 Main window of the Headquarters File Processing Log

This window shows the name of the file received from headquarters, the date and time of reception, the number of records accepted, the number rejected, the status, and an explanatory message in the event of an error having occurred.

This process therefore enables the files received from headquarters over a user-selected period to be queried. It is important to note that if a record in a received file is in the pending state, i.e., has not been processed (because the means of execution of the process was defined as being manual), or processing has terminated incorrectly, it is possible to execute the associated interface process from here ("Execute process" button enabled).

Summarizing, we can conclude by saying that files arrive on the server from headquarters and interface processes running on the server handle the data and load them into system tables, but if a process terminates in error or is defined as being for manual execution, you have the option to launch it from a client station.

Center Monitor

Before going in depth into the Center Monitor it is worth pausing a moment to briefly explain the sales manager.

Basically, we can schematize its operation as follows: the point of sale terminals record the information on-line regarding all the transactions being carried out in a single log for the whole system (file tlogxx.dat, where xx=1 ... 7). This log is located on the server. The manager is a server program (ts004101) that constantly reads the log to translate the information held and store it in tables. These tables are also located on the server, from where the client stations can consult them.
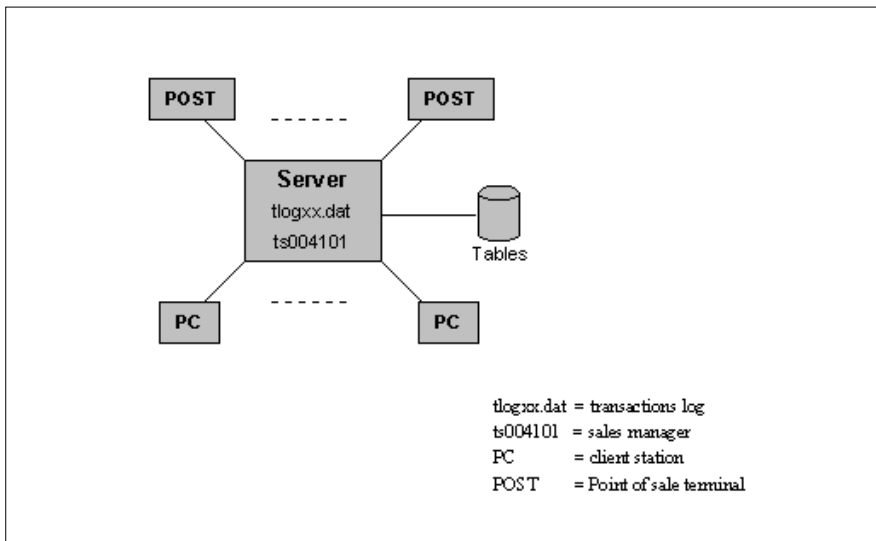
Fig. 6.18 Sales manager activity environment

The **Center Monitor** is one of the basic processes in Sales Management, and its main mission is to start up the manager and control its state. Thus, Center Monitor enables actions including:

- Daily store opening, needed for the correct operation of the SF-GV system.

- Daily store closing at the end of the commercial day, either by closing the store as a whole or company by company.

- Activating and deactivating batch processes run overnight.

- Querying the sales manager status.

- Checking that the sales manager is processing the current transaction log or a previous one and that it is feeding the daily tables into the database.

In addition to starting the sales manager, when the store is opened Center Monitor also allows the cashbox settlement in office manager, the control roll manager, and the invoicing manager to be started (the latter will only be started if the optional Administrative-Financial Management module is installed).

In order to access the Center Monitor, select the process of the same name from the **Daily Operations** folder. The following window will appear:
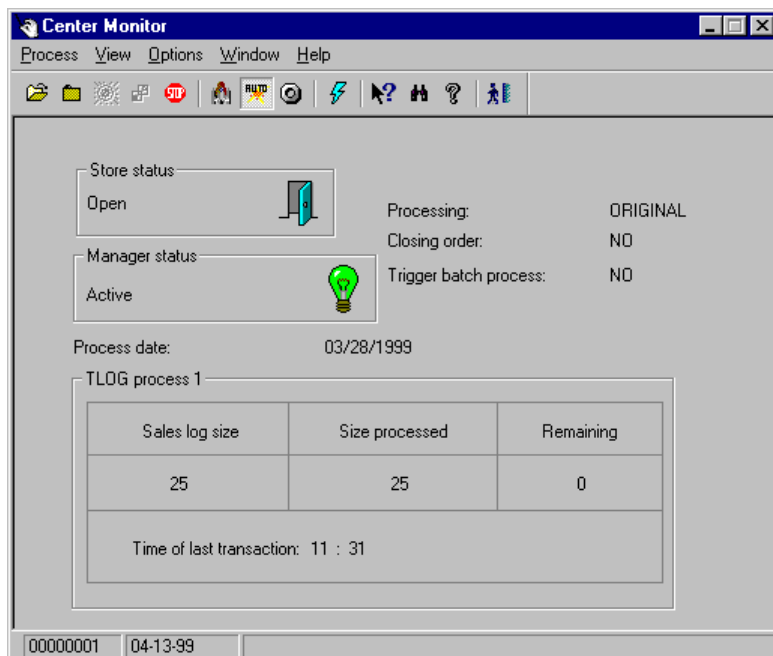
Fig. 6.19 Main window of the Center Monitor

The main window shows the states of the entities associated with the Center Monitor in three boxes: the store, the manager process and the transaction log.

The store can be in either the "Open" or "Closed" state.

The text in the "Manager status" box indicates the manager's current state (Active, Stopped, Reset) and the light bulb located to its right gives a visual, color-coded indication of its status.

Color of the light bulb	Tlog Status
Red	Center Monitor closed
White	Center Monitor opening
Blue	Center Monitor stopped
Green	Sales log processed without delay
Amber	Sales log processed with slight delay
Purple	Sales log processed with delay
Yellow	Stop request

The box in the lower part of the window called "TLOG process 1" indicates the total log size in bytes, the amount already processed (i.e., translated to the tables by the sales manager), the amount pending, and the time of the last transaction. The sales log includes the total set of transactions performed at all the POSTS in the store, and for this reason delays can arise as a result of the volume of transactions.

The monitor also indicates, in the "Processing" field, whether it is working on the current day's log (ORIGINAL) or that of a previous day (COPY). In the "Process date" field it shows the date of the log being processed, whether the store close order has been given or not and whether the batch processes will be started automatically on closing.

> **!** Remember that the manager process must be running at all times in order for the POSTs to operate properly.

Data Updating

Once the **Center Monitor** process has been started, the first decision that should be taken is whether the information shown on the screen is to be updated manually or automatically. As in the case of other SF-GV processes, manual updating is performed by pressing the "F5" function key.

To enable Automatic Updating, open the **Options** menu and select **Automatic Updating**. A new option, **Update Configuration**, will be enabled. Select it, and in the dialog box which appears enter the updating time required.
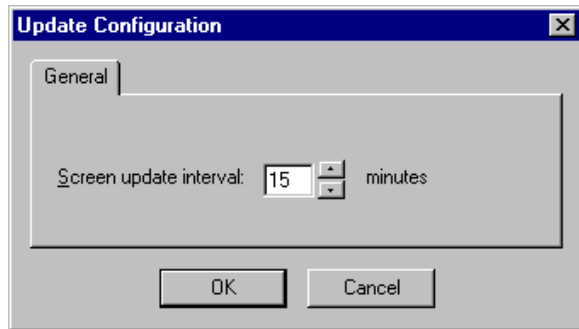
Fig. 6.20 Screen data update time configuration box

Store Opening

Store opening is an immediate operationthat can be carried out by using some options from the available **Process** menu.

The typical sequence of operations is as follows:

1. Select the **Open** option; the following dialog box will appear:
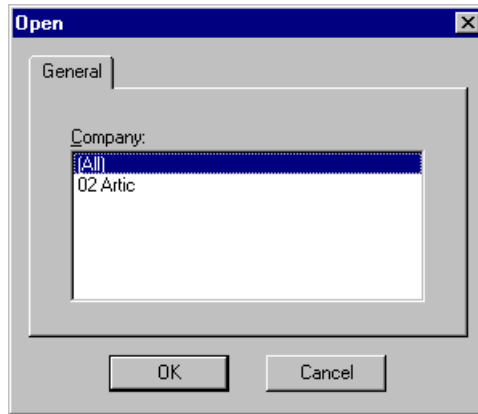
Fig. 6.21 Store opening dialog box

In the "Company" box select the companies you want to open. SF-GV offers the option of either opening companies in the shopping center selectively (for example, if they have different opening times) or opening the store as a whole.

2. Select the **Prepare** option.

   For the opening operation you need to choose a date for the "Opening log" field. This must be the same as that for the sales log.
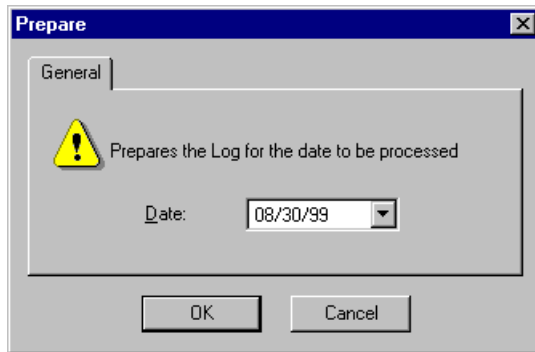
Fig. 6.22 Log preparation dialog box

3. Finally, select the **Activate** option so as to start recording transactions in the log.
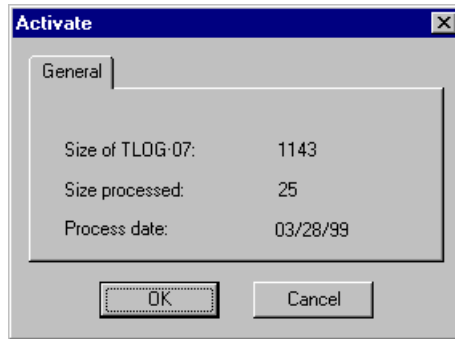
Fig. 6.23 Log activation dialog box

It is at the time the store is opened that the log file, tlogxx.dat, is generated and activated, so that the POSTs can start selling and recording the sales transactions here. At the time of creation, it contains the file header information with a size of 25 or 29 bytes, depending on the installed operating system, Windows NT or AIX.

Store Closing

To close the store, execute the **Close** option from the **Process** menu. The shopping center closing dialog box will appear.

Fig. 6.24 Store closing dialog box

To close a store you must first of all close its companies, otherwise the "Open companies exist" message will be shown.

If you check the "Forced" box, the store is closed irreversibly. Forced closing takes place in the chosen environment (the whole store or certain companies) regardless of the status of the parts of the store. Thus, a forced closing of the shop terminates the transactions even if there are open companies or POSTs that are carrying out sale transactions at the time.

While the store closing process is in progress, the main window of the monitor shows "Closing order: YES".

Remember that in order to avoid duplicating the data in the accrual tables, you need to carry out the following options prior to closing the store:

- prepare the original "tlog" file, change the switch "Trigger batch processes" and enable the transaction log again, or

- restore the data in the tables, prepare the "tlog" file and enable it so that the batch processes are triggered with the updated tables.

Processing the Sales Log from other Days

It is possible to store up to seven log files corresponding to the same or different days. Bear in mind that the log file is called "tlogxx.dat", where xx is a number between 1 and 7. The process is cyclical, so once "tlog07.dat" has been reached "tlog01.dat" will be overwritten.

Each time the store is opened, a new log is created. Thus it is possible for there to be more than one log generated in the same day if for any reason the store was closed and reopened.

Processing the log produced on earlier dates requires the **Prepare** option in the **Process** menu. Simply enter the process date that you want and confirm your choice.

> This file is normally quite large, so this operation can take a few moments.
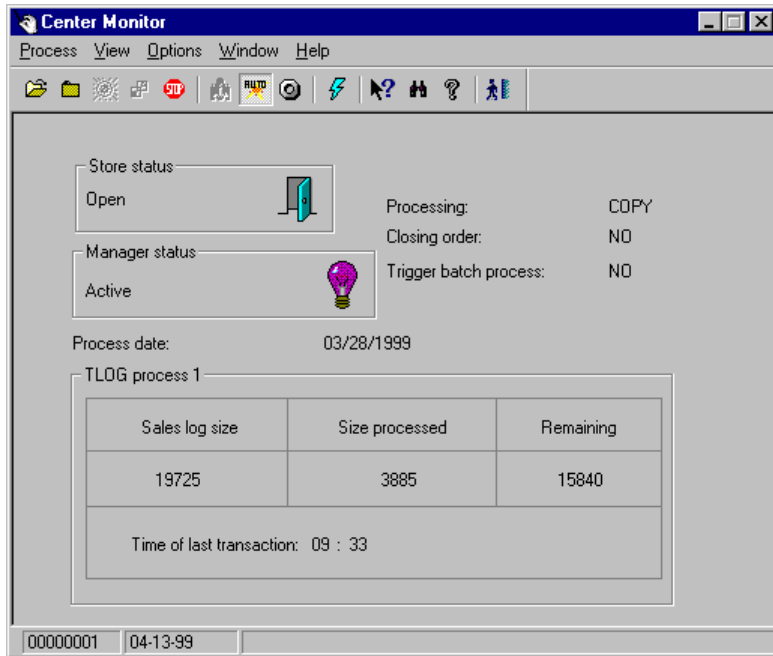
Fig. 6.25 Main window of the monitor when it is processing a copy

Sales records whose dates are not the same as the current date are shown in the "Processing" field on the screen with the text COPY (those for the current date are marked ORIGINAL). There are various reasons why it may be necessary to process records whose date is not the current date. For example, it may be necessary to generate reports again if they were incorrect when first produced because the data they were based on was incomplete.

When the sales manager processes an old log, the information in the server tables with the day's sales is deleted and the data for the day being queried is loaded. These tables could be said to be temporary, or rather the information in them is. What is stored is the file in log format, thus when accessing the sales information the file has to be processed to convert the data into table format.

Processing an old log file is normally done with the store closed. If the store is open at the time it will be necessary to prepare the day's active log again in order to continue working.

Fig. 6.26 Current log reactivation dialog box

Activating and Deactivating Process Strings

To change the current state of the automatic processes, open the **Options** menu and select **Trigger batch process**. The main window will show the new state of the configured parameter. Batch processes are launched when the store closing order is given from SMM. As described, batch processes are controlled from the String Maintenance process in the **Processes and files** folder.

There can be a wide variety of reasons why it is advisable to deactivate these process strings on particular dates.

Transaction Log Query

Transaction means any operation carried out by a POST. The data from each transaction is stored in the transaction log file. The **Transaction query** process provides information about aspects of a specific transaction, which may have been carried out on one or more days previously.

To look up the data for a transaction, start the **Transaction log query** process from the **Transaction query** folder.

The main window of the program will appear, showing the details of a specific sales ticket.
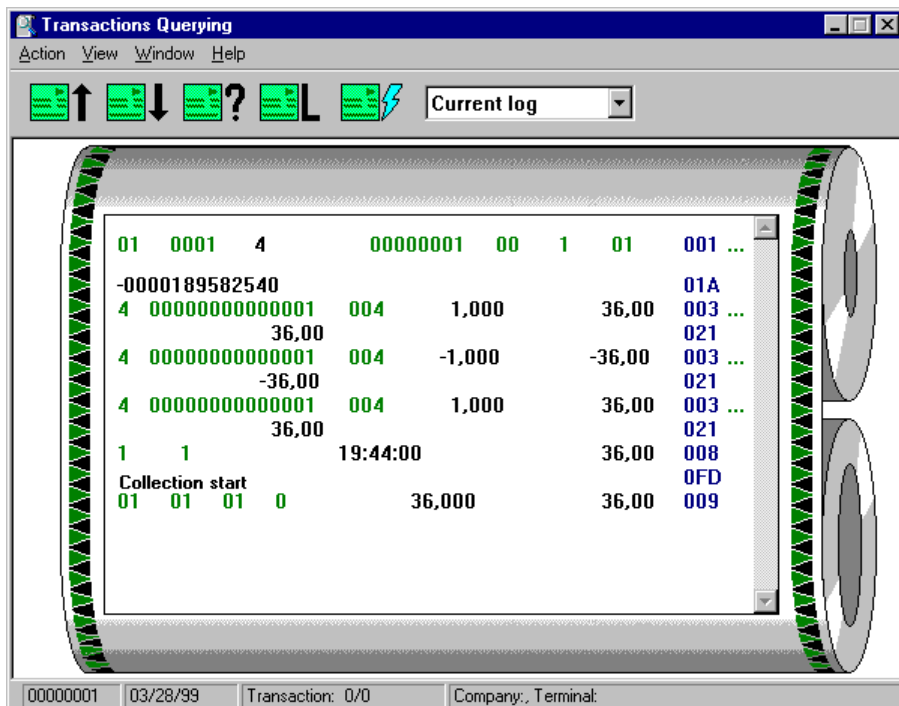
Fig. 6.27 Main window of the transaction log query

You can choose between querying the current log or the historical log for any date within in the past thirty days. To do so open the **Action** menu and select the **Obtain TLOG** option. Alternatively, use the window's pull-down list.

You can step back and forth between the transactions shown in the query with the arrows.

Clicking on the "L" button shows the list of transactions obtained by applying the established selection criteria, or all the transactions if no restriction has been applied.

Since the information in the current log is varying constantly, it is possible to update the screen data. To do so select the **Update window** option from the **Window** menu.

The status bar shows the number of transactions in the sample, the total number of transactions selected, the date of the transaction log being queried, and the type of selection set: company, terminal, salesperson, etc.

To look up a specific aspect of a transaction, place the cursor over it and double-click the fields not shown in black type. These include additional information such as the discount points obtained from a transaction included in a loyalty-building campaign.

If you want additional information on the transaction log file you are querying, open the **Action** menu and select **TLOG id**. A dialog box opens where you can enter the line code, the center to which the tlog belongs, the opening date, etc.

Moreover, it is possible to obtain two listings:

- A listing of the sales ticket shown on the screen.

- A list of all the transactions queried.

Finally, the **View** menu contains one single option, **Include**, which performs the same function as clicking on the question mark icon. Selecting this option displays the next screen, where you can select all the transactions queried by using very diverse criteria.
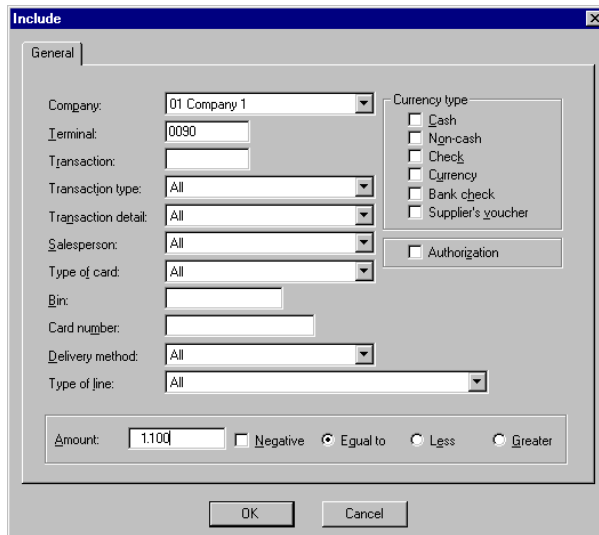
Fig. 6.28 Criteria for selecting queried transactions

- "Company": Code of the company you are working with.

- "Terminal": Terminal where the transactions being queried were carried out.

- "Transaction": Code or number of the transaction being queried.

- "Type of transaction": Type of function the transaction belongs to (sales, cash, querying/request, management, operation, etc.).

- "Transaction detail": Type of operation and code associated with the transaction being queried.

- "Salesperson": Salesperson code associated with the transaction.

- "Type of card" used for settling the transaction.

- "Bin": Card ID code.

- "Card number": Number of the card used as means of payment.

- "Delivery method": Indicates how the products sold were delivered to the customer.

- "Type of line": Code associated with the line generated when carrying out the transaction. This line is shown on the control roll and contains information on the transaction and the specific type of operation.

- The bottom box contains the following items:

  - "Amount": Minimum amount for the tickets being queried.

  - "Negative": This check box should be enabled if the amount indicated in the above box is negative. Enabling this box must be associated with any of the three boxes listed below, "Equal to", "Less than" o "Greater than".

  - The option buttons "Equal to", "Less than" and "Greater than" indicate that the transaction roll will display those queries whose tickets show an amount equal to, less than or greater than the figure shown in the "Amount" field, respectively, by taking into account the corresponding sign.

- In the "Type of currency" box you need to select the method of payment for the transactions being queried:

  - "Cash": For operations paid in cash.

  - "Non-cash": For operations paid by means of another type of document.

  - "Check": For operations paid by check.

  - "Foreign currency": For operations settled in a currency other than the default currency.

- "Bank check": For operations paid by means of a bank check (valid only for Portugal).

- "Supplier coupon": For operations settled by means of a supplier coupon (valid only for Portugal).

● "Authorization": Enabling this check box gives the operator access to certain operations.

Control Roll Monitor

When the store is opened automatically, the server process (ts021003) is launched. This reads the transactions in the log and stores the information in the tables.

> ❗ This process should not be mistaken for the manager (ts004101). Although both processes read log information on-line and store it in tables, each of them is concerned with a different type of information.

If for any reason this process has gone down or has been forced to stop, the on-line log monitor allows it to be restarted without closing and reopening the store. In other words, this monitor is used to activate the ts021003 process manually.

To access it, select the **Control Roll Monitor** from the **Transaction Query** folder.
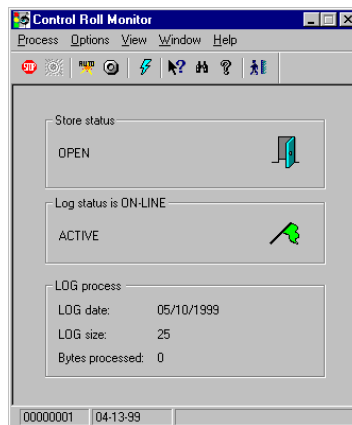
Fig. 6.29 Main window of the control roll monitor

Inventory Monitor

Inventory proper is carried out from the point of sale terminals. Nevertheless, from the client stations it is possible to use the **Inventory monitor** to activate or deactivate it and look up its status.

To access this process, open the **Inventory** folder in the Basic module.
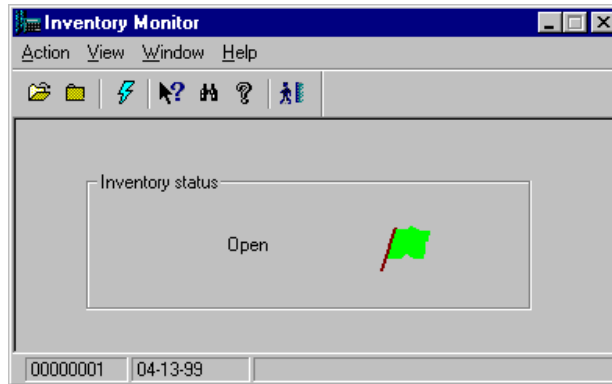
Fig. 6.30 Open inventory monitor dialog box

To activate the monitor, select the **Open** option from the **Action** menu. When the inventory monitor is opened, a process is launched on the server (apeinven) whose task it is to generate the empty inventory file on the server. The points of sale will subsequently fill out and update the corresponding information.

Using the **Close** option in the **Action** menu, another server process is run (cieinven) to terminate the inventory.
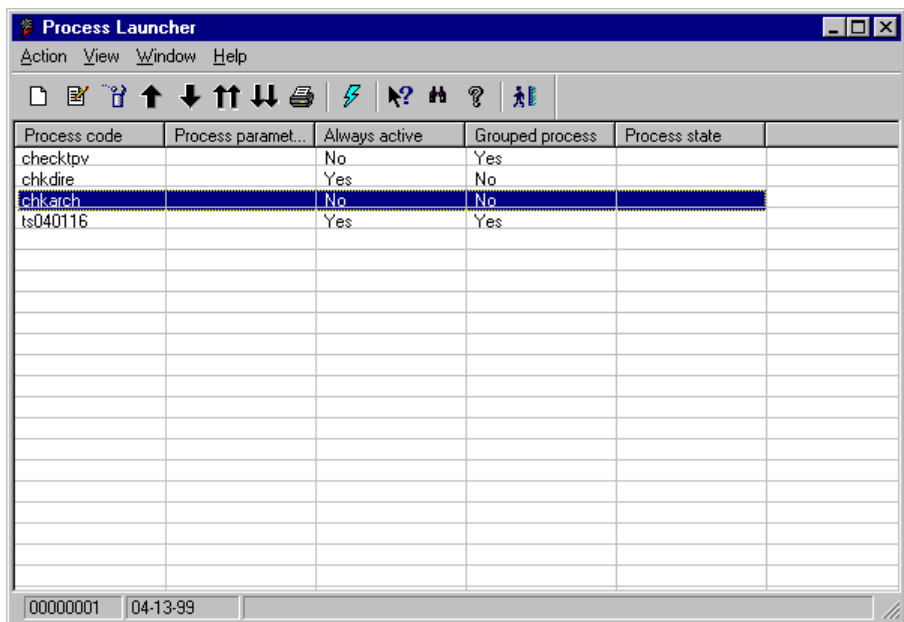
The state of the inventory is shown in graphic format with a green flag when it is open and a red flag when it has closed.

Activating Processes

As mentioned earlier, the StoreFlow system has a set of processes that run on the server which are vital for its operation. If these are not running on the system, StoreFlow will not operate properly (or may not work at all).

One of the system administrator's tasks is therefore to monitor these processes from time to time.

Because on the server this is only possible from the command line, the **Process Caller** offers a user-friendly interface that permits the control and administration of these processes from a client station. This enables any processes that have gone down to be brought up manually. To do this, open the **Processes and files in the Basic module** folder and start the **Process Caller**. The main window of the program appears, showing, in a simple and clear way, the status of all the processes configured for this application that can be controlled.

Fig. 6.31 Main window of the Process Caller

The possible status for each process are:

- "Running": The process is being executed.
- "Stopped": The process is not being executed.

To execute one of the existing processes, select it and click on "Bring up".

In order for a process to appear on the list shown in the main window, it first has to be registered. To do so, open the **Action** menu and select the **New** option. The dialog box shown below will appear.
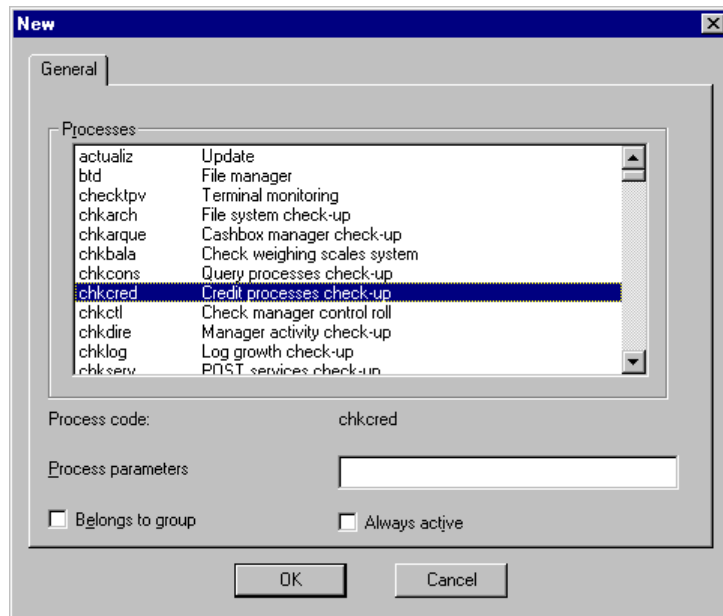
Fig. 6.32 Dialog box for process registration prior to launch

This dialog box allows the following process characteristics to be configured:

- "Process code": The list at the top shows all the processes existing in StoreFlow (server), with their execution name and a brief description. This field is filled automatically when you choose the process you want to control.

- "Process parameters": Indicate those necessary for execution. They should be separated with a comma (,) and spaces should be left blank.

- "Belongs to group": Use this check box to indicate whether the process belongs to a group which must be handled, raised or lowered together. If the box is checked, it will be possible to start the process by clicking on the button "Bring up group", and stop it by clicking on the button "Bring down process group" in the main window.

- "Always active": If this box is checked, it means that the process must always be running, and therefore if the process is found to be down, the system will try to bring it up automatically.

If you want to change any of the attributes (except the code) of any of the processes appearing on the main screen, use the **Modify** option.

Finally, if you want to remove a process from the main window so as to stop monitoring it, use the **Delete** option.

Starting Processes

Processes can be started in different ways:

- **Automatic:** If the process is configured to be *Always activ* , it will be brought up automatically whenever the system detects that it has gone down.

- **Individual:** The process can be started by selecting it in the main window of the **Process Caller** and issuing the command to bring it up (⬆).

- **With group:** If the process has been configured to *belong to a goup* , it will be brought up when the command to bring up the group of processes is issued (⬆⬆).

Stopping Processes

Processes can be stopped in different ways:

- **Individual:** The process can be stopped by selecting it in the main window of the **Process Caller** and issuing the command to stop it (⬇).

- **With group:** If the process has been configured to *belong to a goup* , it will be stopped when the command to stop the group of processes is issued (⬇⬇).

Status Updating

The process status updating can be done manually using the **Update** option, or automatically when an action is executed (Bring up, Take down, New, Modify, Delete, etc.).

Process Caller is used only to run server processes directly and does not apply to Windows processes.

7

Loyalty-Building

- The Customer Loyalty-Building Module
- Processes Associated with Customer Loyalty-Building
- Development of a Loyalty-Building Campaign
- Transaction Point Query

StoreFlow GV

This chapter describes the Loyalty-Building module and details the processes it includes. The idea of loyalty-building originates in the marketing techniques developed in the second half of the 20th century. The aim is to obtain customers' loyalty to an establishment, brand or chain. These techniques are based on the concept of giving customers rebates, discounts or gifts as a reward for repeated purchases or for using a particular method of payment.

Loyalty-building campaigns are a strategy for retaining customers based on a price differentiation and so a way of combating the appearance of substitute products, lower prices or competing establishments.

The Customer Loyalty Module

In order to streamline the operations in Sales Management, loyalty-building techniques have been grouped together in the optional Loyalty module. This responds to the need to win and retain customers facing any company operating in the retail sector today.

Among other features, the Loyalty module has been designed to include the following:

- Various types of loyalty-building campaigns (at present only internal company campaigns are available)
- Management of customer details
- Management of bonus points obtained by customers
- Details of gifts given under the loyalty-building campaign
- Details of accumulated points and gifts earned by a customer
- Hardcopy listing of all the above

It is essential to bear in mind that SF-GV places two conditions on loyalty-building campaigns: that they have a set duration, and that two campaigns do not overlap in time. Therefore, at any given moment there can only be one active campaign per store. It is not possible to launch another until the first one has expired. Nevertheless, remember that loyalty-building campaigns can coexist with promotions and special offers.

To access this module, click on the Loyalty icon on the Sales Management main screen.
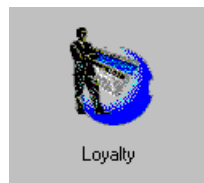
Fig. 7.1 Loyalty module icon

The module consists of a single folder, called Loyalty-Building, which contains three processes, as shown in the figure.

Fig. 7.2 Loyalty-building module interface

Processes Associated with Customer Loyalty-Building

The SF-GV client environment includes nine loyalty-related processes, of which three are included in the Loyalty module proper and the remaining six are included in the Basic module. The first three are described below:

1. **Loyalty-Building Campaigns**, permitting the registration, activation and deactivation of loyalty-building campaigns. These are always associated with a start date and an end date for the campaign. Campaigns are defined for pre-established modes (points for PLU or method of payment).

2. **Gifts**, permitting the definition of the gift and the number of points required to obtain it.

3. **Exchange points for gifts**, permitting the management and exchange of points earned by a customer at the establishment for the corresponding gifts.

In the case of the processes included in the Basic module, a number of necessary fields associated with loyalty-building transactions are activated. The processes include:

4. **Item Maintenance**, described in the manual in relation to item management. From the point of view of loyalty-building, the only thing that has to be taken into account here is that when a loyalty-building campaign is active, some items have associated accruable points (PLU points), which will add up each time the product is purchased.

5. **Customers**, permitting management of regular store customers and their details. This data can be personal or financial. The number of points accrued by each customer can also be looked up.

6. **Card Types**, permitting management of the existing types of cards, and the addition, modification and elimination of types of cards.

7. **Cards**, permitting management of individual cards recorded on the Sales Management system. This program is linked to others, such as for example the StoreFlow electronic funds transfer system (EFT). If customer loyalty-building is external, the "loyalty-building" mode should be chosen; if it is internal, the "customer" mode should be chosen.

8. **Payment Currencies**, permitting management of the existing methods of payment, understood in the broad sense (cash, foreign currencies, cards, supplier or store discount coupons, etc.) The interest of this process for loyalty-building lies in the fact that in some campaigns a discount can be applied depending on the method of payment used, or a percentage rebate depending on the total number of points the customer has earned.

9. **Previous period query**, which allows the user to look up transaction log for any of the last thirty days (by default, the previous day). When the Loyalty module is installed and there is an active loyalty-building campaign underway, it is also possible to obtain information about the total number of points earned for a transaction.

On the server, there are also four other processes related to customer loyalty-building, thus making a total of 13 processes in all, which are summarized in the table below:

Process	Environment	Module
Loyalty Campaigns	Client	Loyalty-Building
Gifts	"	"
Point and Gift Management	"	"
Items Maintenance	"	Basic
Customers	"	"
Types of Cards	"	"
Cards	"	"
Payment Currencies	"	"
Transaction Log Query	"	"
Campaign Activation/Deactivation	Server	-
Mass Update of Points	"	-
Obtaining Transaction Log	"	-
Item Interface	"	-

Development of a Loyalty-Building Campaign

Campaign Phases	Tasks and Processes Involved
1. Campaign registration	Company and mode selection. Campaign start and end dates. *Processes*: Loyalty-Building Campaign
2. Registration or modification of items and/or payment methods	Association of points or discounts with items or payment methods, depending on the campaign. *Processes*: Item maintenance and/or Payment currencies.
3. Definition of gifts	Registration of gifts and definition of the points required for each one. *Process*: Gifts.
4. Exchange of points for gifts	Look up accessible gifts, gifts obtained, transactions for which a gift was awarded, exchange of customer points for a gift. *Process*: Exchange points for giftst.
5. Campaign data query	Query points per transaction: reports on the effectiveness of the campaign. *Processes*: Previous period query, Sales reports and other similar processes, according to the information sought.

The table below shows the typical phases in a loyalty-building campaign. We will follow this order when describing the tasks associated with each.

1. **Defining and launching a campaign**: When a campaign is registered it is given a code, a name and a start and end date. The applicable loyalty-building criteria is established according to the pre-set modes. The mode establishes that the reward obtained by the customer is set on the basis of two criteria:

   - Items purchased
   - The method of payment used

   These criteria are not mutually exclusive, thus a campaign may give points for both the product bought and the method used to pay for it.

> Although it appears in some processes, the value of the purchase is not currently valid as a loyalty-building criterion.

2. **Registering campaign details:** If the items or methods of payment producing points have not been registered during the system setup or daily operation, it will be necessary to do so now. If they have, it is sufficient to modify them. For example, for a payment method campaign, the currencies, cards, and discount coupons generating the discount will be registered, together with the percentage discount their use implies. For a campaign based on items, those items giving rise to points, and how many points are given per item, etc., will be registered.

    It is also important not to forget to cancel the item and payment method points which have been set for use in other campaigns unless you want them to be included in this one, as any points stored in their definitions will be applied during this campaign when it becomes active.

3. **Gift definition:** The gifts included in the campaign are registered together with the points necessary to obtain each one. It is also necessary to discontinue the points from previous campaigns if you do not want to keep them for this one.

4. **Points exchange and gift management:** During this phase the user is offered the following:

    - Information on the number of points accumulated
    - Exchange of points for gifts

5. **Post-campaign queries:** In this phase it is possible to obtain information about the results of the campaign, in particular the points obtained from any given transaction.

Points awarded to customers are transferred to the system in the following way: when the customers go to the POST to pay for an item, they identify themselves as customers of the establishment by means of their customer cards. The customers can also pay by using a personal credit card or other equivalent method, in which case their details are also recorded. These cards can be read from the POST. The points are finally recorded in a field of the transaction log set aside for the purpose. In this way information is available on the points needed to update the Loyalty-Building Campaign which is currently active.

Depending on the mode established for the campaign, SF-GV is responsible for updating either the points accumulated by the customer from the purchase of a point-earning item or the points associated with the use of a particular method of payment, or both.

Registering a Loyalty-Building Campaign

The procedure for registering a new campaign is as follows:

1. Once in the Loyalty module, select the **Loyalty-Building Campaigns** icon.

    The main process window will appear, showing all the current campaigns and indicating the code, description and status of each (only one can be *Active* at a time, the status of the rest must be either *Registration in progress* or *Completed*).

Fig. 7.3 Main Loyalty-Building Campaign process window

2. Open the **Action** menu and select the **New** option. The campaign registration dialog box will appear. From this dialog box it is possible to configure all the details of the new campaign.

Fig. 7.4 Campaign registration dialog box

3. Fill out the dialog box as follows:

    ● "Company": Name of the company to which the campaign is to be applied.

    ● "Code": Numeric code, up to 5 digits, for internal identification of the campaign. This code must be unique for each company, but may be repeated within SF-GV.

    ● "Description": Name of the campaign, up to 25 alphanumeric characters.

    ● "Start" and "End": Start and end dates of the campaign. Remember that Sales Management does not permit simultaneous campaigns. Thus, the dates of two campaigns may not overlap; if they do an error message will be given.

> It is not possible to earn points or exchange them for gifts unless there is an active campaign underway.

    ● "Mode": Choose the discount criteria required for the campaign. The available criteria are:

        ● "PLU points": Points given for purchasing certain items.

- "Means of payment": Point bonus or discount for using a particular method of payment (for example, a store card).

    Both modes are compatible, i.e., the same campaign can allow points to be accumulated for both at the same time.

- "Maintain previous campaign points": Allows the customer to keep unexchanged points from previous campaigns for use in the current campaign.

> If this box is not checked, the points will be lost and all customers' accounts set to 0 at the start of the campaign.

4. Click on "OK".

The campaign is now registered and appears on the loyalty-building program main screen.

Activating, Terminating and Modifying Campaigns

Campaigns are activated automatically when the date on which they come into effect is reached. They also terminate automatically when their end date is reached. Remember that in SF-GV several loyalty-building campaigns can coexist, but it is not possible for two campaigns to be active at once, even if their modes are different.

Active campaigns cannot be discontinued or modified. To do so it is first necessary to deactivate the campaign (**Action** menu, **Deactivate** option). Then, in the event of a modification, the changes should be made to the relevant fields (**Action** menu, **Modify** option) and the campaign should be reactivated (**Action** menu, **Activate** option). In the case of the campaign being discontinued, it should be deleted (**Action** menu, **Delete** option).

Associating Points According to Campaign Type

This section explains how to assign accruable points depending on the campaign mode. Thus:

- If the campaign is of the "PLU points" type, it is necessary to access item maintenance.

- If the campaign is based on methods of payments, you should access payment methods maintenance.

Let us suppose that the campaign is of the first type. The procedure for registering the points associated with the items is as follows:

1. From the **Item Management** group in the Basic module, launch the **Items** process.

2. The item look-up screen will appear.

Fig. 7.5 Item list

3. Choose one of the following possibilities:

- If the item does not yet exist, you can register it as described in the "Item Registration and Query" in chapter 3, section, by opening the **Action** menu and selecting the **New** option.

- If the item already exists, double-click on it. This will bring up the **Modify** dialog box (this can also be done by opening the **Action** menu and selecting the **Modify** option).
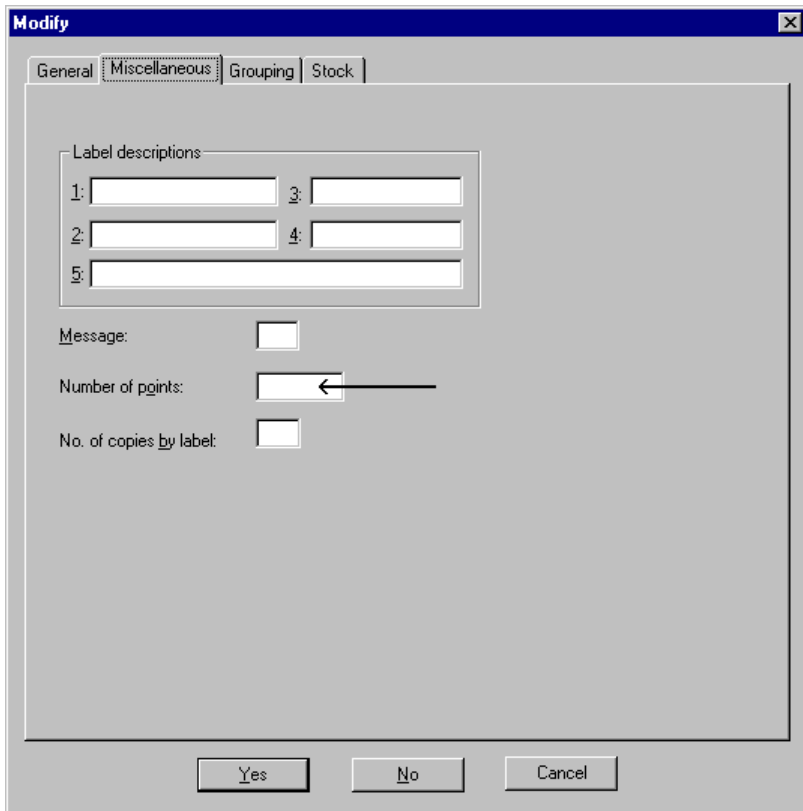
Fig. 7.6 Item details and field to be updated

4. Select the "Miscellaneous" tab and enter the number of points obtained each time the item is bought in the "Number of points" field.
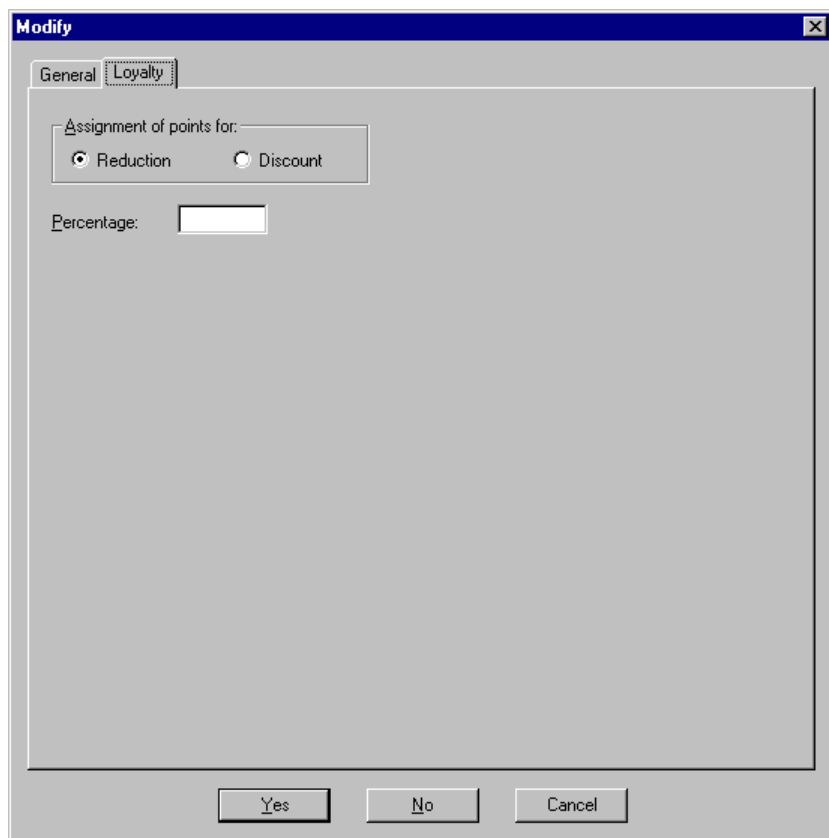
These points will be deducted if the item is returned.

5. Click on "Yes" to accept the update.

Repeat this process for all the items in the campaign.

The figure below shows the field that should be configured if the loyalty-building campaign takes the payment method mode. Remember that in this case, to register the payment method it is necessary to start the **Payment Currencies** process from the **Means of Payment** folder in the Basic module. Choose the method of payment and define the associated type of discount. Also remember that the "Loyalty" tag will only be visible if the Loyalty module is installed and there is an active campaign underway.

Fig. 7.7 Payment method point definition box

The number of points assigned to the transaction is calculated as a percentage of the total amount of the purchase.

If "Reduction" is checked, the maximum discount on a given method of payment may be set (for example, for payment in cash).

However, you should check "Discount" if you want to impose a penalty on obtaining points - for example, in the case of credit card use.

In other words, if paying for a certain item in cash earns 10 points for the customer, paying for it with a credit card earns only 8.

Definition of Gifts

The procedure for defining the gifts available in a campaign is as follows:

1. From the **Loyalty-Building** group, start the **Gifts** process.
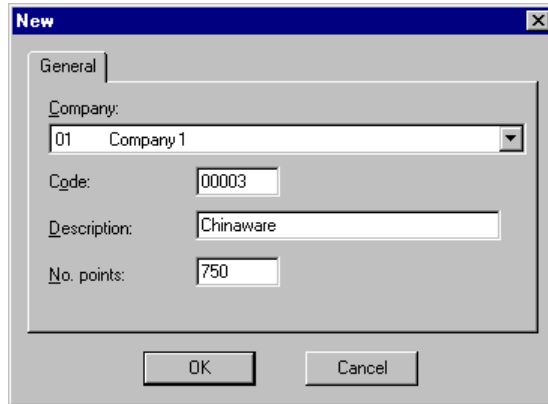
   The main process window will appear. This will show all the gifts available for the currently active campaign once they have been registered.

Fig. 7.8 Main process window for managing of gifts associated with a loyalty-building campaign

2. Open the **Action** menu and select the **New** option. The campaign gift registration dialog box will appear.

Fig. 7.9 Gift registration dialog box

3. Complete the dialog box shown as follows:

- "Company": Select the company for which the campaign was defined previously.

- "Code": Enter an identification code for the gift (up to 5 digits).

- "Description": Enter the reference text for the gift (up to 25 alphanumeric characters).

- "No. points": Enter the number of points needed to obtain the gift (up to seven digits, i.e., {9,999,999} format).

4. Click on "OK". The gift is now registered.

Looking Up Available Gifts and Exchanging Points

When a customer has obtained sufficient points, they may be exchanged for a gift either at one of the cash registers or at specific points intended for this purpose. The **Exchange points for gifts** process provides:

- Information about the gifts obtained by a customer
- Information about the accessible gifts
- The option to exchange points for one or more gifts
- A history of transactions for which points were given to a particular customer

Gifts Obtained

The procedure for obtaining information about the gifts obtained by a customer is as follows:

1. Launch the **Exchange points for gifts** process. A screen is displayed where you can select the customer whose gift information is required. The number of points is the total earned to date, whether exchanged for gifts or not.
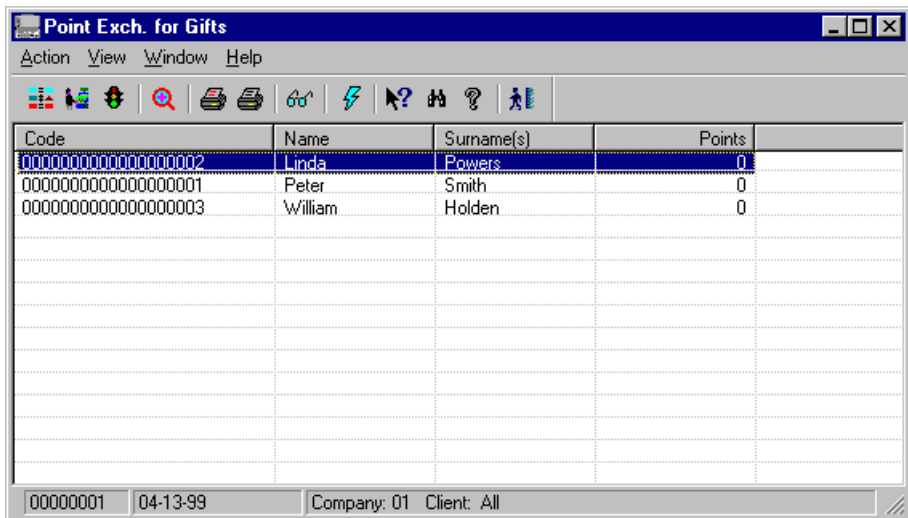
Fig. 7.10 Main window of the point exchange process

2. Open the **Action** window and select **Gifts Obtained**.

Fig. 7.11 Query box for gifts obtained by a customer

The box summarizes the total points earned by the customer to date, with the gifts obtained by exchange of points and the number of points they required.

Exchanging Points for Gifts

To look up the list of gifts for which customers can exchange their points, open the **Action** menu from the main process window shown above and choose **Exchange Points for Gifts**.

A box will appear showing the available points and only those gifts that the customer is eligible for with the current number of points accrued. To record the exchange, select the gift from the table and click on "OK" once the gift has been delivered to the customer. The program will now return to the main window with the loyalty-building points updated.
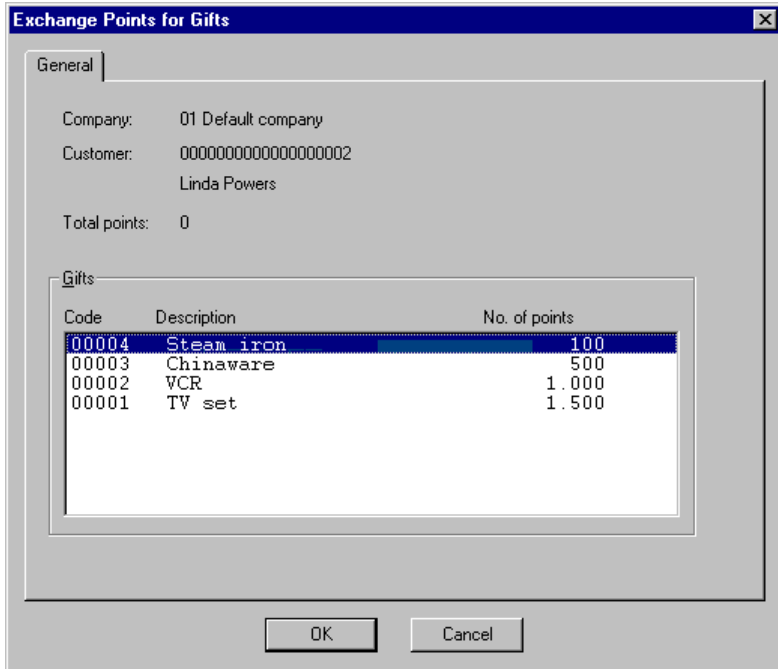
Fig. 7.12 Point exchange dialog box

Customer Transaction and Prize History

If you want to look up the transactions carried out by a customer which have resulted in points towards gifts, select the target customer from the **Exchange points for gifts** process, open the **Action** menu and select **Detail**.

Fig. 7.13 Details of transactions with the points earned for each of them

The **Detail** box will appear. To look up the transactions that were performed during a range of dates, type them in the fields "From date" and "To date" and then click the on "Update" button.

The lower area shows the terminal where the transaction was carried out, the transaction code and the points earned. Remember that it is also possible to look up a customer's personal details from this process by selecting the customer and running the **Query** option from the **Action** menu.

Clicking on "Exchange points" links to the **Exchange Points for Prizes** screen described in the previous section.

Transaction Point Query

Reading the log is usually a slow process and is not done frequently, since retrieving the transaction record takes time.
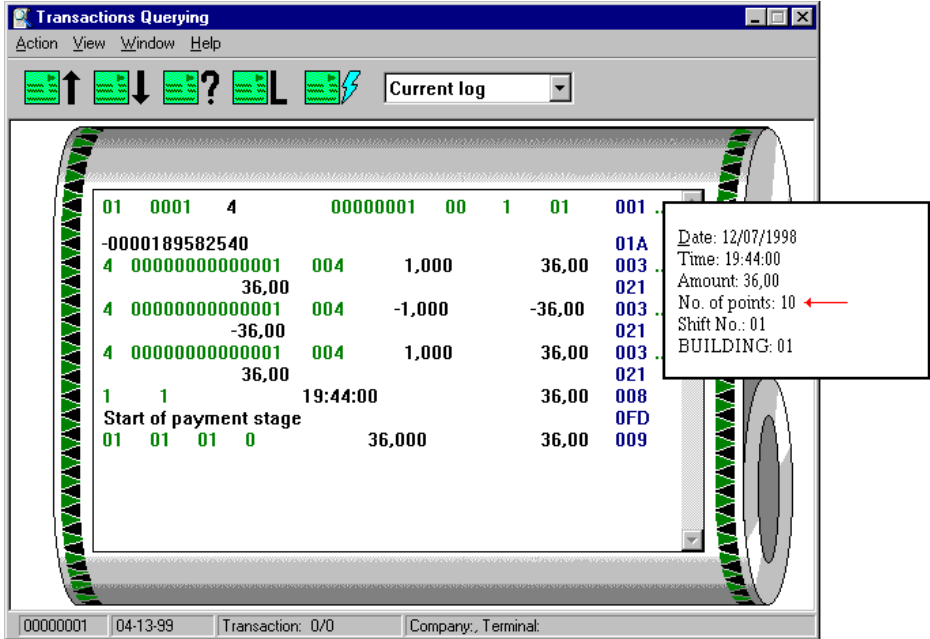
Fig. 7.14 Looking up the points for a transaction carried out at a particular terminal

To obtain information on the total points earned for a transaction, start the **Transactions Query** process from the **Transactions Query** folder in the Basic module. In the main window, which shows a summary of the transactions performed on the active date, drag the mouse over the suspension points which appear at the end of the first line and click on area located to the right of the three dots.

8

Weighing Scales System

- Elements of a Scales System
- System Configuration
- Other Operations with the Scales Module
- Scales Monitor
- Completed Scales Operations Query

StoreFlow GV

This chapter describes the optional Weighing Scales module, designed to serve centers where there is an electronic scales section capable of working with both weighable and unit items.

The basic function of the scales section in a center is to generate a ticket for charging at the point of sale terminal along with other items. This single ticket contains the information (either broken down or consolidated) concerning various weighing operations carried out by using the system's scales.

To access the module, click on the Weighing Scales icon on the main screen of Sales Management.
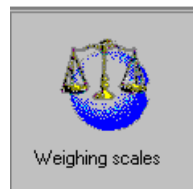
Fig. 8.1 Scales module icon

Elements of a Scales System

The figure below shows the main elements of a typical scales system.
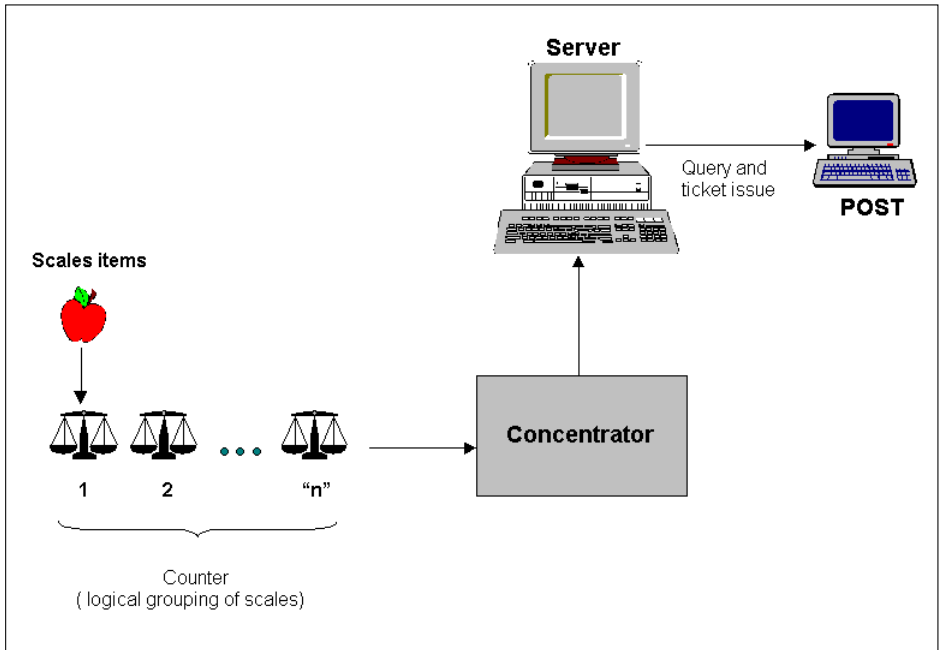
Fig. 8.2 Elements and interactions in a scales system

The elements of the system are the following:

- **Scales:** Each of the scales used to weigh scales items, either by a company operator or by the customer. These items can be sold by weight (the most common case) or by unit, in which case the scales generate the ticket without the need to weigh the units purchased.

- **Counter:** A logical grouping of scales of identical characteristics as far as numbers of assignable keys and their functions are concerned. Each of the scales will be located at, or assigned to, a counter, in the same way that every POST is assigned to an environment. Every counter belongs to a specific department. This will usually have been defined beforehand and coincide with the Scales department itself.

- **Concentrator:** A gateway connected between the scales and the server allowing transport of data packets between the two components. Normally arranged in-line with the series of scales.

- **Scales ticket:** The ticket given to the customer for information purposes after performing an operation at the scales. The bar code on this ticket starts with 25. The POST reads the code and queries the server for the value of the operation. Depending on the degree of detail set, the POST ticket may include only the total value of the operation and the department where it took place. Alternatively, it could include a breakdown of the various items making up the total. Once read, the scales ticket moves from the "Pending payment" to "Paid" status on the server. The scales ticket should not be mistaken for the cash register ticket given to the customers when the full amount due for their purchases is settled.

- **Server:** Unit where the information regarding processed scales tickets is kept (the specific information is user-configurable), by means of the BALD server process and other similar processes. The server also keeps a record of scales operations. The server sends the price associated with the scales ticket to the POST; this data may or may not include a break-down depending on the configuration of the environment the POST belongs to.

- **Scales items:** The items that are weighable on the scales system are referred to, by extension, as scales items. There can also be scales items which are not weighed, such as those sold by the unit.

  In order for an item to be considered a scales item, whether it is weighable or a unit item, it has to be defined as such by registering it via the **Items** process (check the "Weighable item" box in the "General" tab) as described in the ❯ "Item Maintenance" chapter. It then needs to be assigned a PLU code.

- **PLU:** In addition to its internal reference code in the store, every scales item also has a code called the PLU, which is useful only in the context of the scales. The scales administrator assigns the PLU code to each item before it is put on sale.

System Configuration

The configuration phase of the Weighing Scales module includes the initial tasks necessary for it to operate. Configuration requires the following operations to be carried out in the order shown:

1. *Registering counters:* The logical groupings of scales with similar characteristics are registered. Usually, each counter is assigned to a scales section in the store (meat section, fruit and vegetables section, etc.)

2. *Registering models of scales:* The different makes of scales that are going to be used in the shop are registered. In this step the number of available item and salesperson hot-keys (PLU) is also defined.

3. *Registering salespersons:* The scales operators are registered. These must be drawn from the existing pool of store employees. They can be assigned a hot-key for identification purposes.

4. *Registering scales equipment:* The individual weighing scales that are going to be used in the store are registered. This step also involves defining the counter where they will be located and whether they will work in connected or disconnected mode.

5. *Registering scales items:* Choose the previously registered items that can be weighed in the scales section. A number of item parameters are also defined, such as the associated PLU, price, expiry period, or ticket font format.

6. *Assigning scales keys to items:* Hot-keys are assigned to the items available at the corresponding counter.

7. *Ticket customization:* A format is defined for scales tickets and applied to either the counter or to specific scales.

8. *General operating and presentation parameters:* General parameters are defined for the entire scales system (time formats, number of days that key process information is kept, etc.).

9. *Assigning protocols and IP addresses:* Counters and individual scales are associated with the corresponding concentrators and communications programs.

Counter Configuration

As mentioned earlier, a counter is simply a group of scales with similar characteristics where articles of the same type are sold. In this context, having similar characteristics means that their assignable keys perform the same function. Remember that each weighing scales unit will be located at, or assigned to, a counter, in the same way that each POST is assigned to an environment in the initial configuration of SF-GV. In turn, every counter must belong to a department.

The counters process provides maintenance of the counters table where the scales are located.

To register the existing counters:

1. From the **Basic Data** group in the Weighing Scales module, start the **Scales Counters** process.

Fig. 8.3 Main window of the counters process

2. Open the **Action** menu and select the **New** option.

   The counters registration box will appear.
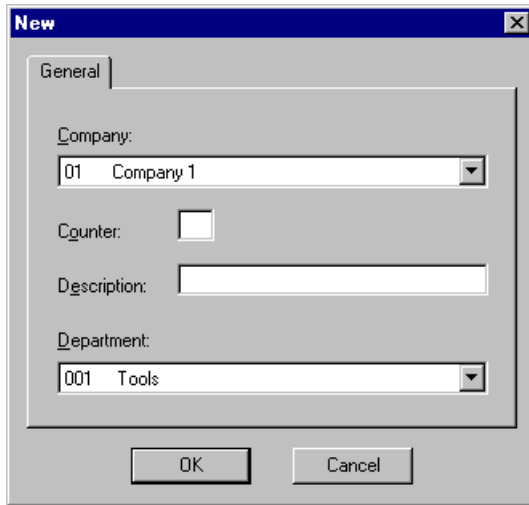
Fig. 8.4 New counter registration box

3. Complete the dialog box shown above as follows:

- "Company": Select the company that the counter belongs to.

- "Counter": Type in a numerical code of up to 2 digits to identify the counter.

- "Description": Type in a brief reference text for the counter (for example, the type of items that are going to be weighed).

- "Department": Select the company department that the counter will belong to from the pull-down list.

4. Click on "OK".

Salespeople Configuration

The basic functions that can be carried out in this phase are:

- Registering or discontinuing a salesperson (scales operator)
- Querying by salespeople, companies, counters and active keys
- Printing listings and activating a hot-key for each salesperson

In SF-GV, a salesperson is a company employee responsible for operating a scales unit. His or her function is thus similar to that of a point of sale terminal operator. Therefore, before configuring a salesperson as a scales operator, he or she must first have been registered as an employee of the company in question.

Before running this process, remember that you should first look up the employee reference and password (**View password** option in the **View** menu) in the **Employees** process of the Basic module.

To register a scales salesperson:

1. From the **Basic Data** group in the Weighing Scales module, start the **Scales Salespersons** process.

Fig. 8.5 Main window of the scales salespersons management process

The main window of the process shows a table with a list of selected salespeople arranged in columns. The following information is given: identification code of the salesperson as an employee of the company, the scales salesperson code proper, the employee name, the code for the counter where the salesperson is to work, the password the salesperson will need to use the scales, the date the employee was registered as a scales salesperson at the center, and the sales hot-key assigned to the salesperson (each time the employee weighs an item and presses his or her salesperson key, a sale is assigned to him/her).

Double-clicking on any of the lines on the list brings up the **Modify** dialog box.

2. Open the **Action** menu and select **New**.

The scales salesperson registration box will appear.
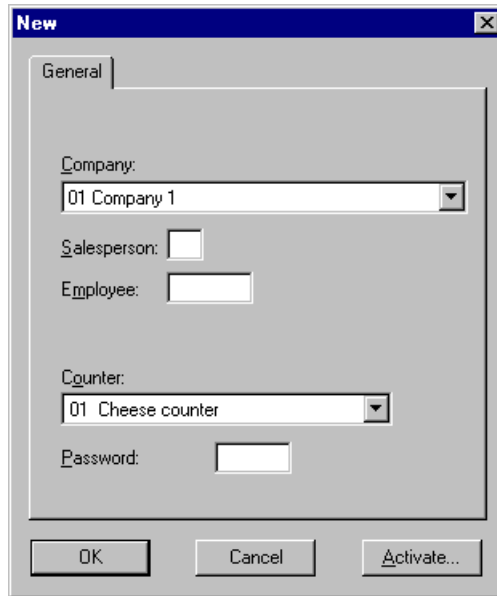
Fig. 8.6 Scales salesperson registration box

3. Complete the dialog box as shown (follow the stated order when entering data in the fields):

- "Company": Select the company that the employee being registered as a salesperson belongs to.

- "Salesperson": Enter a code (up to 2 digits) for the new salesperson.

- "Employee": Enter the code for the company employee to be registered as a salesperson (maximum 8 digits). Remember that the employee must have been registered beforehand from the **Employees** process. When you move to another element the employee name will appear to the right of the field.

- "Counter": Select the counter where the new salesperson is going to work.

● "Password": Password needed to operate the scales. This is a numerical code of up to 4 digits. It does not have to be the same as the password assigned to the employee in **Employees.**

● "Activate": Click on this button to assign a hot-key to the salesperson. This will allow the salesperson to identify him or herself rapidly during operations. On clicking this button the **Activate Key** box will appear.

Fig. 8.7 Dialog box for assigning a hot-key to a salesperson

The box above will show the current counter and salesperson. Select the "Active" option in the "Activation" box. Enter the code for the key you want to assign (2 digits) and click on "Yes" to validate the new employee hot-key.

You can also access this dialog box using the **Activate** option from the **Action** menu.

4. Click on "OK".

Configuration of Models and Specific Units

StoreFlow allows you to work with different models of scales manufactured by different suppliers.

The first phase of the model and unit configuration enables you to register the types of scales (models produced by a specific manufacturer, so as to indicate the hot-keys available, etc.). The second phase allows you to register the individual units used in the store.

Proceed as follows to register the available models of scales:

1. From the **Basic Data** group in the Weighing Scales module, start the **Scales Models** process.

Code	Brand	Model	No. keys for PLU	No. keys for salesperson	Type
001	Epelsa	4512	1	1	Scales

00000001   03/28/99   Company: 01
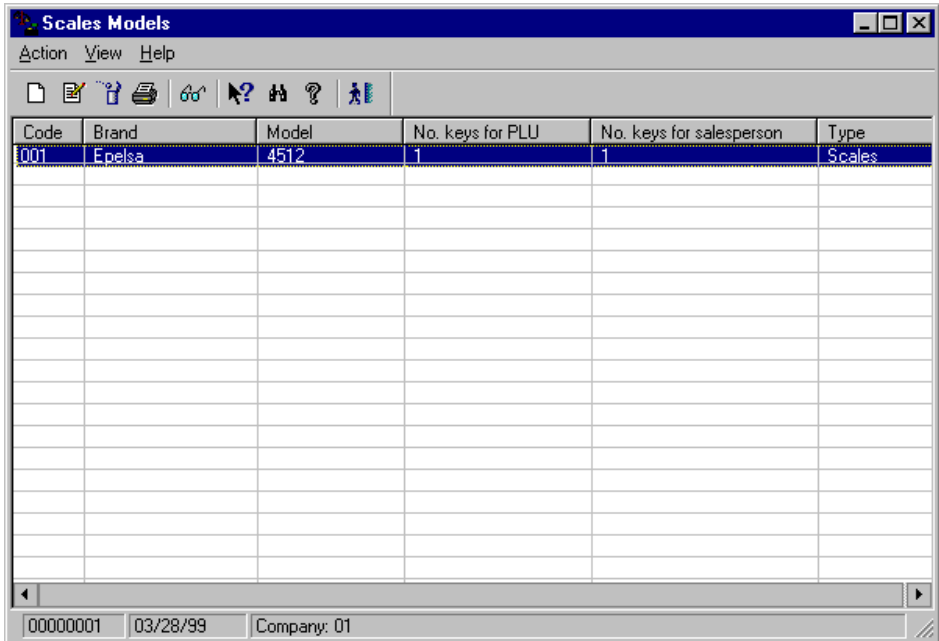
Fig. 8.8 Main window for scales model maintenance

The main process window displays a table with one of the registered makes of scales in each row, together with the following information in the columns: code and description identifying the make of scales, commercial identification of the scales model, number of keys to associate with items, number of

salesperson keys available on the model, and finally the use that will be given to the scales in the center.

Double-clicking on any of the lines on the list will bring up the **Modify** dialog box.

2. Open the **Action** menu and select **New**.

The scales model registration dialog box will appear.

Fig. 8.9 Scales model registration dialog box

3. Complete the box as follows:

- "Company": Select the company that the model of scales you are registering belongs to.

- "Code": Enter a code of up to 3 digits to identify the make.

- "Make": Type in the name of the scales manufacturer (maximum 21 alphanumeric characters).

- "Model": Type in the scales model (maximum 21 alphanumeric characters).

- "Associated keys" box: Includes the "PLU" and "Salesperson" check boxes, which correspond to the scales item sale and salesperson hot-keys. Enter the number of keys of each type available on these scales.

- "Type": Information box showing the operating mode of the scales. Here you can indicate whether the scales are normally going to be used in a situation where there is a salesperson who weighs items for customers.

4. Click on "OK".

Once the models have been registered you can register the individual scales that will be used in the store. *Unit* refers to the physical scales.

To register a specific scales unit used by the company:

1. From the **Basic Data** group in the Weighing scales module, start the **Scales Equipment Maintenance** process.

Fig. 8.10 Main window of the scales unit maintenance process

The main process window displays a table where each row corresponds to a selected scales unit and the following information is arranged in rows: code identifying the scales unit, code of the counter where it is located, identification of the model of scales, its network status (connected or not), and the date the scales were registered for use at the counter.

Double-clicking any of the lines on the list brings up the **Modify** dialog box.

2. Open the **Action** menu and select **New**.

   The scales unit registration box will appear.

Fig. 8.11 Scales unit registration box

3. Complete the box as follows:

   ● "Equipment": Enter a code of up to 2 digits to identify the unit.

   ● "Company": Select the company that the counter where the scales is being registered belongs to.

   ● "Counter": Select the counter where the scales will be located.

- "Model": Enter the specific scales model.

- "Registration date": Activate the date of definition of the new unit (this does not have to be the same as the system date).

- "Status" box: Select "Connected" if the scales are connected to the network and hence to the concentrator, or "Disconnected" if the scales are not linked to the concentrators because you do not want to process their data on the server (either because it belongs to a supplier who sells in the store but does not belong to the group, or because the scales do not permit sales, or because you want to register it but not include it in the system yet).

4. Click on "OK".

Configuration of Scales Items

Scales items are those which can be weighed by using a counter's scales. Before configuring these items they must first be registered using the **Items** process, assigned a reference and defined as scales items (by checking the "Weighable item" in the "Flags" box). Then they can be associated with a PLU, which is a four-digit code used to expedite the entry of items.

 To configure an existing article as a scales item:

1. From the **Weighing Scales Items** group, start the **Scales Items** process.

Fig. 8.12 Main window of the weighable item maintenance process

The main process window includes a table where each row corresponds to a PLU code for the selected counter. The table columns contain the following information: department code, reference. PLU code, description and retail price of the item.

Double-clicking any of the lines on the list will bring up the **Modify** dialog box.

2. Open the **Action** menu and select the **New** option.

The scales item registration box will appear.

Fig. 8.13 Weighable item definition box

3. Fill out the dialog box shown as described below (follow the stated order when completing the fields):

- "Reference" box: Select "Local" if the PLU code is internal to the department and only valid in this context. In this case, the sale is completed at Department level (for example, this is the most appropriate option if you are running a one-off special offer). When you choose this option the "Item" text box is disabled, as there are no items assigned (and therefore no stock queries can be performed). Select "General" if the PLU code is going to be associated with a reference code for an item which has already been registered (this is the most frequent case). If the item is defined in this way, stock queries are enabled for the company as a whole.

- "Item": This box will be available only if "General" has been checked. Enter the internal reference code for the item which will be associated with the new PLU code. If you do not know the code, you can look it up via the **Items** process. It must correspond to a reference registered previously. The same reference may not be associated with more than one PLU code. If the item code entered is correct, the item description will be shown in the right-hand part of the text box.

- "Company": Select the company that the article belongs to.

- "Department": Select the department that the article belongs to.

- "PLU": Code that identifies a specific item sold in the department using the scales. The first available code appears automatically. Accept it or enter a new one (maximum 4 digits).

- "Price": The price of the product. If the reference has been defined as general, when the item code is entered the program will complete this field with the value stored in the item table and it will not be possible to modify it. If, on the other hand, you have decided to make the reference local, you should enter the price of the item (maximum 12 digits).

- "Tare": Weight of the packaging, where applicable, always in grams (maximum 5 digits).

- "Expiry": Number of days before the item expires (maximum 3 digits).

- "Description": Brief reference text that will appear on the scales when the item is weighed (maximum 25 alphanumeric characters).

- "Typeface" box: The character style that will be used for the tickets generated by the scales.

  - Normal: Standard size characters (width and height).

  - Double height: Standard width characters of twice the standard height.

  - Double width: Standard height characters of twice the standard width.

  - Double height-width: Characters twice the standard height and width.

- "Type of sale" box: Specify whether the article is sold by units or by weight. The usefulness of this field is apparent, for example, in the case of items sold "by units", which obviously do not need to be weighed but can be labeled from the scales department, thus avoiding the need to go to another department.

4. Click on "OK".

Repeat this procedure for all the weighable or "by unit" items. Subsequently, when you run queries from this process, remember that you can sort the scales item lists according to any criteria you prefer (options **By reference** or **By PLU** in the **View** menu) or limit the presentation of items to a range of references or a given PLU (**Include** option in the **View** menu).

Assignment of Programmable Keys

As mentioned earlier, in SF-GV all the scales at a counter have the same characteristics, therefore their keys can be assigned in a single operation. This process enables the item hot-keys to be assigned (the salesperson hotkeys were assigned earlier during the salesperson configuration phase).

The general procedure for registering the programmable scales keys is as follows:

1. From the **Basic Data** group in the Weighing Scales module, start the **Scales Keys** process.

   The main window shows the existing counters and the hot-keys available on the scales belonging to each counter, and those associated with an item.

Fig. 8.14 Main window of the key maintenance process

2. Select a counter and open the **Action** menu. Select **Modify** or double-click on any of the lines of the table.

The hot-key assignment box will appear. This dialog box allows you to associate scales keys with items and modify existing associations.
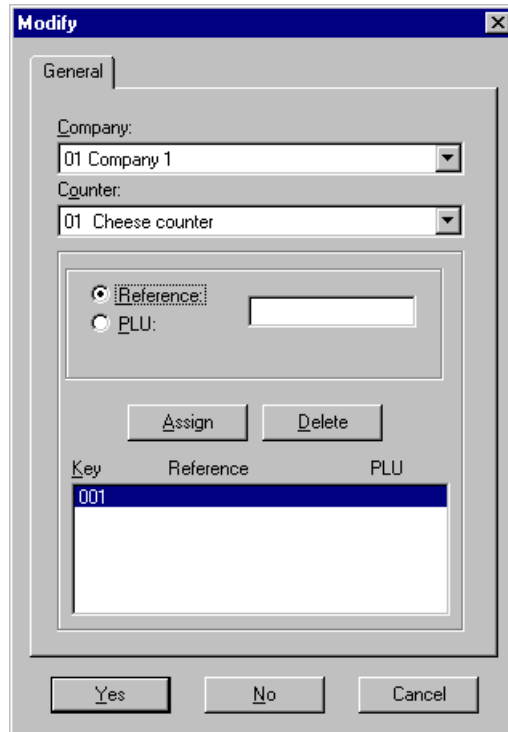
Fig. 8.15 Dialog box for assigning scales keys to items

3. In the dialog box, select the company and counter where the operations are going to take place.

   If you select "Reference" the association will depend on the reference code of the item. If you select the PLU option it will depend on the PLU code.

   Depending on the option button selected, enter either the reference code or PLU code in the text box.

   When you enter a code, the description of the item will appear at the bottom.

4. Click on "Assign" to associate an article to the selected key in the "Key/Reference/PLU" list box located beneath it. This box contains the keys associated with the item references along with their PLU codes. Clicking on this button moves the item to the list box where it is associated with the selected

key. Repeat the process for all the items you want until all the available keys have been defined.

The "Delete" button allows you to remove the association with the key selected in the bottom list.

Customizing the Scales Ticket

In addition to the result of weighing the item and calculating its price (the format of which was configured during scales item registration), the scales ticket includes header and footer messages (the latter is also referred to as the legend). These can be configured during this phase.

Ticket configuration can be applied across a whole counter or to a specific unit.

Ticket headers and footers are designed in phases. The first phase involves configuration of the series of header lines. This is followed by configuration of the ticket legend or footer.

To configure a line of scales ticket text:

1. From the **Basic Data** group in the Weighing Scales module, start the **Header and Legend** process.
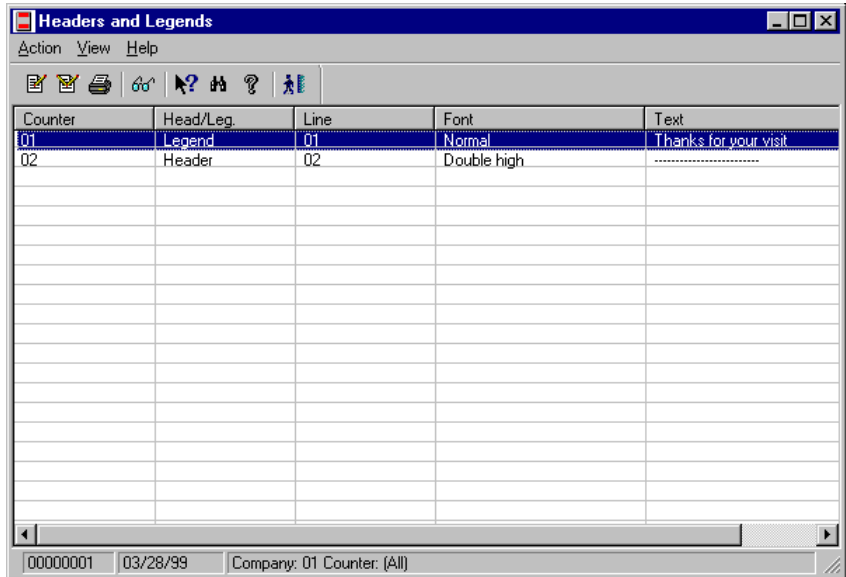
Fig. 8.16 Main ticket text customization window

The program window contains a list of the selected scales units. By default, the information will appear ordered by counter; if you want it sorted by scales units, you need to change the default option in the **View** menu.

The information arranged in the columns shows the following: code of the counter where the tickets are going to be produced with this type of legend (this column will be displayed only if the **By counter** command is selected from the **View** menu), whether it is a type of header or legend (footer), the line number, the font, and the text that will be printed on the header and footer.

Double-clicking any of the lines on the list will bring up the **Modify** dialog box

2. Open the **View** window and select:

- **By counter:** To configure the ticket which will be applied to all the scales on a specific counter.

- **By unit:** To configure a ticket that will apply only to a specific scales unit.

3. Open the **Action** menu and select New.

The **Modify** box will appear.
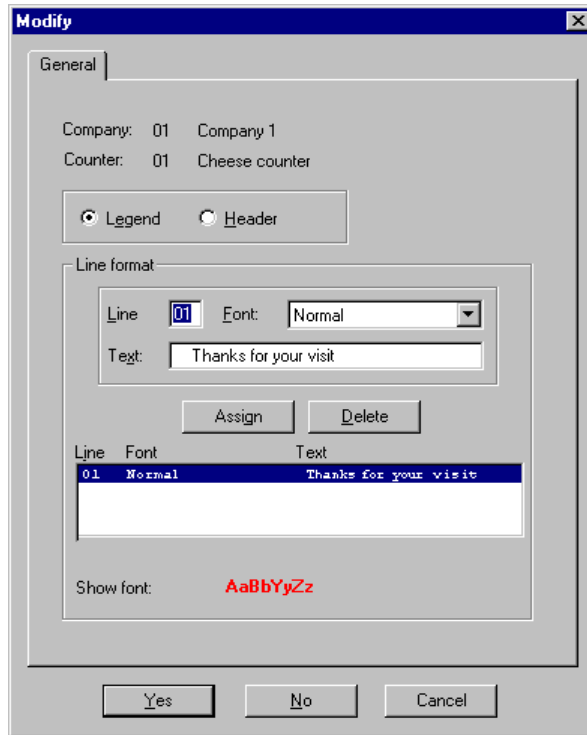
Fig. 8.17 Message text configuration box

The top of the box shows the company and the counter or unit, depending on the **View** option selected, for which the ticket text is being defined.

4. Complete the box as follows:

- "Legend"-"Header": Choose the element that you want to configure.

- "Line format" box: Enter the number of the line you want to configure, the character format and the text.

- "Assign": Click on this button to confirm the text as configured, and the line will move to the display box at the bottom where the text of each line is shown.

   The "Delete" button lets you clear the selected line from the list.

   Depending on whether you have chosen the "Legend" or "Header" option button, the display will list the ticket header or footer lines.

- "Show font": Lets you see the way your chosen text format will look.

5. Click on "OK".

Repeat this process for all the header and legend lines until you obtain the desired ticket.

General System Presentation and Operating Parameters

To complete the ticket configuration, a number of format and operating parameters have to be set for all the scales counters and units in a company.

The presentation parameters that you can configure are:

- The time format
- The date format
- The ticket presentation format (more or less detail)

The following parameters are configurable:

- The number of days before a ticket for ordered merchandise becomes obsolete.
- The number of days that the accrued and historical information for salespeople and items will be stored.
- Whether the concentrator files are going to be erased when the scales system is closed.

To configure the general presentation and operating parameters for the scales system:

1. From the **Scales System Operations** group, start the **Scales Control** process:

   The main window of the process will appear, where you will be able to update the general parameters of the system directly.
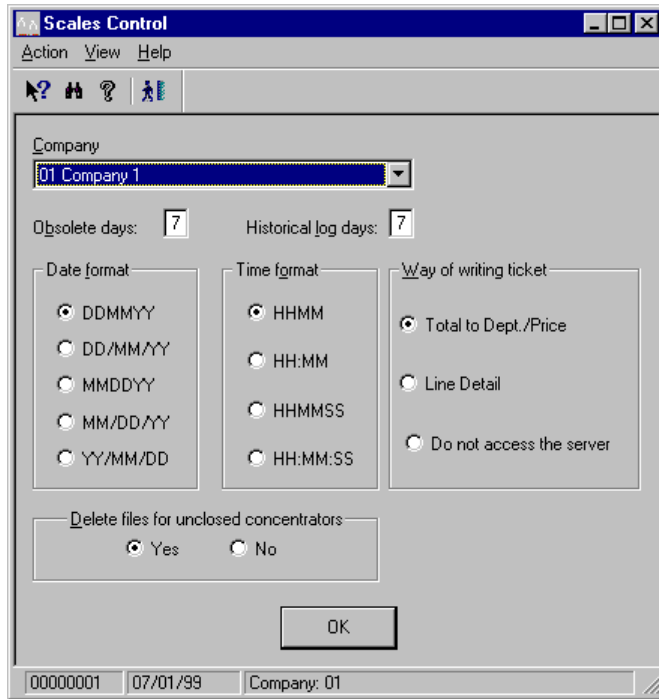
Fig. 8.18 Main window for configuring general scales system parameters

2. Complete this screen as follows:

- "Company": Select the company that the scales system you are configuring belongs to.

- "Obsolete days": Type in the number of days (maximum 2 digits) for a ticket awaiting collection to be considered as missing.

- "Historical log days": Type in the number of days (maximum 2 digits) that the system will keep information for the accrued data queries by salesperson and reference.

- "Date format ": Choose the format for the dates printed on the scales tickets.

- "Time format ": Choose the format for the times printed on the scales tickets.

- "Way of writing ticket": Choose one of the following options:

  - "Total to Dept. / Price": The generated ticket will only show the total for all the items in the department.

- "Line detail": The ticket will show the item total and the amounts and weights broken down by item.

  - "Do not access the server": The ticket is generated in local mode and no record of the operation is left on the server.

- "Delete files for unclosed concentrators": Check "Yes" if you want the system to delete the files remaining on the concentrators which have not been closed when the scales system is closed from a monitor.

3. Click on "OK".

Communication Protocols

This configuration phase allows you to associate the counters and scales registered previously with a specific concentrator, defined by its IP address, and to select the communications programs managing the system.

To define the scales system communication protocols:

1. From the **Scales System Operations** group, start the **Communication Protocols** process.

Compa...	IP Address	Description	Commands	Tickets	Counter	Description
01	127.90.25.25	Epelsa	generic	generic	02	Weighing scales counter

00000001   03/28/99   Company:All

Fig. 8.19 Main window for communication protocol definition

2. Open the **Action** menu and select the **New** option.

The new protocol registration dialog box will appear.
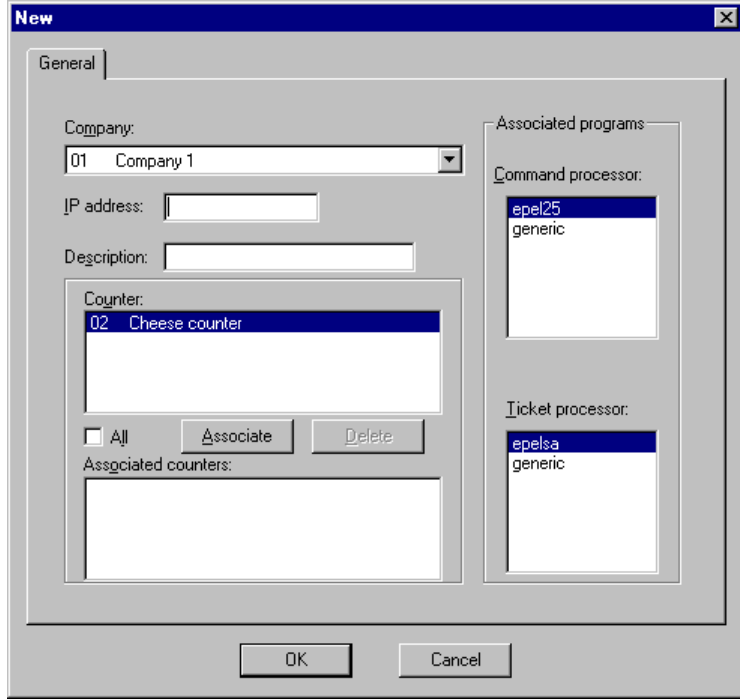
Fig. 8.20 Dialog box for assigning protocols and programs to the scales system

3. Complete the box as follows:

- "Company": Select the company whose scales system you are configuring.

- "IP Address": Enter the IP address of the scales concentrator.

- "Description": Brief reference text for the concentrator.

- "Counter": Choose the counter that you will associate with the concentrator, or check the "All" box to associate them all with the same concentrator.

- "Associate": Click on this button to effectively associate the counters with the concentrator.

If you click on the "Delete" button all the selected associations will be deleted (if "All" is checked, the association with all the counters will be deleted).

- "Associated counters": Shows the list of counters already associated with the concentrator.

- "Associated programs": The communications programs that will be used for communications between the scales and the server.

  - "Command processor": Choose the communications program that will operate between the server and the scales.

  - "Ticket processor": Select the communications program that will operate between the scales and the server.

4. Click on "OK".

Other Operations with the Scales Module

Modifying Prices of Scales Items

This process allows you to change the prices of scales items defined as PLU local (in the "Reference" field of **Scales Items, [Action-New]**) and which are therefore not registered as references in the general StoreFlow GV items table.

The prices of generic items must necessarily be modified from the **Item Maintenance** process.

To modify the price of a scales item:

1. From the **Weighing Scales Items** group, select the **On-line Price Change** process.
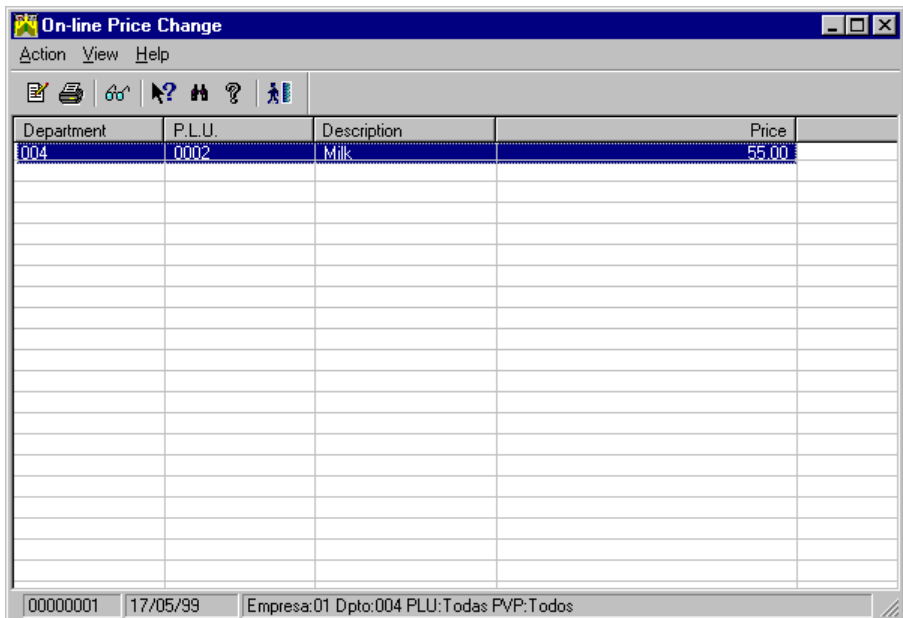
Fig. 8.21 Main window of the scales item on-line price change process

The main process window shows a table where each row corresponds to an item defined as PLU local. The columns show the following information: code of the department that the item belongs to, code assigned to the counter item whose price you want to change, item description, current item price and new price at which it will be sold.

2. Double-click any of the lines on the list or run the **Modify** command from the **Action** menu. The **Modify** dialog box will appear. Write the new selling price using at most 7 digits (including two decimal places).
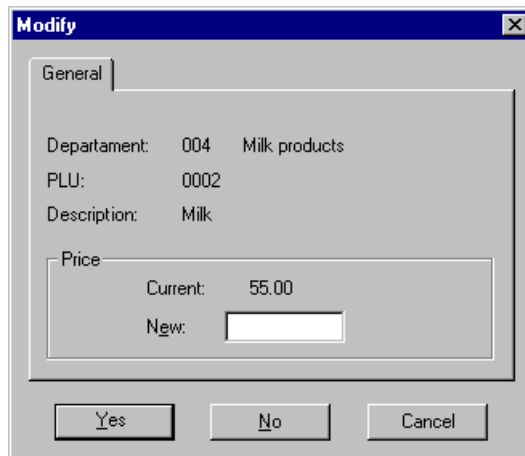
Fig. 8.22 Price change dialog box

3. Click on "OK".

The price of the item will change. Remember that since queries can show very large lists, you can select items by specified PLU range, price, means of sale, company, and department by using the **Include** option in the **View** menu.

Generation of Tables of Free PLUs

Free PLUs enable you to generate tables from the PLUs which have not yet been assigned to any item. This process is not frequently used, and should therefore only be accessed if an error arises when creating new PLUs.

To generate a new range of PLUs:

1. From the **Weighing Scales Items** group, start the **Free PLUs** process.
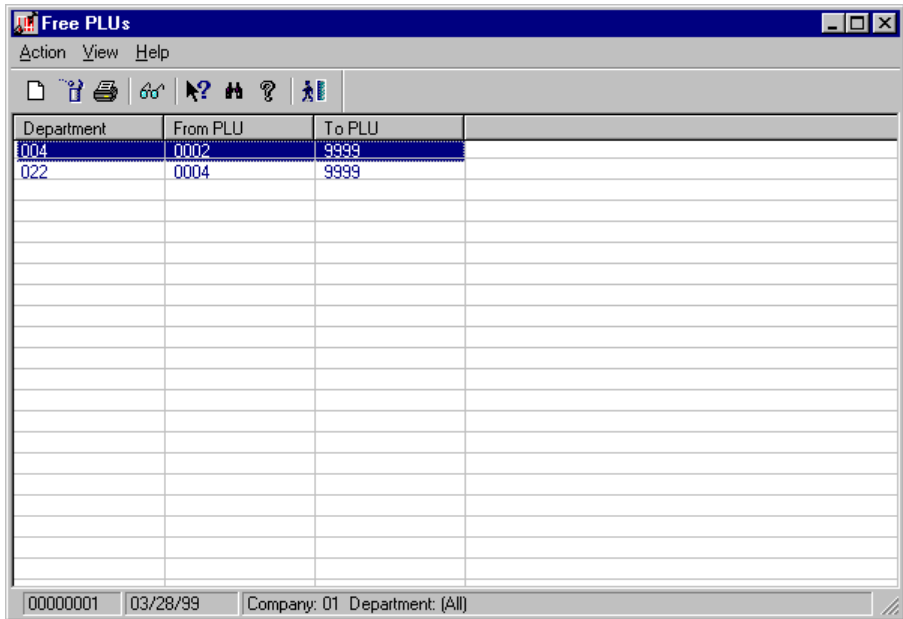
Fig. 8.23 Main window of the PLU generation process

The **Free PLU Maintenance** program window contains a list of the department codes and PLU ranges.

2. Open the **Action** menu and select **New**.

The dialog box allowing you to define the range of PLUs to be generated will appear.

Fig. 8.24 Free PLU range definition dialog box

3. In the dialog box above, select the company and department and enter the range of free PLUs you want to regenerate, indicating the lower limit in the "Start" field and the upper limit in the "End" field (both are numbers of up to four digits and must be greater than zero).

4. Click on "OK".

Reasons for Ticket Cancellation

The **Reasons for Cancellation** process from the **Basic Data** folder of the Weighing Scales module enables you to manage the reasons for cancellation of scales tickets defined freely by the scales system administrator.

When a ticket is cancelled, the data recorded during a previous scales operation is deleted from the server. Thus, this cancellation always takes place from an SF-GV client station (not to be mistaken for the administrative cancellation of a transaction, which is carried out at the POST, or the cancellation of a basic weighing operation, which the operator can perform from the scales before the ticket data is transferred to the server).

There are a variety of possible reasons for cancellation:

- Loss of the scales ticket
- Theft or fraud
- Merchandise being returned before the payment is made

In general, a cancellation is necessary when the ticket does reach the POST and the item cannot therefore be charged for, even though SF-GV has received the scales data. This function allows SF-GV to monitor missing merchandise.

To register a new reason for cancellation:

1. From the **Basic Data** group in the Weighing Scales module, start the **Reasons for Cancellation** process.

Fig. 8.25 Main window for registering reasons for cancellation

The window of the **Reasons for Cancellation Maintenance** program contains a list of codes and descriptions of the reasons why a ticket may be cancelled.

Double-clicking any of the lines on the list will bring up the **Modify** dialog box.

2. Open the **Action** menu and select **New**. In the dialog box shown, select the company, a code of up to 2 digits to identify a single reason for cancellation and type in a short description of the reason using up to 25 alphanumeric characters.

> **!** Code 99 is reserved for SF-GV, as it cancels certain internal operations.

Fig. 8.26 Box for registering ticket cancellation reasons

3. Click on "OK".

When canceling a ticket, the person carrying out the operation must select the reason before completing the operation.

Scales Monitor

Use of the **Scales monitor** process is reserved for the scales system administrator. The main functions that can be carried out from the server include:

- Activating the scales system at the start of the trading day, and closing it at the end (this is the ideal scenario, but not necessarily the common one).

- Activating or stopping the server-scales communication program and the scales-server program after it has gone down or problems have arisen during the execution of any of the processes involved in the system operation.

- Sending specific commands to the command file in order to load the tables (items, salespeople, PLUs, etc.).

- Re-processing the scales operations log file in the event of problems.

To access the monitor, start the **Scales Monitor** process from the **Scales System Operations** group. The main process window will appear.
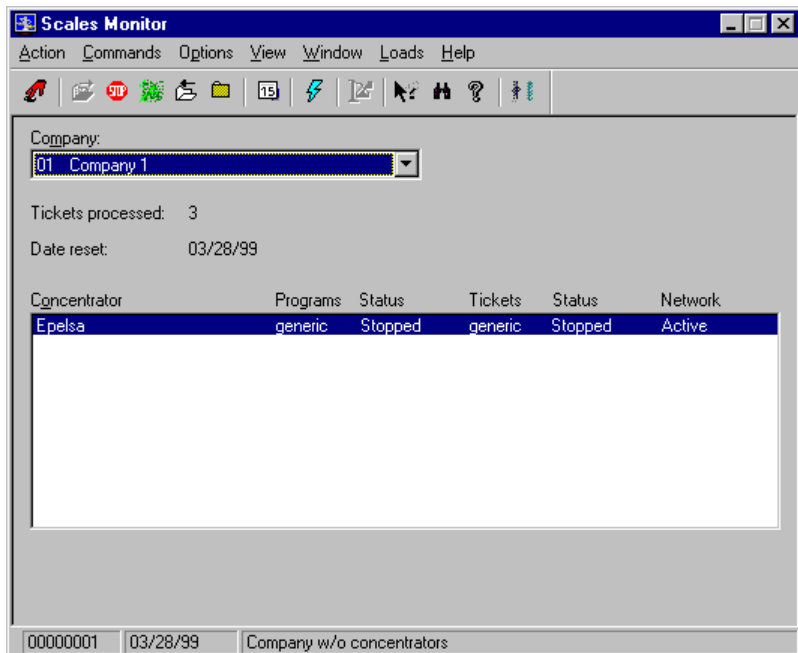
Fig. 8.27 Main window of the store scales system monitor

This window allows you to select the company whose information the scales system is going to display.

The total amount on the tickets processed so far by the company and the last date the scales system was booted are shown.

A list is also shown, organized into columns containing the IP addresses of the concentrators used by the selected company and the details of the processes used and their current status.

- Concentrator: The IP address assigned to the scales concentrator used by the company.

- Commands: The communications program responsible for transferring commands and data from the server to the scales via the concentrator. Its current status is shown in the column located to the right.

- Tickets: The communications program responsible for transferring data from the scales to the server via the concentrator. The current status is shown in the column located to the right.

- Network: Indicates whether the concentrator is on-line or not.

To control a scales concentrator, select it from the list and execute the command required.

The table below shows the main commands and their basic usage sequence.

Menu	Option	Action Performed
Commands	Activate system	Enables the communications programs needed for the connection between the server and the scales concentrator.
	Initialize	Boots the scales system with the system date and all the commands and ticket processes associated with the concentrators.
	Stop	Stops the command processor and/or ticket programs on a specific concentrator.
	Activate	Enables the command processor and/or ticket programs on a specific concentrator.
	Re-process	Sets the pointers to their initial values so as to process the ticket and command files again.
	Close	Closes the scales system for the processing day.
	Change date	Shows the current date and time on the scales system.
Window	Automatic updating	Updates the program window automatically at specific intervals.
	Update window	Updates the screen in real time.
Loads	Load scale system	Allows you to choose the data for the total or partial loading of the different tables in the scales system.

Completed Scales Operations Query

As in the case of operations carried out from the POSTs, it is possible to look up the equivalent information stored in the transaction log on the server recording the transactions performed from the scales system. The processes used are described below.

The information offered by SF-GV on operations carried out from the scales includes:

- Full ticket details look-up of for a sale carried out in the scales section
- Scales items accrued and historical data query
- Accrued and historical data query on a salesperson in the scales section

Ticket Header and Line Query

Every sale carried out from the scales section is accompanied by a ticket. In addition to the sales text, this includes valuable information for the store manager, such as:

- The amount of the transaction
- The date and time when it took place
- The counter where the operation was carried out
- Other details, such as the ticket number, type of unit, specific scales, etc.

For management purposes, a ticket can be in any of a number of states.

- **Pending payment:** The item has been weighed and the ticket generated in the scales section, but has not yet been paid for at a POST.

- **Collected:** The item the ticket refers to has been paid for at a cash register.

- **Ordered:** The item the ticket refers to has been ordered and weighed, but it has not yet been paid for. This state is useful when handling home deliveries, for instance when items can be ordered by telephone but are charged later (normally at the time of delivery, unlike items which are paid for at the POST and, unless they are paid for by the end of the day, are cancelled). This state is hardly used in practice.

- **Missing:** SF-GV considers the tickets associated with items requested but not collected within 24 hours to be missing.

- **Canceled:** The ticket was cancelled for one of the reasons defined in the process of the same name (Reasons for ticket cancellations).

To look up the information available on a series of tickets:

1. From the **Reports** group in the Weighing Scales module, start the **Ticket Query** process.
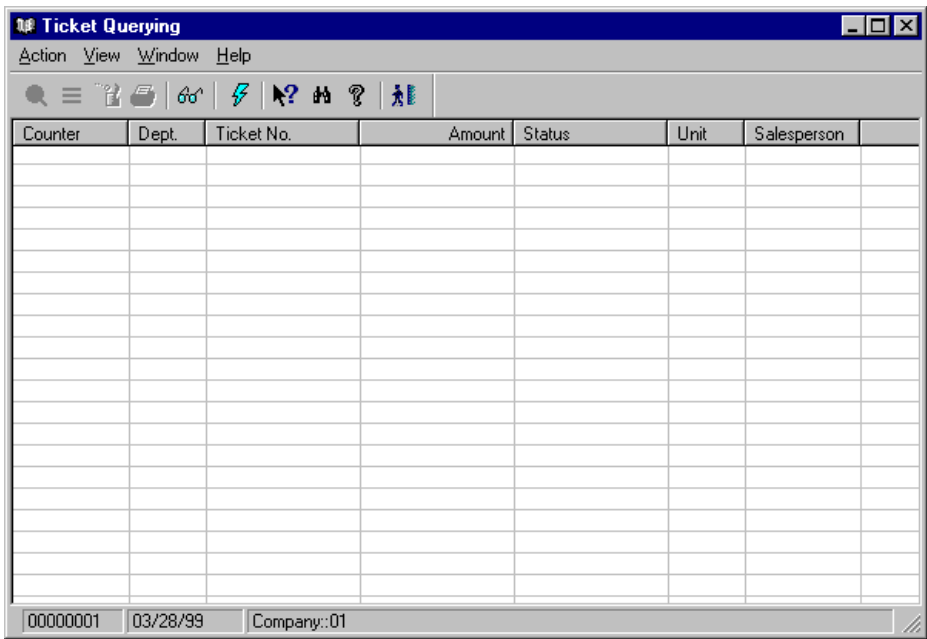
Fig. 8.28 Main ticket query window

2. Given the large number of tickets normally generated in a given store, it is usually a good idea to set up a filter. The criteria to limit the query can be set from the **Include** option in the **View** menu. The following box appears:

Fig. 8.29 Criterion selection dialog box for scales tickets

3. Complete the box as follows:

- ● "Company": Select the company that you want to work with.

- ● "Counter"-"Dept": Select the preferred search option. Depending on which one you choose, the box will show a list of departments or counters from which one or all may be chosen.

- ● "Salesperson": Select the salesperson responsible for the tickets you want to look for.

- ● "Ticket No." (Ticket Number): Enter the start and end values of the range of tickets you want to query (up to 13 digits).

- ● "Amount": Enter the minimum and maximum ticket amounts you want to query (up to nine integer digits with two decimal places).

- ● "Reference"-"PLU": Select the option for the type of search you want to carry out, i.e., by internal references or PLU codes.

- ● "Date" box: Choose the date of the log process (date of execution of the chain that generated the scales sales history log file) and of the ticket issue.

- "Time" box: Select the start and end times to set a time interval for the query, applicable to the operation in the scales section or to the issuing of the ticket.

- "Status" box: Limit the query to tickets with a given status.

- "Type" box: Choose the type of ticket to search for. For the purposes of a query, tickets can only be of the "sales" type (regardless of whether they have been paid for).

Thus, the following queries can be performed on the historical ticket log file:

- One or more tickets by counter or department

- One or all of the scales employees

- By range of tickets (from-to)

- By range of amounts (from-to)

- By PLU or specific reference, if a department or a counter has been chosen

- By processing or issue date

- By range of dates (from-to)

- By ticket status (pending payment, paid, cancelled)

- By ticket type (sale or order)

4. Click on "OK".

The main window will show a list of the tickets meeting the specified search criteria.

5. Select a ticket, open the **Action** menu and select the **Query** option.

The **Ticket query** box will appear. This shows the following general information about the operation:

- Date when the process generated by the historical ticket log file was executed

- Code and description of the unit that the ticket belongs to

- Ticket number

- Scales from which the ticket was issued

- Ticket type (direct sale or order)

- Standard date or date recorded in the database

- Standard time or time of issuing of ticket

- Code and descriptive text for the salesperson who carried out the operation

- Total number of detail lines contained in the ticket

- Current ticket status (pending payment, paid or cancelled)

- Status date, current date or date of the last query

- Status time, current time or time of the last query

Clicking on "OK" finishes the query and closes the dialog box.

Ticket Query	✕
Date:	10/21/98
Counter:	02 Cheese counter
Ticket No:	2502201000028
Equipment:	01
Type:	Sale
Date type:	Sale
Time type:	10:16
Salesperson:	01 Surname1, name1
No. Lines:	2
Status:	Pending collection
Status date:	Sale
Status time:	10:16

<div align="center">

[OK]   [Lines]

</div>
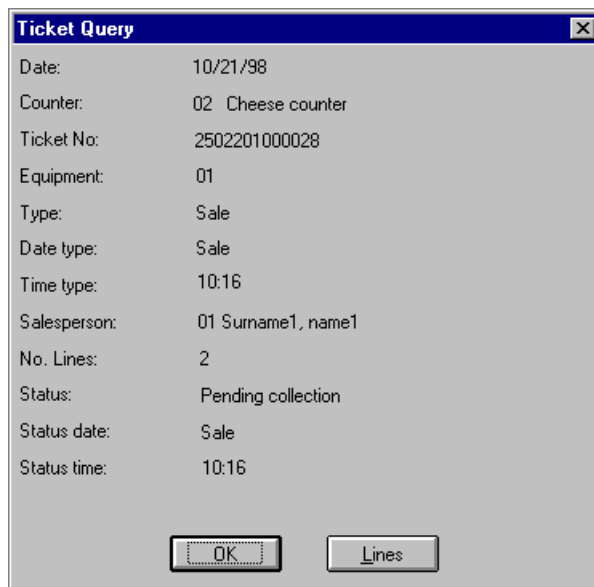
Fig. 8.30 Ticket header query box

6. If you want to know the amount, the weight and items in the operation, click on "Lines".

    The **Ticket Lines Query** box will appear.
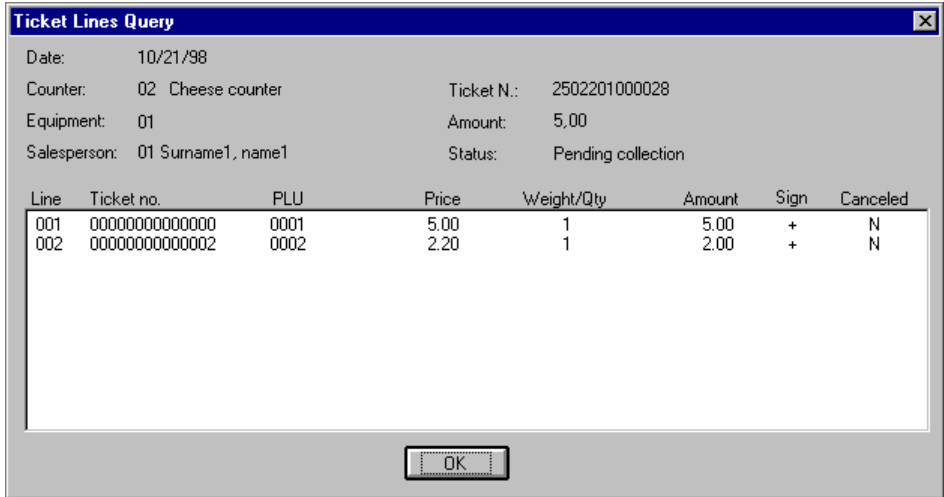
Fig. 8.31 Ticket lines query box

The top section of the box shows header details from the previous box; the only new data shown is the total amount on the ticket.

A table appears where each row represents a ticket line. The columns contain the following information:

- Ticket detail line number

- Reference and internal code or PLU of the item sold

- Unit price of the item

- Weight or quantity of the item sold (items can be sold by weight or by units)

- Specific amount on the detail line (the amount is obtained by multiplying the price of the item by the quantity or weight sold)

- Sign of the line, i.e., whether it is a positive or negative amount

- Whether the ticket line has been cancelled or not

7. Close both dialog boxes (lines and header).

The detail data shown on the cash register ticket generated by the POST at the time of payment for the transaction depends on the terminal environment configuration (see the section ❯ "Definition of environments" in the Configuration chapter).

Item Information Query

In SF-GV, the following information on scales items can be queried:

- **Accrued for item:** Allows you to look up the sales of items made via the scales system up to a specific date and the operations carried out on the tickets resulting form these sales.

- **Item history:** Allows you to look up the sales recorded in the item history log and the operations carried out on the tickets resulting from these sales.

In both cases it will be necessary for the strings responsible for maintenance of scales item accrued and historical data to have been run previously. Given the similarity of both processes, we will describe the **Historical Log Query by Reference** process only.

To query the historical log by reference:

1. From the **Reports** group in the Weighing Scales module, start the **Historical Log by Reference** process.

   The ticket selection box will appear.
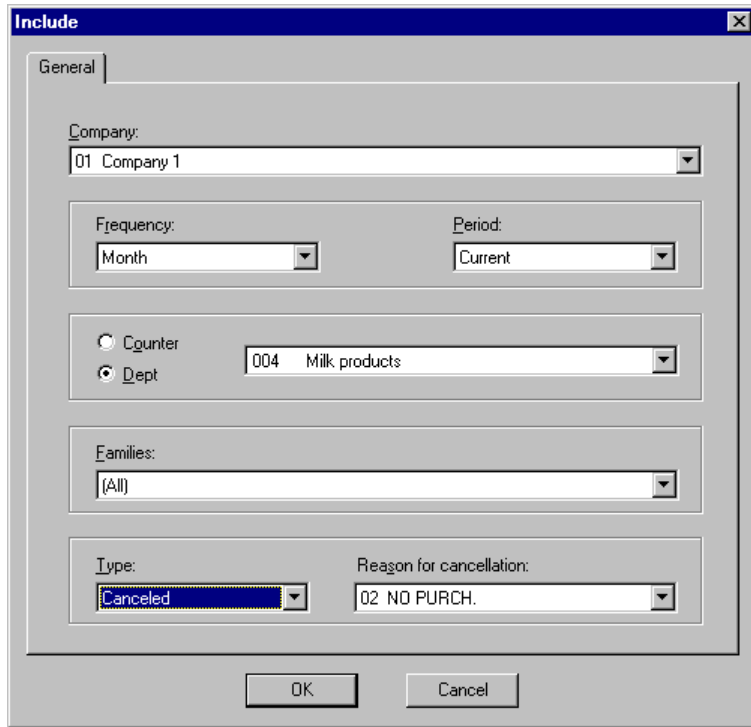
Fig. 8.32 Dialog box for selecting ticket historical details by reference

2. Complete the box as follows:

- "Company": Select the company where you want to carry out the query.

- "Frequency": Choose the time interval you want to look up, the historical details for a given month or a campaign.

- "Period": Choose whether you want to query the current log or an earlier one (the log is closed periodically and a new one created).

- "Counter"-"Dept": Select the preferred search option. Depending on which one you choose, the box will show a list of departments or counters from which one or all may be chosen.

- "Families": Select one or all of the families in the company.

- "Type": Choose the type of operation carried out on the ticket issued in the scales section. Remember that "Consumed" will include all tickets.

- "Reason for cancellation": If you chose the "Canceled" option in the box above, select the reason for cancellation of the tickets sought.

3. Click on "OK" to start the search.

   The main window will appear, displaying the tickets that fulfill the specified search conditions.
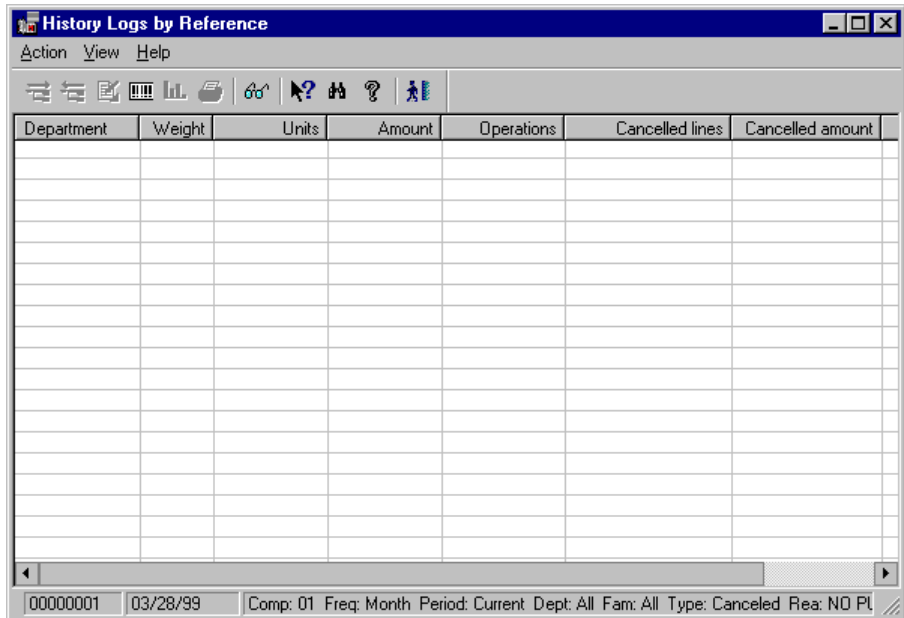
Fig. 8.33 Main window of historical details by reference

Depending on the selection criteria established in the previous box, the contents of the first column will vary. It will therefore be possible to query a specific counter, department, family or reference.

The other columns will show the following information on the selected counter, department, family or item:

- The accumulated weight of the items

- The accumulated total number of items

- The accrued total amount

- The total number of operations carried out

- The number of cancelled lines

- The total amount of the cancelled lines

Double-clicking on any of the lines of the listing will bring up the **Comparative table** dialog box.

4. From the main window, open the **Action** menu and select:

    ● **Detail**, to show the following level of detail on the scales chosen in the top part of the box:

        ● If the level is counter or department, you will be able to detail the families in each counter or department, respectively.

        ● If the level is family, you will be able to detail the item references or the PLUs in each family.

        ● If the level is item reference or PLU, this option will not be available.

    ● **Group** to reduce the level of detail:

        ● If the level is item reference or PLU, you will be able to group them together by family.

        ● If the level is family, you will be able to group them together by counter or department.

        ● If the level is counter or department, this option will not be available.

    ● **Comparative Table**: Shows the type of counter, department, family or item operations carried out on the tickets issued.

Comparative Table								
Company:	01							
Frecuence:	Month/Current							
Counter:	01 Butcher's							
Family:	001 Family 1 dep							
Reference:								
	Operations	%	Amount	%	Weight	%	Units	%
Consumed	5		263		0		2	
Collected	1	20.0	40	1.5	0	50.6	0	
Ordered	2	40.0	52	19.8	0	32.9	0	
Canceled	1	20.0	14	5.1	0	16.5	0	
Missing	3	60.0	245	93.3	0	32.9	2	100

Fig. 8.34 Summary table of operations performed on tickets

- **Graph:** A bar chart is shown based on the comparative data above.

- **Access by reference:** Allows you to search for items using the specific item reference or PLU code. If the level of detail is less than "family", this command will not be available (it will be grayed out).

Salesperson Information Query

The salesperson information query is in all respects similar to that for items. Thus, SF-GV allows you to query tickets issued by a salesperson, in particular:

- **Accrued by salesperson:** Allows you to look up, at a variety of levels of detail, the accrued sales by a scales salesperson up to a specific date and the ticket operations resulting form these sales.

- **Salesperson history:** Allows you to look up the accrued sales recorded in the log for a given salesperson and the operations carried out on the tickets resulting from these sales.

Given the similarity of both processes, we will only comment on the **Accrued Query by Salesperson** process.

To query a salesperson's accrued sales:

1. From the **Reports** group in the Weighing Scales module, start the **Accrued by Salesperson** process.

   The ticket selection box will appear.
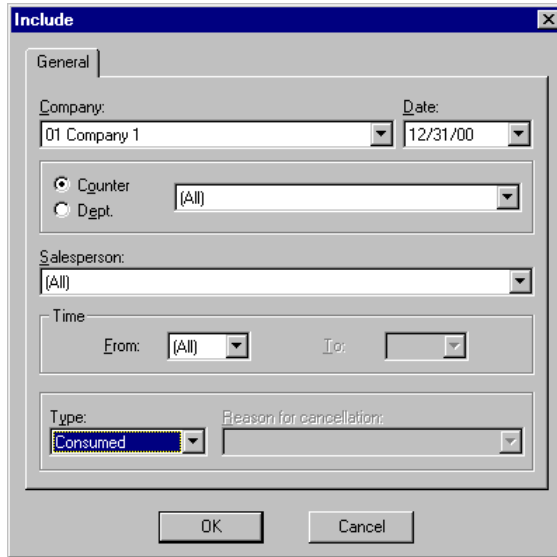
Fig. 8.35 Main window of accrued sales by salesperson

2. Complete the box as follows:

- "Company": Select the company with whose data you want to work.

- "Date": Select the date when the accumulated data history file was generated.

- "Counter"-"Departments": Choose the preferred search option. Depending on which one you choose, the box will show a list of departments or counters from which one or all may be chosen.

- "Salesperson": Select the salesperson whose results you want to see from the list.

- "Time": Select the range of times for the operations.

- "Type": Select the types of tickets you want to check. Remember that "Consumed" will include all tickets.

- "Reason for cancellation": If "Cancelled" was checked, here you can choose the reason for canceling the ticket

3. Click on "OK" to start the search.

The main window showing the tickets fulfilling the search conditions appears.

Fig. 8.36 Main window showing accrued sales by salesperson

Depending on the selection criteria established in the previous box, the top section of the box will indicate the counter or department. The table columns show the following information:

● Code of the salesperson who carried out the operations. This field will appear if the selection criteria did not specify the salesperson.

● Accumulated weight of the items sold by the selected salesperson.

● Accumulated total number of items sold by the salesperson.

● Total accrued amount for the salesperson.

● Total number of operations carried out by the salesperson.

● Number of cancelled lines.

● Total amount of the cancelled lines.

Double-clicking on any of the lines of the listing will bring up the **Comparative table** dialog box.

4. From the main window, open the **Action** menu and select:

● **Detail** to show the following level of detail on the scales chosen in the top part of the box:

- If the level is the salesperson, you will be able to detail the intervals in which the operations have taken place.

- If the level is "intervals", this option will not be available.

- **Group** to reduce the level of detail:

  - If the level is set at the intervals in which the operations took place, you can group them by salesperson.

  - If the level is "salesperson", this option will not be available.

- **Comparative table:** Shows a table indicating the types of operations performed and the tickets issued by the salesperson.

- **Access by reference:** Enables you to conduct searches by salesperson reference code.

- **Graph:** Shows a bar chart based on the comparative data above. If the level of detail is "intervals", this option will not be available.

9

Utilities

- Process Analysis
- Version Control
- Report Generation

StoreFlow GV

This chapter describes the Utilities module, which consists of programs that offer management tools, basically those used for running system processes and defining the messages that are shown on the POST.

To access the module, click on the Utilities icon on the main screen of Sales Management.

Fig.9.1 Utilities module icon

The module is made up of five folders. It is intended for use by the system administrator or the company's technical department and allows the following aspects to be handled:

- Process analysis
- Control of the SF-GV versions installed in a specific store
- Report generation, allowing you to make queries and produce reports from a standard ODBC-compatible database
- Messages from the POST

Managing events and the messages sent from the POST, which also belong to the Utilities module, is described in the ➤ "Terminal Management" chapter.

Process Analysis

The system includes a range of server processes called "spies" whose function is to monitor that certain critical SF-GV services are working correctly.

The spies run on the server and are in constant communication with the server process they monitor. Each spy monitors just one process. For example, the spy "chklog" monitors the growth of the daily log, while "chkdire" monitors the correct operation of the manager.

For each of these supervisor processes there is a group of events associating the errors or events which can occur in the tasks that you are inspecting. In turn, one or more messages are associated with each event. These are the messages that will be displayed (accompanied by a sound) whenever the event occurs, provided that the process monitor is running.

In other words, the spy checks predefined events that can affect its corresponding process. When one of these events occurs, it notifies the user of the incident by writing the relevant information to the database so that it can be queried from the client station and the relevant message shown on the screen.

Let's look at an example:

Process on server	Group (code and description)	Events (code and description)	Messages
chkdire	02 - Sales manager	01 - Manager status	Manager down
			ORACLE connection error
		02 - Manager activity	Manager not advancing
			ORACLE connection error
		03 - Manager error	The manager has stopped incorrectly
			ORACLE connection error

Typical use of the processes included in **Process Analysis** involves the following phases:

1. *Registering event groups:* Allows you to add new groups of events to those predefined in SF-GV (the predefined events are usually sufficient for standard system management).

2. *Registering of system events:* Allows you to add events to those predefined in SF-GV and determine whether these events should be checked periodically or not.

3. *Definition of messages for each event:* Associates messages with the existing events.

4. *Control via the Process Monitor:* when the **Process Monitor** program is running, events are constantly queried as they are checked at set intervals. In the event of error the necessary action can be taken.

The use of the processes in each phase is described below.

Event Groups

This process enables groupings to be defined for the events that occur on the system, although normally the predefined groups in the SF-GV installation are sufficient.

If you want to add a new group, run the registration procedure from the **Process Analysis** folder, start the **Event Group** process and create the association with the new group, by specifying a code, a description, and the corresponding server process.
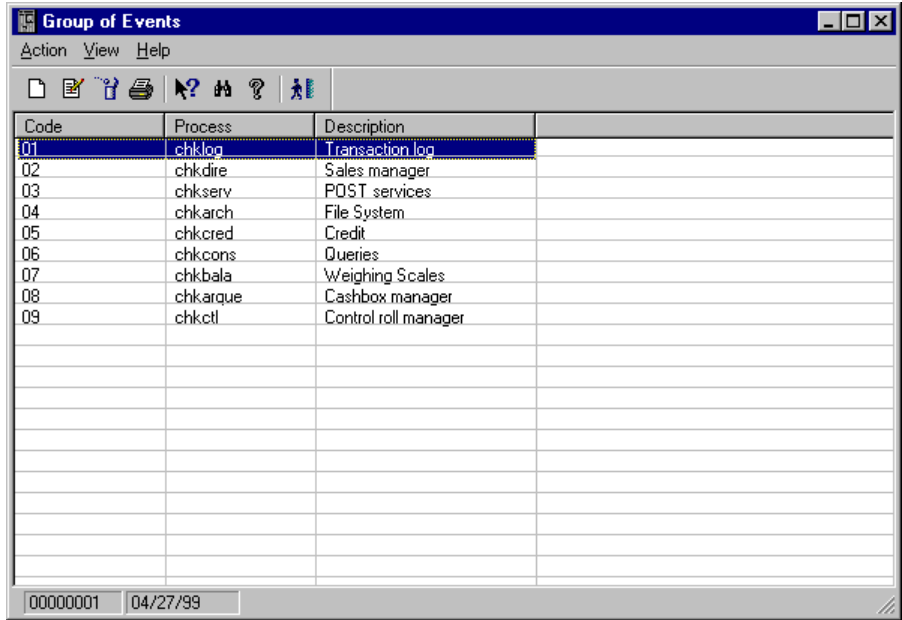
Fig. 9.2 Main window of the Event Groups process
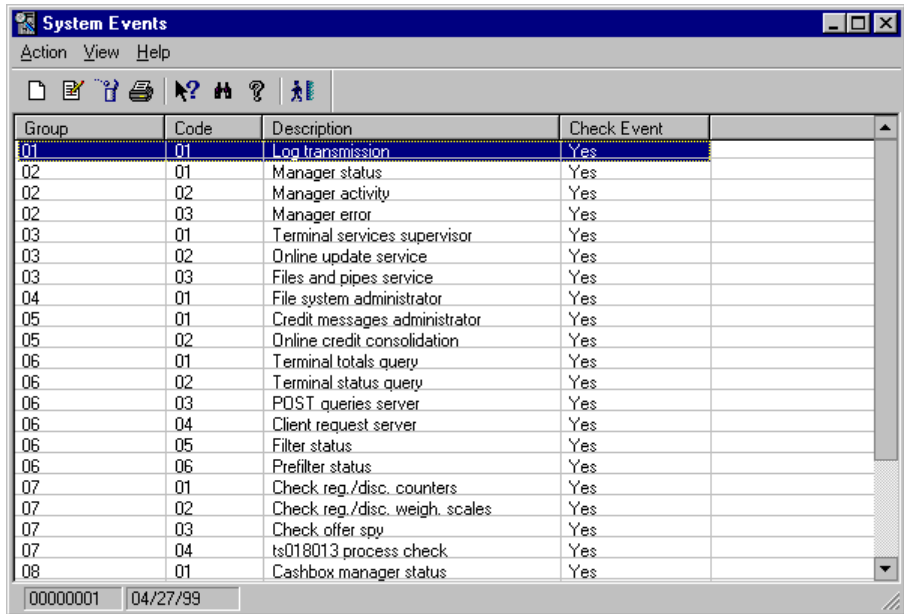
Events

An event is an error in a critical server process managed by a spy process.

The **System Events** process allows you to define new events, delete defined ones and determine whether the existing ones should be checked or not.

The procedure for registering an event or changing its checking status is as follows:

1. From the **Process Analysis** group, start **System Events**.

Fig. 9.3 Main window of the events maintenance process

2. Open the **Action** menu and select **New**. The following dialog box will be brought up.

Fig. 9.4 Event registration dialog box

3. In the box shown in the figure, select the group that you want the event to belong to, a unique two-digit code for the new event and a brief description. Check the "Check Event" box if you want its operation to be checked periodically from the **Process Monitor** process (this is usually enabled, although you may decide to disable it so as not to overload the system, or simply because you already know about the error).

4. Click on "OK".

Event Messages

This process allows you to associate a brief message with each system event. This message is shown in the main window of the **Process Monitor** process when it is running and the system detects that the event has occurred in the process that is being checked.

To associate a message with an event, from the **Process Analysis** group start the **Event Messages** process and run the registration procedure. This will allow you to define or modify the message associated with the selected event.

Process Monitor

This process is responsible for displaying events on the client station as they occur in the system and for giving a warning if any errors occur while the process is being run. This window is usually kept open and minimized during the working day. If an event is detected, the window is maximized automatically so it can be looked up. This query will be shown on all the stations that have the process open.

The procedure for monitoring events occurring during process execution is as follows:

1. From the **Process Analysis** group start the **Process Monitor** process.
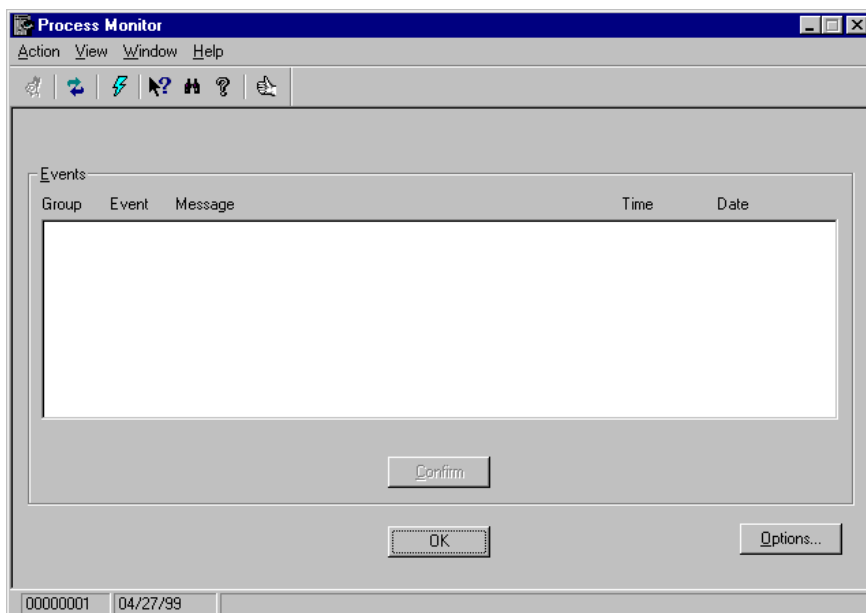
Fig. 9.5 Main window of the Process Monitor

2. From the main screen, click on "Options".

    The Process Monitor operating options dialog box will appear.
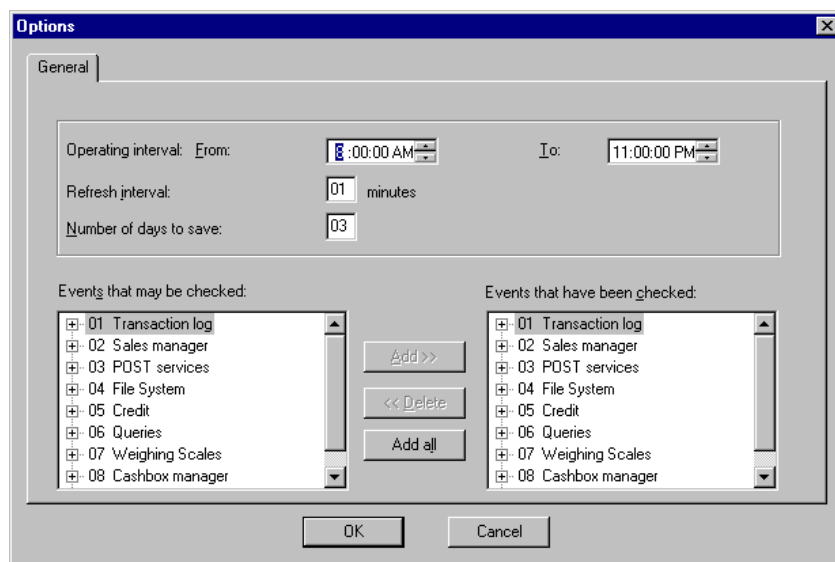
Fig. 9.6 Process Monitor general parameters configuration dialog box

3. Complete the box as follows:

    - "Operating interval"

        - "From": Enter the time the process is to start checking events.

        - "To": Enter the time the process is to stop checking events.

    - "Refresh interval": Enter how often (in minutes) system events are to be checked.

    - "Number of days to save": Enter how many days of system activity is to be kept.

    - "Events that may be checked": Displays the groups of predefined events plus the new ones that have been added from the **Event group** process.

    - "Events that have been checked": Displays the groups of events that are being checked periodically. Events may be added or removed using the buttons.

4. Click on "OK" to minimize the main window until an event takes place.

5. When an event occurs, it will be shown in the main window together with the group and code, the message defined in **Messages by Event**, and the date and time when it occurred. Select it from the list of events and click on "Confirm" so that it continues to appear on the list of events.

Version Control

This folder includes a series of processes that enable the user to know the versions of SF-GV installed on the different client stations in the case of a multi-company group. It is for internal use and is normally reserved for the technical department or the system administrator.

Centers

This process allows you to register the company's existing centers so that you can subsequently obtain the installed versions. From the **Version control** group, start the **Centers** process and run the center registration procedure. Associate a code of up to three digits and a description of up to 20 alphanumeric characters with each center and follow the standard registration procedure.

A center cannot be eliminated if client stations have been defined for it.

Client Stations in Centers

This process allows you to look up the client stations in a shopping center or add new stations to enable their subsequent management during version control.

In order to add client stations, execute the **standard element registration** procedure via the **New** option in the **Action** menu. In the dialog box that appears, assign the center, the company, an identification code of up to 2 digits for the client station and a brief description.
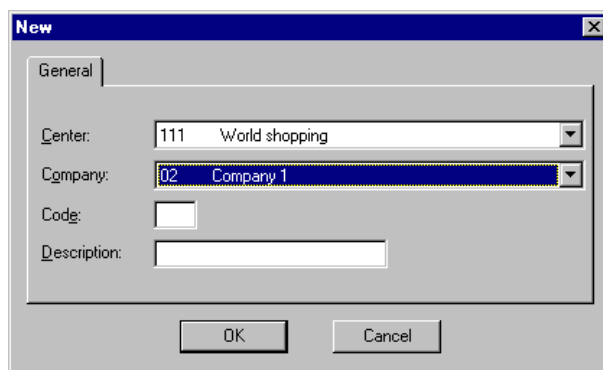
Fig. 9.7 Dialog box for registration of client stations in centers

Obtain Versions
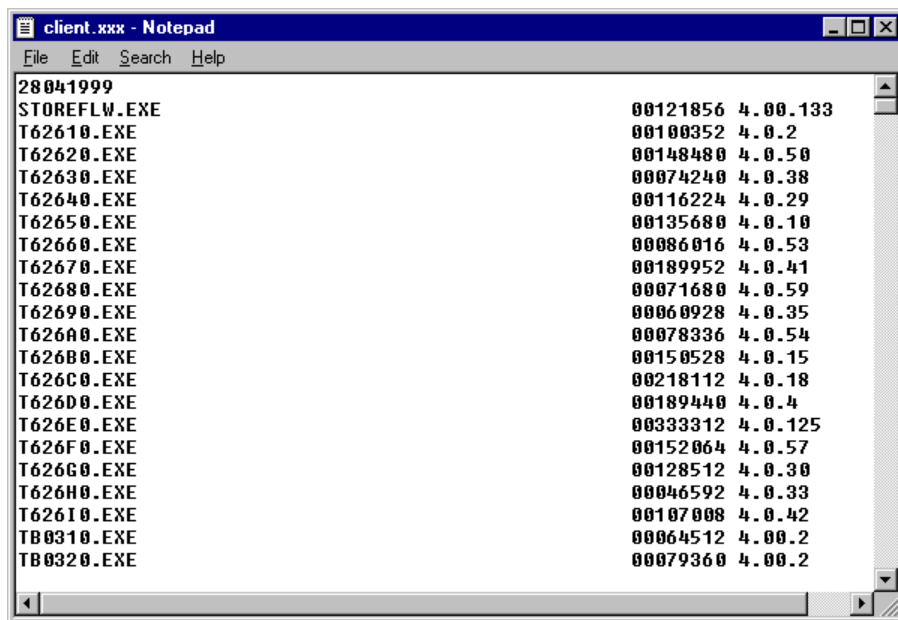
This process allows you to launch the **Auditor** procedure, which collects information on the versions available on the client stations located in the centers. From the **Version Control** group, start the **Version Auditor** process and simply click on the "Audit" button.

A status bar is shown for the generation procedure. The application communicates with the centers by means of a file transfer procedure. It obtains the versions that are being used, records them in a file and sends it to the server.

By default, this file is called "cliente.xxx" and is stored in the "version" sub-directory on the client station where the StoreFlow programs are installed (c:\storefl\version\cliente.xxx). When it is sent to the server it is stored there with a name of the form "vccceepp.inf", which allows its origin to be identified:

- v: Indicates that the contents are versions.
- ccc: Specifies the center the client station belongs to.
- ee: Identifies the company.
- pp: The last two digits are used to identify the client station.

The information contained in this file is shown in the figure below: the first line gives the date the audit was performed, and below it are three columns giving the name of the program or file, its size in bytes and the installed version.

```
client.xxx - Notepad                                          _ □ ×
File   Edit   Search   Help
28041999
STOREFLW.EXE                                  00121856 4.00.133
T62610.EXE                                    00100352 4.0.2
T62620.EXE                                    00148480 4.0.50
T62630.EXE                                    00074240 4.0.38
T62640.EXE                                    00116224 4.0.29
T62650.EXE                                    00135680 4.0.10
T62660.EXE                                    00086016 4.0.53
T62670.EXE                                    00189952 4.0.41
T62680.EXE                                    00071680 4.0.59
T62690.EXE                                    00060928 4.0.35
T626A0.EXE                                    00078336 4.0.54
T626B0.EXE                                    00150528 4.0.15
T626C0.EXE                                    00218112 4.0.18
T626D0.EXE                                    00189440 4.0.4
T626E0.EXE                                    00333312 4.0.125
T626F0.EXE                                    00152064 4.0.57
T626G0.EXE                                    00128512 4.0.30
T626H0.EXE                                    00046592 4.0.33
T626I0.EXE                                    00107008 4.0.42
TB0310.EXE                                    00064512 4.00.2
TB0320.EXE                                    00079360 4.00.2
```

Fig. 9.8 Result of the version audit

Version Comparison

This is the most basic of the processes included in the **Version Control** group, as it tells you the version of the SF-GV processes installed in each center and on each client station in the center. It is first necessary to have generated the information by using the **Version Auditor** process.

To display the version installed at a center, proceed as follows:

1. From the **Version Control** group, start the **Version Comparisons** process.
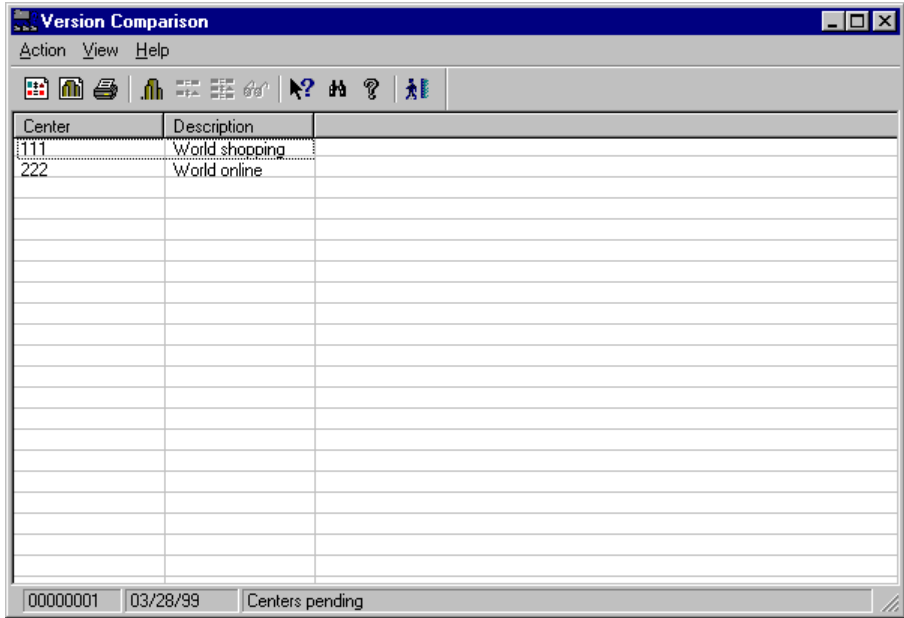
Fig. 9.9 Main window showing the versions installed by center and by client station

2. Open the **Action** menu and select **Load master information** and then **Load centers**.

The master information is the most up-to-date information on the existing versions and is kept in a file called "v0000000.inf".

After the connection, a process begins that copies the data obtained using **Version Auditor** onto a table. Subsequently, when reports are requested, the data in this table is compared with that in the table with information about the latest versions. That is to say, the file "v0000000.inf" is compared with file "vccceepp.inf".

3. To select the contents displayed, open the **View** menu and select:

- **"Pending centers":** Enables you to obtain the list of the centers for which it was not possible to ascertain the latest installed version.

- **"Differences summary":** Shows a summarized list of the centers that do not have the latest version, including the date of the most recent version available.

● **"Differences detail":** Displays a detailed list of the centers and the client stations that do not have the latest version.

Fig. 9.10 Detail of differences in comparison of versions

Report Generation

The Report Generator has been designed to allow users to query the StoreFlow databases directly in order to obtain results quickly, in a simple and orderly manner, without their needing to know SQL language syntax. This gives users an easy way of generating reports not provided by SF-GV.

The only requirement is that the database should be compatible with the ODBC standard.

The first step is to prepare the selection query which will determine what information will be shown in the document. Using this query, the report template can be designed. This includes the layout of the fields that are obtained, summary functions, text, titles, page headers and footers, and other components in the various sections of the page model. It is also possible to order and group together the information according to user-defined criteria. This template is fully configurable, as are all of its components.

Finally, when this report design stage has been completed, you can associate the data obtained from the query with the objects that make up the template and see the entire report on screen or, if you prefer, print out as many copies as you want.

Report Design

Start the **Information Generator** process and choose the option **New** in the **File** menu. A blank template will be shown and the following buttons will appear on the toolbar:

Query

To obtain a report, the first thing you have to do is select the information you want to show. You can do this in the **Information Generator** by means of the **Query editor**.

The record selection is defined by a macro query and this, in turn, contains one or more simple queries joined by operators such as Join, Intersection or Exclusion. To make this concept easier to grasp, each simple query can be understood as a set of data, and the macro query as the result of the operations that are carried out on these sets of data.

The Query Editor can be accessed via its icon or by using the **Query** option in the **Edit** menu. This brings up the following dialog box:
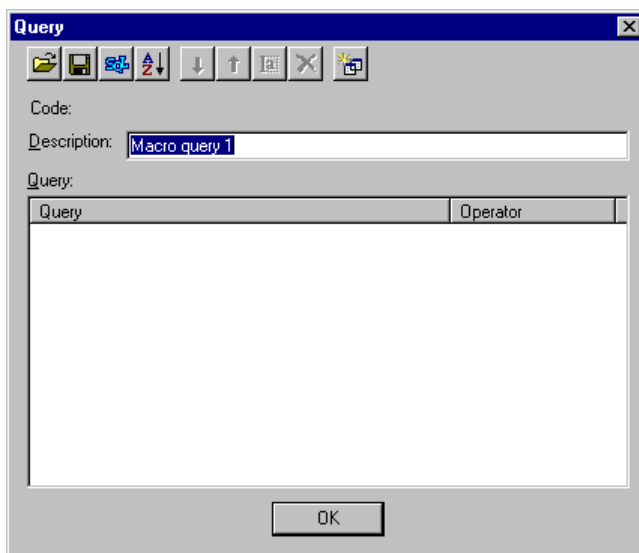
Fig.9.11 Macro query editor

This box allows the "Description" of the macro query to be defined and the toolbar to be used to compose the various simple queries. The "Code" is assigned internally when saving the macro query.

Open: Shows the *Open Query* dialog box.

Save: This saves the macro query in the database, along with all its simple queries.

SQL statement: Shows the **SQL statement** dialog box.

Sort: Shows the *Orderings* dialog box.

Move down: Moves the selected simple query down one position.

Move up: Moves the selected simple query up one position.

Edit: Displays the dialog box allowing you to edit the selected simple query.

Delete: Removes the selected simple query from the current macro query, but it does not delete it from the database. Pressing the DEL key has the same effect.

New Query: Shows the dialog box that allows you to compose the first simple query.

Once the first simple query has been built, new buttons appear on the toolbar.

Union: Displays the dialog box allowing you to compose another simple query and include it in the macro query, using the UNION operator with the previously selected simple query.

Intersection: Displays the dialog box allowing you to compose another simple query and include it in the macro query, using the INTERSECT operator with the previously selected simple query.

Exclusion: Displays the dialog box allowing you to select another simple query for inclusion in the macro query, using the operator MINUS with the previously selected simple query.

Change Operator: Changes the operator to the right of the selected simple query.

Brackets: Groups the selected simple queries together in brackets, or removes the brackets if they have been selected previously.

Simple Query

The Report Generator includes the following dialog box to allow you to build a new simple query or to edit an existing one.
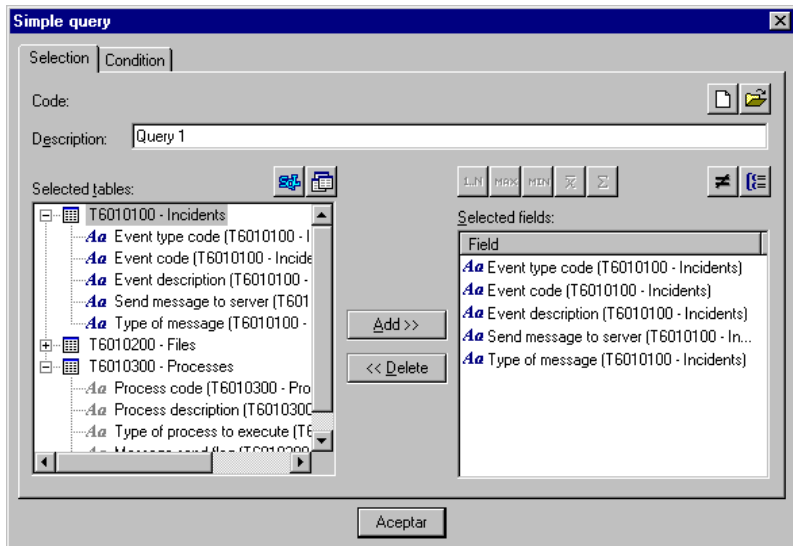
Fig. 9.12 Simple query dialog box

This dialog box allows you to open a simple query existing in the database or to prepare a new one, by defining the description, the tables, the selected fields specifying a grouping function (if necessary) and finally defining the conditions.

🖻 Tables

The first step for setting up a simple query is to define the tables that will be used, i.e., where you plan to obtain the information from. To do this you need to click on the relevant button. Once in the **Table manager**, move those that you need to the "Selected tables" column on the right. These will now be available for the query.

The table manager also allows you to explore the various database entities, together with their fields and their respective data types: alphanumerical (Aa), numerical ($\#$) or date (🔢).
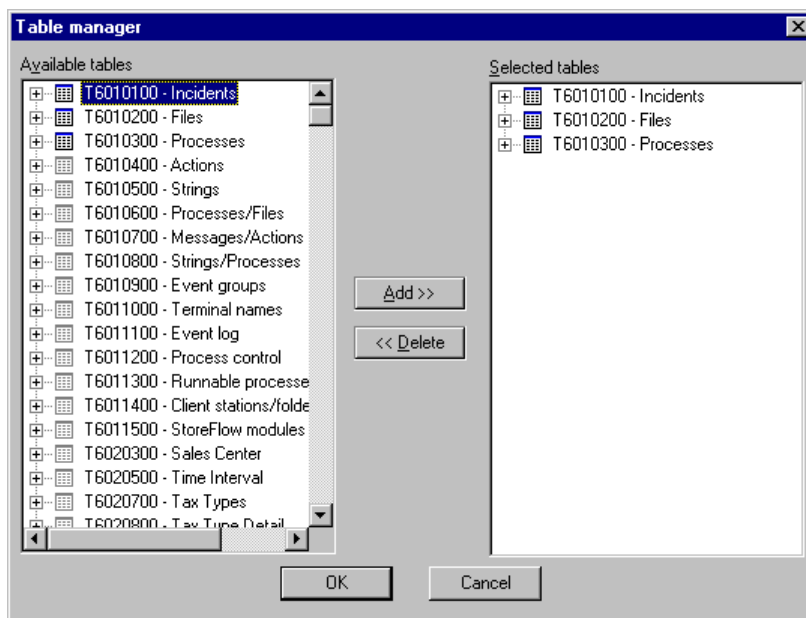
Fig. 9.13 Table administrator dialog box

Selection

Having chosen the tables you want to use, you can select the fields. In this case it is also possible to apply different grouping functions to them.

Counter: For every field without a function, the number of times the specified field is repeated is shown.

Maximum: Shows the maximum value the field can take for each field without a function.

Minimum: Shows the minimum value the field can take for each field without a function.

Average: For every field without a function, this shows the average of the specified field (applies only to numerical fields).

Sum: For every field without a function, this shows the sum of the specified field (applies only to numerical fields).

Distinctive and grouped: A simple query can also have two properties: "distinctive" and "grouped". The first property, when active, means that if there is more than one record with the same information, this information only appears once in the query results. The use of the second property is similar, as it groups together all the fields not containing a function that have the same value. But if there is a field to which a grouping function applies, the Grouping property changes the result such that the grouping function is applied to each of the values taken by the fields that do not have a function.

If at least one field has a grouping function, the rest of the fields that do not have a function should appear in the GROUP BY clause, which means that the 'grouped' property will be activated automatically.

New condition

Once the selection of fields has been defined, it will be possible to define the limitations that will have to be taken into account to obtain the records.

These conditions will be linked to one another by the logical operators AND and OR, and possibly bracketed together.
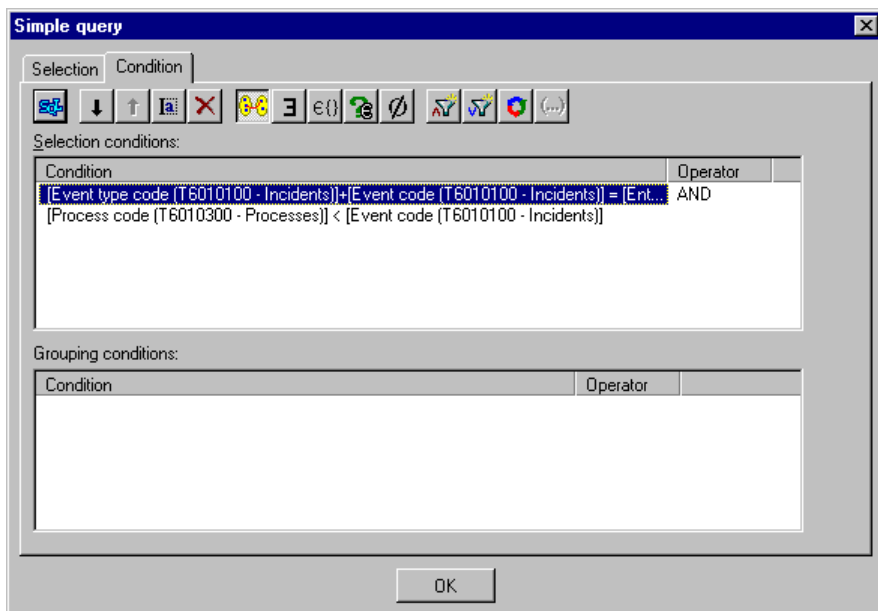
Fig. 9.14 Simple query (Condition) dialog box

There are five types of conditions.

Relational condition: Compares two expressions by means of a relational operator, such as =, <, >, ≤, ≥, ◊, A_C%. This latter operator is equivalent to the operator LIKE in the SQL language. The wildcards used are the underscore (_) to replace a single character and the percentage sign (%) to replace several.

These return a result only when the comparison is true.

This type of condition can also be used to relate two tables by comparing fields in each.
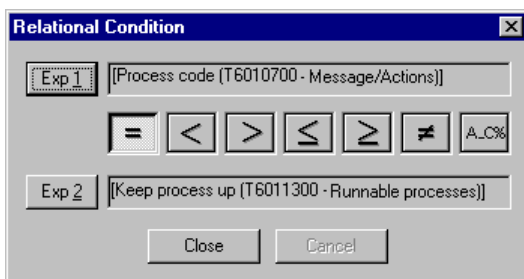
Fig. 9.15 Relational condition dialog box

⊒ Existence condition: Returns data provided that a given result in another query exists (or does not exist).
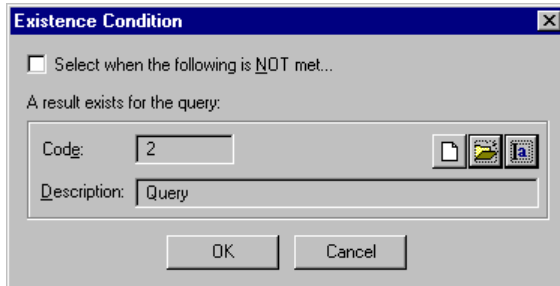
Fig. 9.16 Exists condition dialog box

Group membership: Returns only the records in which the condition that the stated expression is equal to one of the specified values is (not) met.
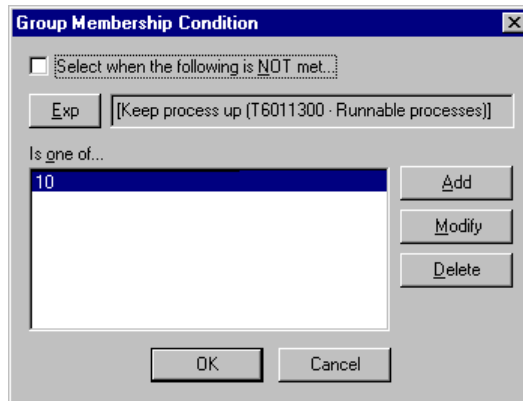
Fig. 9.17 Belongs to group condition dialog box

The "Add", "Modify" and "Delete" buttons operate on the items in the list of values: "Is one of ...".

Query membership: Returns only the records in which the condition that the indicated expression is equal to one of the values returned by the specified query is (not) met. The last of these queries must have exactly one output field.
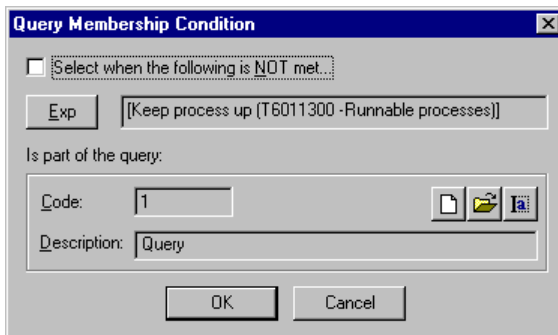
Fig. 9.18 Belongs to query condition dialog box

In the case of both the *Query membership* and the *Existance* condition, a new query can be composed or one that has been stored can be opened. This query can also be modified, bearing in mind that this might alter the results of other reports based on it.

Nullity condition: Returns only the records in which the indicated expression has (does not have) the null value.
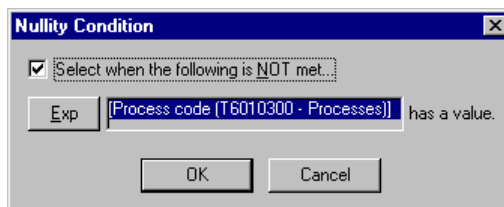
Fig. 9.19 Null condition dialog box

Selection and Grouping Conditions

If a condition is of the type *Selection* or *Grouping*, the system decides internally without consulting the user at any point. This difference has to do with the place that will be occupied by this condition in the SQL statement. The selection conditions correspond to the WHERE clause and the grouping conditions to the HAVING clause.

Expression

In all the conditions where an Expression is referred to, the Expression generator will need to be used. This allows you to enter constant values, field references or field functions as operands, whether they are part of the query selection or not. The operators that can be used are the arithmetic symbols: "+", "-", "x" and ",". To insert brackets, select the operands to be bracketed and press the INSERT key or click on the ⊡ button.
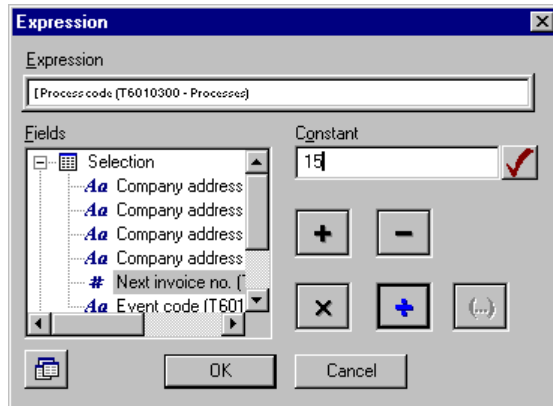
Fig. 9.20 Expression dialog box

⊞ SQL Statement

The **SQL statement** dialog box can be called up by clicking on the corresponding button in either the Selection or Condition tabs of both the **"Query"** (macro) and **"Simple query"** dialog boxes.

This shows the current state of the SQL statement at any moment during the process of constructing the query and, if necessary, enables the user to obtain the data resulting from this query to check whether it is what was expected.

A further use of this dialog box is that it allows an advanced user to modify the SQL code more quickly than using the Query Editor and to obtain the corresponding results. It should be noted that this new code will not be taken into account when returning to the Query Editor.
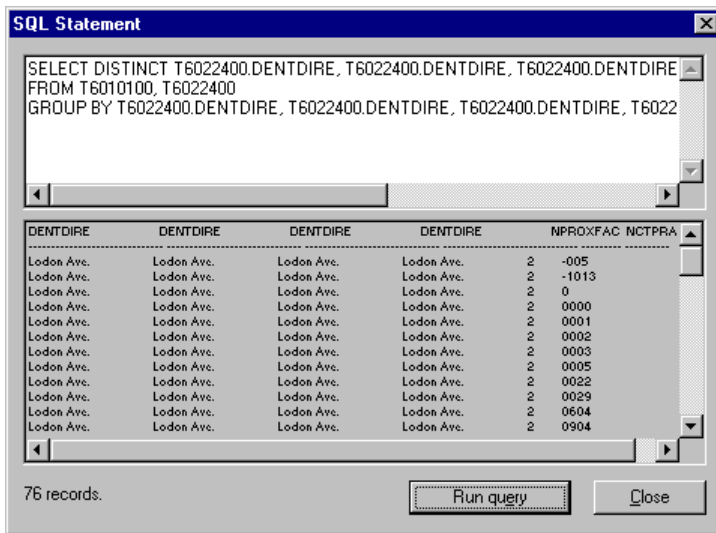
Fig. 9.21 SQL statement dialog box

![Sort icon] **Sort**

Returning to the **Query** (macro) dialog box, the Query Editor allows you to specify by which columns the results should be ordered and whether the order should be ascending or descending.
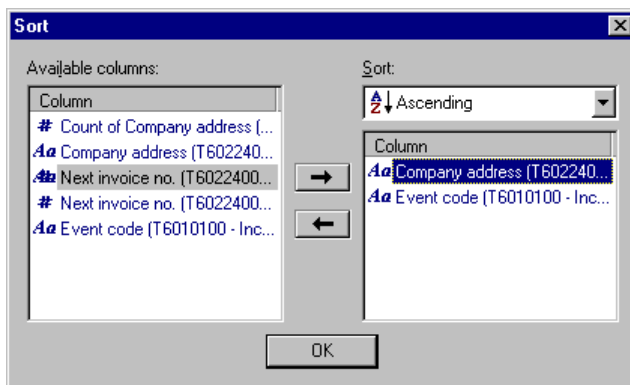
Fig. 9.22 Ordering dialog box

Column Integrity

It is important to remember that if the macro query comprises more than one simple query, the number of output fields in each of these queries, and the type of data in each column, must be the same.

If either of these requirements is not met, it will not be possible to specify the ordering, save the macro query, or exit from the dialog box.

Report Template

The first thing you see when opening a new document is a model page made up of five sections: Title, Page heading, Detail, Page footer and Final. Each of these sections corresponds to a location in the page at the time of printing.
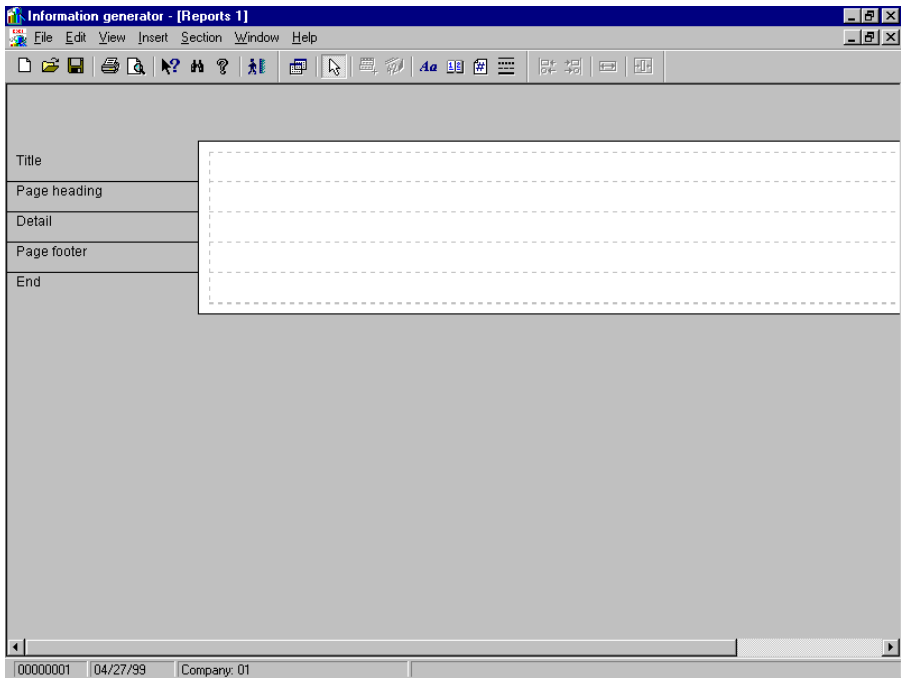
Fig. 9.23 Information Generator template

Title: This is printed only once, at the top of the first page.

Page heading: Printed on the top of every page, except the first, where it appears under the title.

Detail: Printed once for every record obtained by the query. Several detail sections can appear on the same page, ordered one after another.

Page footer: Printed at the bottom of every page.

Final: Printed on the last page of the report, once all the records have been printed.

Every section is made up of one or more lines that in turn contain the various components of the report, aligned horizontally in each.

There are six classes of components, divided into two groups:

Variable Components

These change their values according to the record that is being printed.

Field: Takes the value of the specified field in the record that is being printed at the time.

Summary: As the records follow on from one another, this accumulates the value of a specific field and shows the specified function at the moment it is printed. This can be: Maximum, Minimum, Counter, Individual counter, Summation or Average. This component can only be located in the sections that come below the Detail.

Static Components

These keep the same value throughout the printing of the entire report.

Text: Shows default text.

Print date: Shows the date when the report was printed.

Page number: Shows the number of the page being printed and, if required, the total number of pages.

Line: Draws a horizontal line across the page. This can be of various colors, thicknesses and styles.

The report components can also be ordered according to the type of information they show and different properties can be specified for them.

Groups	Properties	Components
Graphical components	Color, thickness, style, position.	Line
Text components (TC)	Font, type color, background color, edge color, border color, alignment.	Numbers, Dates, Texts and Page numbers.
Numbers	*Same as TC* + decimal places, format of negative numbers, decimal separator, thousands separator, currency format.	Numerical fields, Counter Functions, Individual counter and counters applied to numerical fields.
Dates	*Same as TC + agenda, month and year, format of each, separators.*	Date of printing, date fields and functions applied to date fields.
Texts	*Same as TC.*	Labels, text fields and functions applied to text fields.
Page numbers	*Same as TC + total number of pages, separators.*	Page numbers.

Component Locations

Once the components are placed in the template it is possible to change their length, position and even the section to which they belong. There are also tools enabling them to be lined up vertically, equalizing their length and centering them on the page. To line up or equalize the length of two or more components, you must select them and click on the corresponding button on the alignment bar, context menu or **Edit** menu. In all the cases the first component selected will be taken as the reference. It is also possible to activate the *Adjust size when printing* property in the Format dialog box. This allows you to print the data displayed for the component without the risk of losing information because of the size specified in the report template.

Display and Hide

At times there might be sections that you decide not to use, or only to use in certain cases. For these cases the Report generator allows you to hide (and redisplay) the specified sections by using the context menu or the **Section** menu. This feature can also be applied to components via the Format dialog box corresponding to the component in question.

Groupings

Another report feature is the possibility of grouping together records obtained from a query according to the values in a specific column. To do this you need to use the **Insert Group** option in the **Section** menu and specify the column by which to group together the data and the order in which the groups are to be printed. At this point two new sections will appear: *Group header* and *Group footer*.

This enables you to obtain partial summaries for each group by inserting Summary Function components in the *group's footer* section.
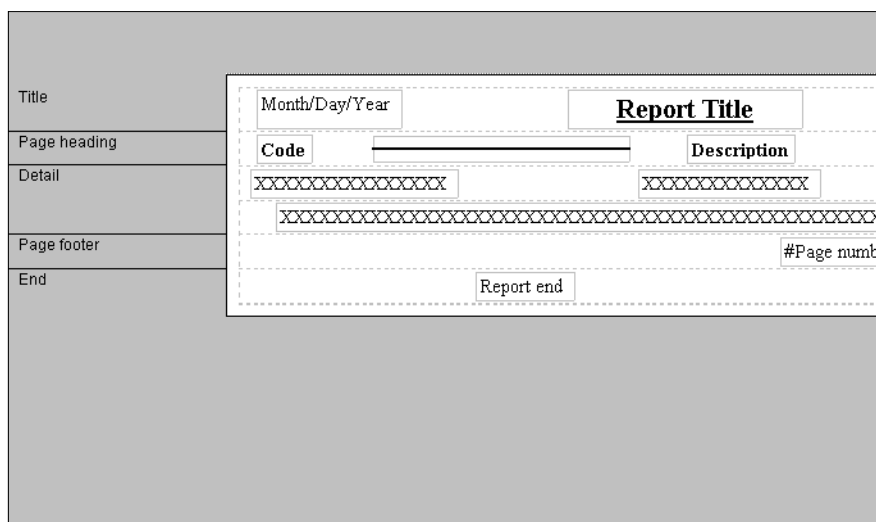
Fig. 9.24 Example of the results of a template design

Print

Printer Setup

This feature allows you to define the properties of the printer, page size and page orientation (portrait or landscape). Access it from the **File** menu, **Printer setup** option.

Set Margins

This option enables you to define the width of the margins to be allowed when printing. You can access this option from the **Setup margins** option in the **File** menu.

Print Preview

Once the design of the listing has been completed, the Report generator allows you to view the information obtained from the query, ordered, grouped together and with the configuration specified in the template. In the print preview, the report is shown the way it will be printed, with either one or two pages per screen. Three different zoom magnification ratios are given.

Printing

The printout is perhaps the final goal of the Report generator. The program cannot therefore be used unless a printer has been installed.

When printing, the sections will be placed in their corresponding positions on the page and all the components will take the value referenced in the template, depending on the record, page number or moment the report is printed.

You can print one, several or all the pages of the report, and as many copies as required.

Saving

Reports contain three types of entities which are stored and accessed separately:

1. The *report template*, with all its components and configurations.

2. The *Macro query*, referenced by reports or "Existance condition" or "Query membership" conditions.

3. The *Simple queries*, which contain the information about the selected fields, functions and all the conditions applied.

How to Save

When the report template is saved (either by clicking on the save icon or selecting the **Save** option in the **File** menu), the macro query and all its associated simple queries are also saved.

If the save button is clicked from the **Query** (macro) dialog box, only the macro query and its associated simple queries will be saved.

Retrieving and Deleting Reports

Complete reports can be opened from the **File** menu using the **Open** option or via the button on the toolbar along the top of the main window. You can also use this dialog box to delete unused reports from the database. However, deleting a report does not delete the macro query it references.

Retrieving and Deleting Queries

Macro queries and simple queries can each be loaded from their respective dialog boxes by clicking on the **Open** button. In the **Query** (macro) dialog box there is also the option to load a simple query so as to generate a macro query comprising just this one simple query.

Macro queries can also be opened from the dialog boxes corresponding to the *Exists* or *Belongs to query conditions*.

As with reports, the **Open** dialog box allows you to erase queries from the database. However, in this case the system will give a warning if you try to delete a query that is being used.
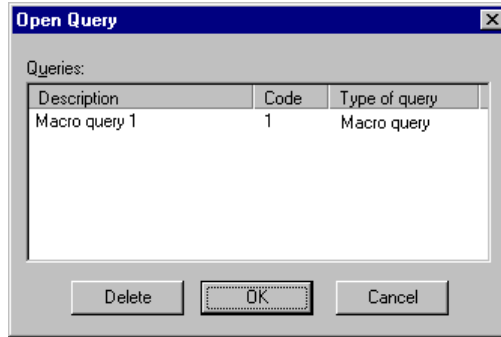
Fig. 9.25 Open query dialog box

Example

As an example, let us examine, step by step, the typical sequence of operations needed to prepare a report from the results of a simple query.

1. Having started the **Information Generator** process, select the **New** option from the **File** menu. A blank template for the report will appear.

2. Choose the **Query** option from the **Edit** menu. The **Query** (macro) dialog box will appear. From the dialog box you can either retrieve an existing macro by clicking on the "Open" button 🖻, or you can create a new one consisting of one or more simple queries by following the steps described below.

3. Click on the "New query" 🔳 button to bring up the **Simple query** dialog box. As in the earlier case, here you can either retrieve an existing query or create a new one by following the steps below.

4. Fill in the "Description" field and click on the "Tables" button 🔳 the **Table Manager** dialog box will be shown.

5. Select the tables needed for the query from the "Available tables" column by clicking on the arrow. As you select them they are added to the "Selected tables" column. The "OK" button takes you back to the **Simple query** dialog box.

6. To choose the fields you want to include in the query from the selected tables, first display the tables to see their columns and add the fields one by one to "Fields selected" by using the arrow.

7. Click on the Condition tab and then on the "New condition" button ▽. Here you can define the search conditions (which can be as complex as you want) by using the different types of operators. Let us take a simple case in which the only search condition is that two expressions are equal. To do this click on the "Relational" icon 🔡 to call up the **Relational condition** dialog box. Here, choose one of the possible values for the first expression and another for the second, double-clicking on the corresponding buttons and the operator that relates them (Exp1 = Exp2).

8. Click on "OK" in the **Relational condition** box to return to the **Simple condition** dialog box. Here, click on "OK" again to go back to the **Query** (macro) box.

9. It is a good idea to save the query constructed so far. To do so, simply click on the "Save" icon 💾. At this point the query will be given a code, which together with the description will serve to identify it.

10. Click on the "SQL" button to bring up the **SQL statement** dialog box.
    In addition to allowing you to check and modify the generated SQL statement, if necessary, this dialog box also enables you to run the query. The system will respond with the number of selected records.

11. Clicking on "Close" takes you back to the **Query** dialog box, where you can click on "OK" to go to the main Report generator window.

12. The next step is to design the template, by defining the title, the page header and footer, and the end of the report. With the "Text" button selected 𝘈𝘢 , move to the section of the template you want to edit and click it with the left mouse button to bring up the **Edit text** dialog box. This task can also be done at the beginning, before composing and running the query.

13. Once the template has been designed and the query has been prepared, the result needs to be included in the report.

    ● Click on the "Field" button 🖳 and drag it up to the template detail line. Clicking the left mouse button opens the **Insert field** dialog box, showing all the fields of the selected tables involved in the query. Place it at the appropriate point on the detail line and a series of "X" will appear whose length matches that of the field.

- Repeat the previous step for all the fields that you want to include in the report.

- If not all the information will fit within the width of the detail line, it can be broken into more than one line. To spread it over more than one line in this way, place the cursor on the "Detail" sign on the template and click the right mouse button to bring down a menu offering the "Add line" option.

14. When the template is saved, whether by clicking on the "Save" icon or using the **Save** option in the **File** menu, the macro query is also saved, along with all the simple queries of which it is made up.

10

Administrative-Financial Management

- The Administrative-Financial Information in Sales Management
- Configuration of Basic Sales Parameters
- Sales Queries
- Executive Sales Information
- Cash Differences
- Cash Withdrawals
- Cashbox Settlement in Office

This chapter describes the Administrative-Financial Management module included in the standard SF-GV package. In a commercial environment, Administrative-Financial Management is a business discipline that addresses aspects such as:

- *Generation and processing of data* originating in the SF-GV system, which is used for executive decision-making purposes. This includes consolidated sales graphics, the preparation of estimated sales budgets, sales reports, etc. The control of history files is also included here.

- *Follow-up and regularization of cash differences* which occur at physical and dummy terminals, based on various criteria.

- *Control of cash withdrawals* which usually take place at the end of the day at the terminals, particularly when a specified amount is exceeded.

- *Cashbox settlement in office*, for managing and controlling the receipts resulting from sales made by a floating cashier, and for settling from a client station the money existing in its drawer and establishing its bookkeeping periods.

The Administrative-Financial Information in Sales Management

In Sales Management, the administrative-financial information is controlled basically through five groups of programs:

1. **Sales reports** - This includes the processes that enable item sales reports to be generated in real time. These reports can be detailed by operator, sector, department, etc.

2. **Cashbox settlement in office** - This groups together the processes that enable floating cashiers to be controlled.

3. **Executive sales information** - This consists of the processes used for setting the budgets by department and querying the sales data and graphics by department, center, hour, etc.

4. **Cash differences** - This includes the processes used for querying and regularizing cash discrepancies.

5. **Cash withdrawals** - This contains the processes used for managing the cash withdrawals that take place daily at the cashdesks.

Configuration of Basic Sales Parameters

The basic sales parameters are a set of initial values that must be configured before result tables and graphics can be prepared for aspects such as sales forecasts or sales recorded by intervals.

Four basic sales parameters exist:

- *Time intervals* determine the length of the time intervals (which are not always hours).
- *Time frequencies*, such as days, months or years -all of them predefined- or any other frequency that may be added by the user.
- *Storage periods*.
- *Sale periods*.

The configuration of the basic sales parameters is performed from the corresponding processes in the Basic module, but affects the processes used in the Administrative-Financial Management module.

Time Intervals

Time intervals are used for preparing and calculating sales data and graphics.

To configure the time intervals:

1. From the **Sales Interval** group in the Basic module, launch the **Time Intervals** process.

   The main window of **Time Interval Maintenance** will appear, showing the day divided into hours and the length of each interval. The intervals can be configured with longer or shorter periods to provide more or less detail.

Fig. 10.1 Main window of the Time Intervals process

2. Open any interval by double-clicking on it. For instance, to configure 20-minute intervals, double-click on the interval from 12 to 13 hours.

3. Enter 20 (or the value of the new interval) in the dialog box.

The intervals will be rearranged according to the new partition.

Time Frequencies

Time frequencies are periods in the year that group together a specific user-defined multiple of days. They appear, basically, in presentation graphics containing sales-related data. By default, the three most common time frequencies are days, months and years.

Sales Management enables new frequencies to be registered, the only condition being that the defined periods must not overlap and need to cover the entire year, from January 1 to December 31.

Moreover, existing frequencies can be deleted as long as they are not linked to history or accrual files whose global storage period is based on the frequency being deleted (to do so, an identical storage period can be created again for the file based on a different frequency).

We will now add a new frequency, for instance, a four-month period, which will divide the year into three periods.

To add a new time frequency:

1. From the **Processes and Files** group in the Basic module, launch the **Frequencies** process.
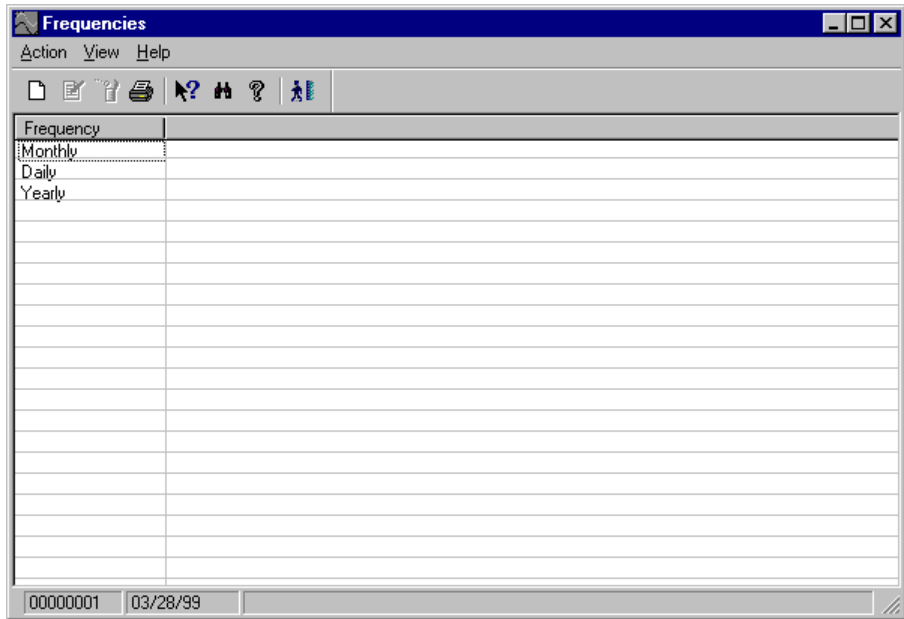
Fig. 10.2 Frequency configuration process

2. Select the **New** option in the **Action** menu. The new frequency registration dialog box will appear.
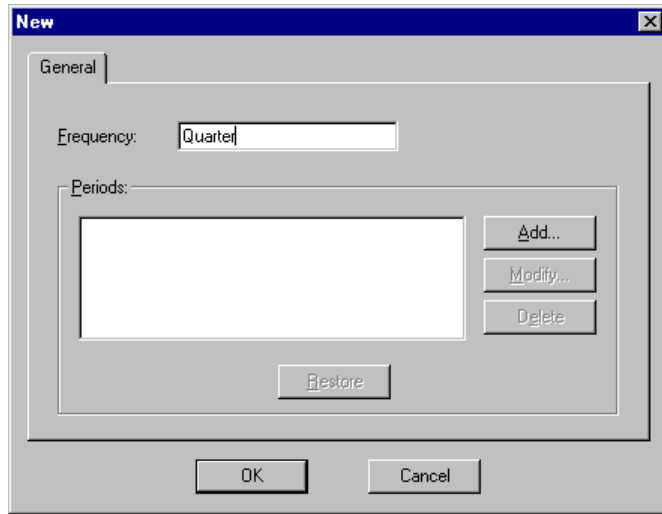
Fig. 10.3 New frequency registration dialog box

3. Enter the name of the new frequency in the "Frequency" box, in our case FOUR-MONTH, and then click on "Add" to define the new frequency or period.

    The **New period** dialog box will appear.
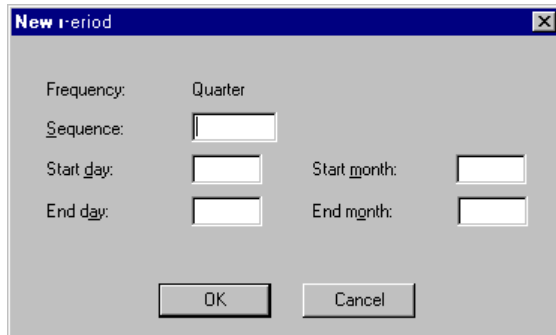
Fig. 10.4 Periods that the frequency is divided into

4. Fill in the box with the following values:

Sequence	**01**
Start day	**1**
Start month	**01** (January)

End day   **30**

End month   **4** (April)

and click on "OK". The box will reset its fields to enable the 2nd and 3rd four-month periods to be added. In the following steps, fill in the box with the values shown below:

Sequence	**02**	**03**
Start day	**1**	**1**
Start month	**05** (May)	**09** (September)
End day	**31**	**31**
End month	**8** (August)	**12** (December)

The year will be completed after entering the third four-month period. If illogical, invalid dates are entered or days are missing, Sales Management will display a message.

5. Click on "Cancel" to close the day and month definition box and then click on "OK" to save the new frequency, which will now appear in the main window.

Storage Periods

The data processed by SF-GV is stored in files. Every so often, this data is saved to special files called history files, where all the operations of a certain type are stored in sequence. History files are essential to detect errors or failures in the operation of SF-GV, or simply to query specific results.

One of the most common operations in Administrative-Financial Management is to take information from some source data files in SF-GV and, based on that information, generate and save new information to target files.

This (internal) operation involves three aspects which must be configured:

● Select the source and target files for the data

● Define the frequency (or period) for storing the data

● Define how long the data will be stored

One example of this operation would be the accruals of any type of sales, such as cash differences or similar. Thus, to calculate the accrued cash discrepancies it will be necessary to read every day the cash difference history file, add the result, and save it to the cash difference accruals history file. Moreover, to prevent the accruals file from growing excessively, it will be necessary to define how long this information will be kept on file. These aspects are controlled from the **Storage Periods** process included in the **Processes and Files** folder of the Basic module.

To define the storage periods for a type of information:

1. From the **Processes and Files** group in the Basic module, open the **Storage Periods** process.

Source	Source file description	Frequency	Hist. file	History file description	Periods
T6050400	Operations by Term./Salespe...	Daily	T6110200	Oper. hist. term./salespers.	732
T6050400	Operations by Term./Salespe...	Yearly	T6110200	Oper. hist. term./salespers.	2
T6050400	Operations by Term./Salespe...	Monthly	T6110200	Oper. hist. term./salespers.	24
T6050500	Operations by terminals	Daily	T6110300	Oper. Hist. by terminals	732
T6050500	Operations by terminals	Yearly	T6110300	Oper. Hist. by terminals	2
T6050500	Operations by terminals	Monthly	T6110300	Oper. Hist. by terminals	24
T6050700	Accum. cash diff.	Daily	T6110500	Cash differences hist.	732
T6050700	Accum. cash diff.	Yearly	T6110500	Cash differences hist.	2
T6050700	Accum. cash diff.	Monthly	T6110500	Cash differences hist.	24
T6050800	Accum. sales by dept.	Daily	T6110600	Sales Hist. by Department	732
T6050800	Accum. sales by dept.	Yearly	T6110600	Sales Hist. by Department	2
T6050800	Accum. sales by dept.	Monthly	T6110600	Sales Hist. by Department	24
T6051300	Accum. diff. cashiers	Daily	T6110800	Cashier differences hist.	732
T6051300	Accum. diff. cashiers	Yearly	T6110800	Cashier differences hist.	2
T6051300	Accum. diff. cashiers	Monthly	T6110800	Cashier differences hist.	24
T6051600	Accum. sales by packaging	Daily	T6110900	Packaging movement hist.	732
T6051600	Accum. sales by packaging	Yearly	T6110900	Packaging movement hist.	2
T6051600	Accum. sales by packaging	Monthly	T6110900	Packaging movement hist.	24
T6051700	Accum. sales references	Daily	T6111000	References sales hist.	732
T6051700	Accum. sales references	Yearly	T6111000	References sales hist.	2

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Fig. 10.5 Main window of the Storage periods process

2. Access the procedure for registering new items.

    The storage period configuration dialog box will appear.
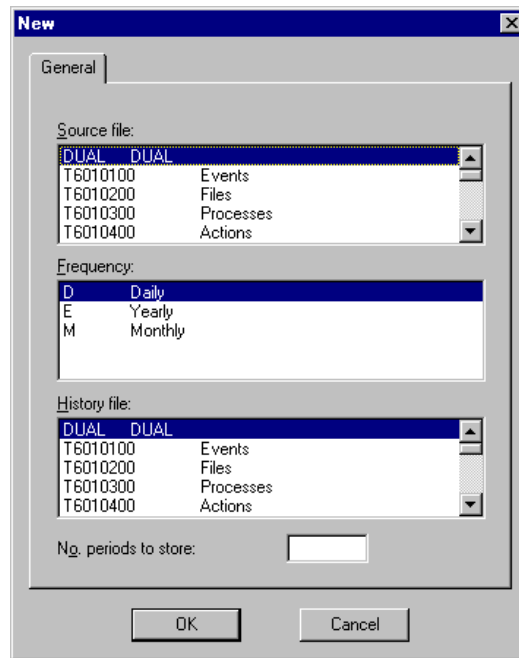
Fig. 10.6 Dialog box for defining the storage operation

3. Select the data source in "Source file", the destination for the processed data in "History file", and the storage period in "Frequency" (this last box will only display the default frequencies and those that have been defined by the user in the previous section, "Time frequencies", by means of the **Frequencies** process).

If a source file and a target file that are incompatible internally are chosen inadvertently, they will be rejected by SF-GV (arbitrary associations are not permitted).

4. In "No. periods to store", enter an integer (maximum 3 digits). This is the only parameter in this dialog box over which the user has actual control. The storage frequency, combined with the number of periods chosen, will determine the total storage time for the information. Thus, a Monthly (M) frequency with 24 storage periods will keep the selected information for two years.

5. Click on "OK".

Repeat this process for all the required history files until you complete the list of existing target files.

Sale Segments

Sale periods are quantitative intervals used for presenting graphical and numerical data from other SF-GV processes, such as the distribution of accrued sales or sales by department.

To configure the existing periods:

1. From the **Sales Interval** group, launch the **Sales Segments** process.
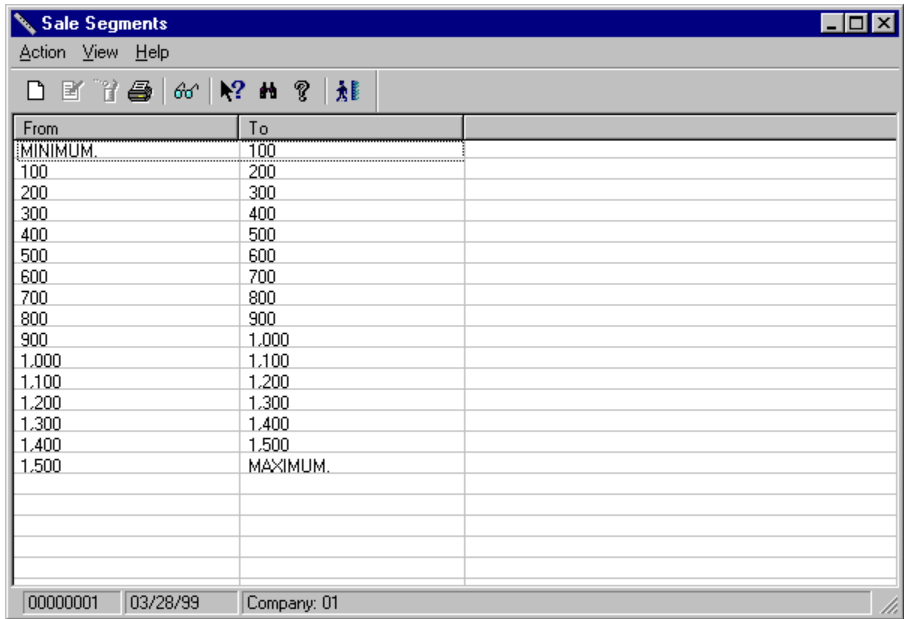
Fig. 10.7 Main window of the period configuration process

2. To configure the sale segments, choose the **New** option in the **Action** menu. The following window will be displayed:
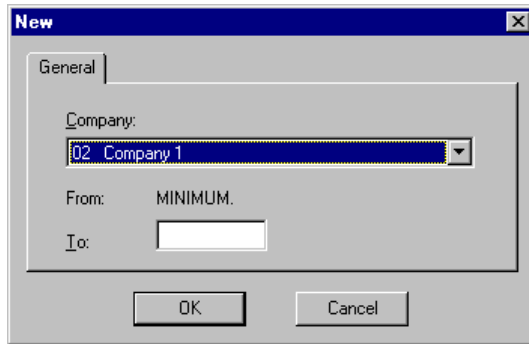
Fig. 10.8 Sale period registration dialog box

3. To create a sale segment table, in the "To" box you must enter any value as the high limit for the first sale segment and click on "OK" to validate the value.

4. Next, you must configure the next sale segment, whose low limit will be the high limit of the previous period, and so forth, until you have configured the sale segment table that will be used to generate, for instance, accrued sales reports or sales presentations by department.

Sales Queries

Available Types of Reports

A detailed study of sales made is surely one of the most reliable analysis methods available to a company. In SF-GV, this function is included in the **Sales Reports** group located in the Financial-Administrative module. This group provides access to the following types of reports:

- Item reports
- Department reports
- Company reports
- Operator reports
- Special offer and promotion reports

Item Reports

The main function of this and the other processes in the group is to generate printed sales listings in order to enable their subsequent querying and analysis.

To query history sales for a group of items (the most common case):

1. From the **Sales Report** group, select the **Item Reports** process.

Fig. 10.9 Main window of the item sales querying process

2. Open the **Report** menu, select **Sales by item log**, and then choose **New** in the option's drop-down menu.

The historical sales selection box will be displayed.
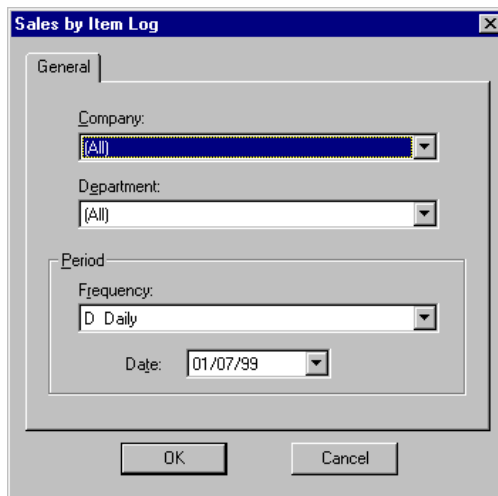
Fig. 10.10 Box for selecting the historical sales querying period

3. Fill in the above box as follows:

- "Company": Select the company whose items will be used to create the report.

- "Department": Select the specific department.

- "Family": Select the family.

- "Period" box: Select one of the periods that the year has been divided into (these are the periods defined in the **Frequencies** process described earlier; for instance, you can choose a four-month period). In the day, month and year fields, enter any date included in the period for which the report is to be generated.

4. Click on "OK".

The generated report will be displayed in the main window of the process. It will normally include multiple items, unless the **Sales by item** option is chosen. Since selection of the information to be queried is not an immediate procedure, the process offers the possibility of directly accessing the last five sales reports generated.

The available sales reports include:

- On-line sales of an item : This offers an item's on-line sales.

- Historical sales of an item: This offers an item's sales for a specified period of time (described earlier).

- Analysis of groupings: This enables sales reports to be obtained for the items in a grouping, sorted by amounts or by items. Grouping creation is described in the ➤ "Item Maintenance" chapter.

Department Reports

The querying process is identical to the one described for sales by item, but in this case the available reports include:

- Sales by period and department
- Sales by department
- Sales by sector
- Monthly department comparison

Company Reports

The following reports are available from this process:

- Company sales
- Sales by time interval and company
- Daily tickets by intervals and terminals
- Daily tickets by interval and terminal (total)

Operator Reports

Two types of reports can be queried from this process:

- On-line statistics
- Historical statistics

Special Offer and Promotion Reports

The following types of reports can be queried:

- Special offer sales query (items)
- Special offer sales query (departments)
- Promotion sales query (items)
- Promotion sales query (departments)
- Promotion sales query (environments)

Because of the importance of the sales reports, examples of each of these 17 reports have been extracted to the manual "Sales Reports and Server Reports", together with an explanation of each of them.

Executive Sales Information

The figure below shows a flowchart describing the use of the Sales Executive Information processes.
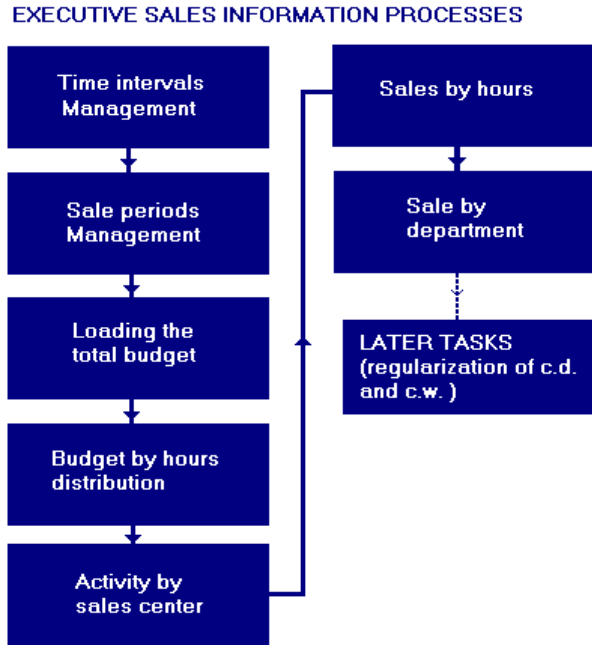
Fig. 10.11 Flowchart describing the use of executive sales information processes

Executive sales information is very useful for decision-making purposes and is displayed in graphical format in all the processes. The aim, in short, is to obtain information in graphical format by following the process described below.

Loading the Total Budget

Before sales forecasts or budgets can be proposed, it is necessary to know the total budget to be established, which will be used by the rest of the processes in the group. The usual procedure for obtaining this information is to find out the total budget and then distribute it by department, or vice versa. Once the total budget and its distribution are known, they may be included in SF-GV.

The preliminary budget loading procedure is as follows:

1. From the **Sales Executive Information** group, launch the **Budget Assignment** process.
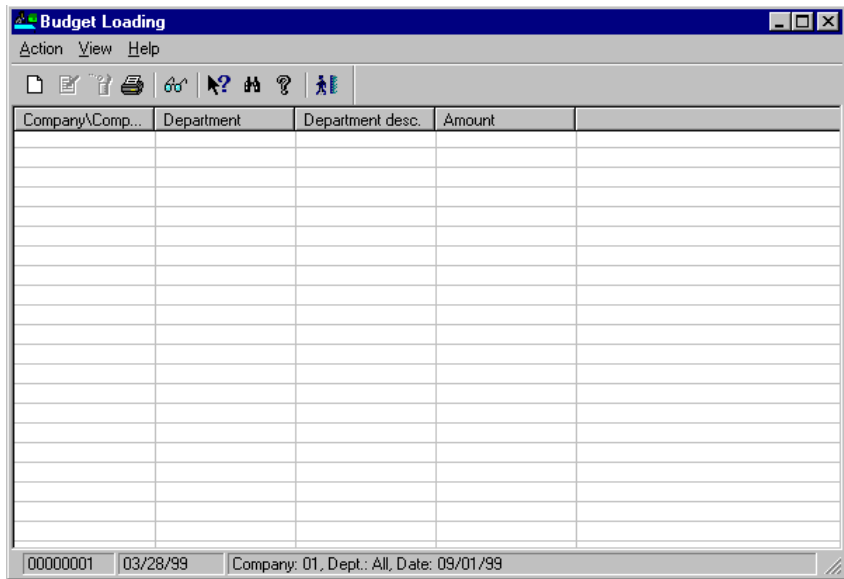
Fig. 10.12 Daily budget initialization process window

2. Access the new budget registration screen.

   The new budget registration box will be displayed.
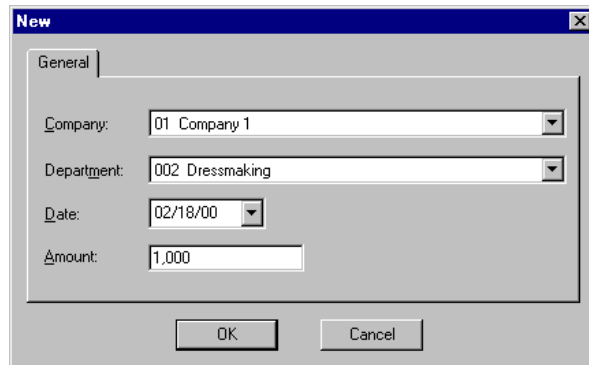
Fig. 10.13 Preliminary budget registration by department box

3. In this box, select the company, the department, and the budget date, and enter the daily amount for the department you have chosen.

4. Click on "OK".

Repeat the procedure for each department in the company. The total budget, which must be loaded so that it can be displayed later by means of the **Budget by Hours** process, will be equal to the sum of all the budgets that have been entered.

Budget by Hours

One of the key tasks of a company's top management is to forecast estimated sales budgets for the sales department and study their statistical distribution over time in order to identify the purchasing habits of the store's customers.

These tasks can be carried out by means of the **Budget by Hours** process included in the **Sales Executive Information** group. Although the default configuration used is by hours, the process can also work with *other time intervals* defined in the **Time Intervals** process described earlier in the ➤ "Configuration of basic sales parameters" section.

SF-GV lets you choose how to present the sales budgets and offers three options for displaying a budget:

- By the store's companies
- By the departments in a given company
- By time intervals during normal business hours

The sections below describe the usual procedures for using this process, which assume that the user is already viewing the main window of the **Budget by Hours** process.
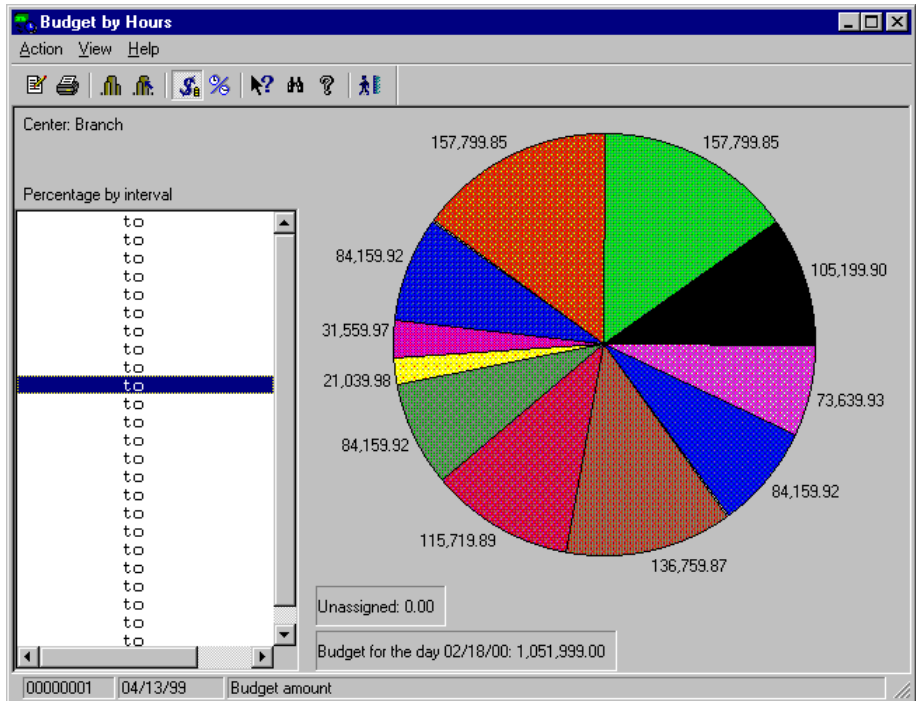
Fig. 10.14 Main window of the Budget by Hours process

The main window displays a sector graphic with the sales distribution by hours for the current date.

Modifying the Distribution of the Estimated Budget

To modify the sales estimate by time intervals, follow the procedure described below from the main window:

1. Select a time interval (by default, one-hour intervals) and double-click on the chosen interval to open the **Modify** box.

   The percentage estimate box will be displayed.
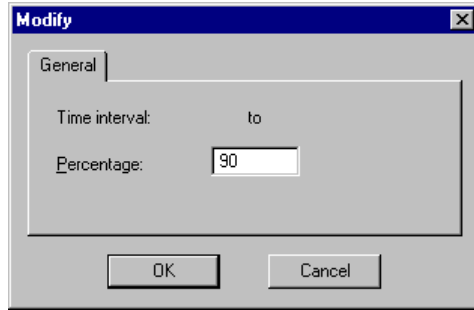
Fig. 10.15 Box used for entering the estimated percentage for an interval

2. Enter the estimated percentage of total sales for the interval.

3. Click on "OK" to validate the value.

The sector graphic will be updated in real time to reflect the new distribution. Repeat this procedure for all the time intervals included in the store's business hours.

SF-GV does not verify whether the sum of all the percentages equals 100. The user must check the partial percentages entered.

Selecting the Query Criterion

To change the query criterion, open the **View** menu in the **Budget by Hours** process and select:

● The **Budget amount** to display the amount corresponding to each interval based on the total amount sold by the department (without indicating the interval)

● The **Time interval** option to know the interval's start time (without indicating the total amount)

The main window shows a graphic divided into sectors, with the data updated according to the new criterion.

To look up the same data, but for a specific department in the company:

1. Open the **View** menu and select **Department**.

The **Select department** dialog box will appear, showing a list of the existing companies and departments.

Fig. 10.16 Company and department selection box

2. Select the company and the department you want and click on "OK".

Remember that the graphic divided into sectors will not appear in the window if daily budget data has not been defined for that specific department.

For all the criteria described, the "Unassigned" literal in the main window indicates the remaining amount in monetary units for the department's total which has not yet been allocated to any of the time intervals still pending.

The "Budget for the day DD/MM/YY: XX.XXX" literal indicates the total amount in monetary units that is expected to be sold today.

Sales by Center

This process enables the user to query the sales and the estimated budget for each of the centers in the group and, as is the case with the rest of the querying processes, display the data under various criteria. These criteria are as follows:

- Amount divided by hours

- Total sales accrual

To display the activity graph, launch the **Center Sale** process from the **Sales Executive Information** group.
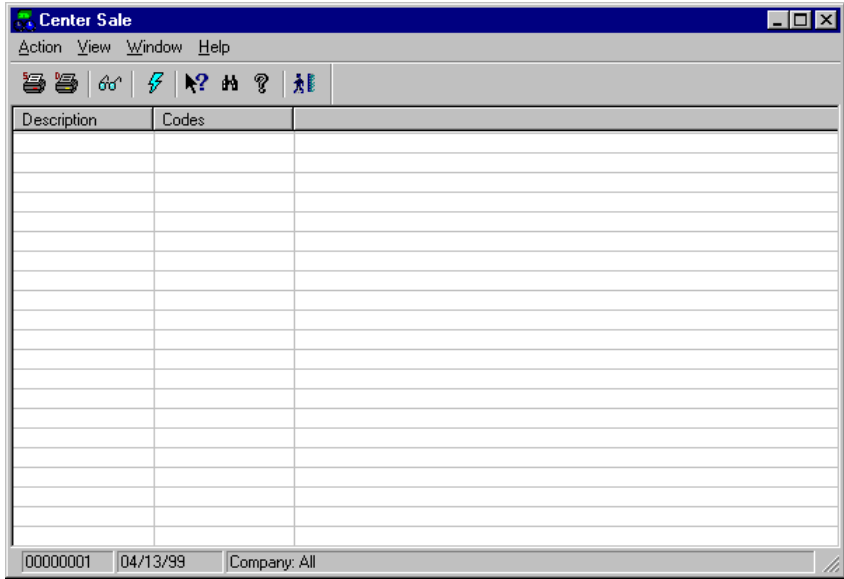
Fig. 10.17 Main window of the Center Sale process

This process and the two processes described below provide real-time information displayed in different colors .

Sales by Time Interval

The **Sales by Time Interval** process displays graphics with total sales for a center or a company in the group.

To display the activity graph, launch the **Sales by Time Interval** process from the **Sales Executive Information** group.
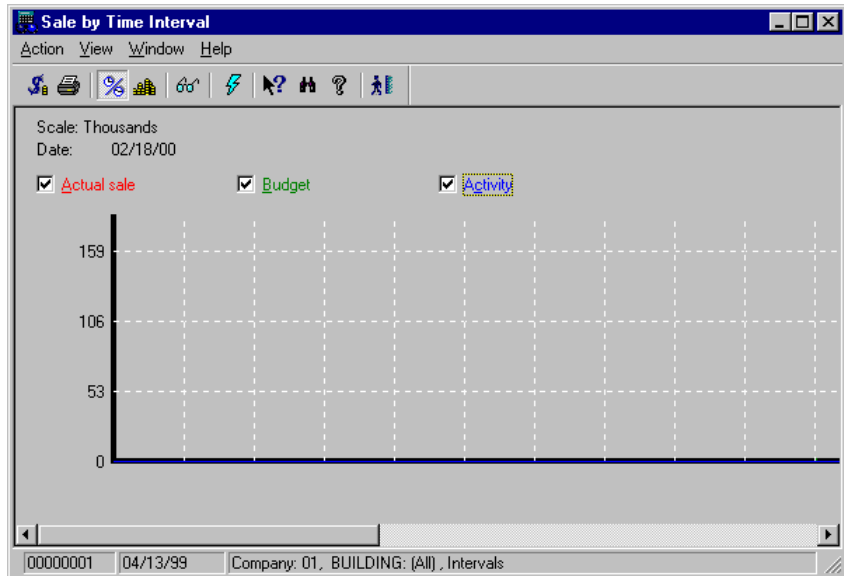
Fig. 10.18 Main window of the "Sale by time interval" process

The graph displays the total sales, the estimated budget and the activity hours
in red, green and blue, respectively.

Sale by Department

The **Sale by Department** process displays a bar graph indicating the sales by
hour for a given department.

To look up the sales by department, launch the **Sales by Department** process from
the **Sales Executive Information** group. The main window of this process shows
the department's sales in a bar graph, identified by different colors. To select a
different department, open the **View** menu and choose **Department sales and
budget**. In the box displayed, change the active department and company.
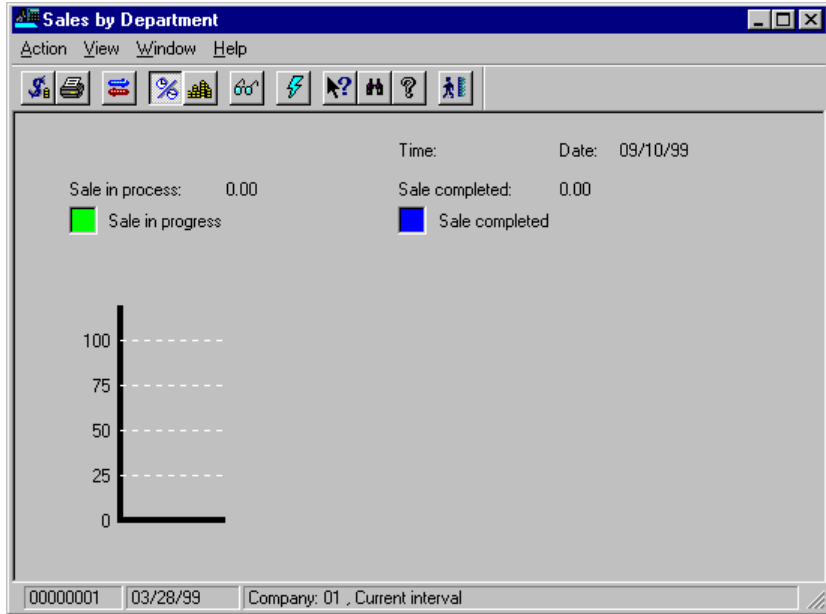
Fig. 10.19 Main window of the Sale by department process

You can vary the look-up criteria by following the same procedure described for the above processes.

Cash Differences

A cash difference (hereafter c.d.) is a discrepancy between the amount of money which theoretically should have been deposited at a point of sale terminal for the total number of items sold, and the actual amount invoiced. It is obtained through manual counts upon closing the cash desk and performing the corresponding cashbox settlement operation; it can be positive or negative, i.e., with more or less money than the expected sum; and it can be detailed by cashbox groups. The actual value of a c.d. can vary significantly from one terminal and department to another, as it depends on parameters such as the average amount by transaction and the total number of daily transactions. Cash differences of around 0.3 to 1 per thousand are considered normal.

The c.d. that usually occur in a store's POS terminals can be due to different reasons:

- Payments of small amounts that the customer (or the operator) disregards or fails to pay.
- Errors on the part of the terminal's operator.
- Petty theft or irregular behavior of the terminal's operator(s).

The purpose of the processes included in the **Cash differences** group is to:

- *Look up the cash differences* that occur, using the terminal or terminal operator criterion.
- *Regularize these terminal differences* (i.e., enter them into the system to validate them).
- *Display reports* on differences by terminal in order to analyze the system and its operators.

The processes associated with these tasks are described below.

Queries by Terminal

The **Queries by Terminal** process is used for querying the terminals that present discrepancies and details of these differences, such as the date, the amount of the difference, interventions that have taken place at a terminal, etc.
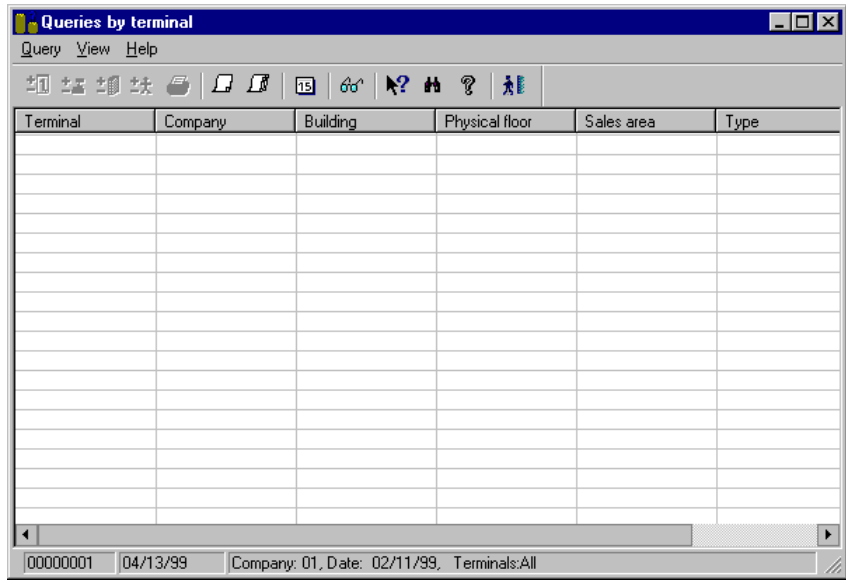
Fig. 10.20 Main window of the terminal difference querying process

The window displays columns with the terminal ID, the company it belongs to, and the levels where it is located.

The following operations can be performed from this process:

- Look up the c.d. for all the terminals in the company for a specific date (**[Query][Total for day]**). The query date can be changed by selecting **[View][Another date]**.

- Look up the c.d. for the selected terminal and the current date (**[Query][Terminal differences]**).

- Display a box with the c.d. for a terminal, by days or months (**[Query][Terminal difference summary]**).

- Look up the salespeople who have used the selected terminal (**[Query][Salespeople by terminal]**).

● Look up the interventions that have occurred at the selected terminal
(**[Query][Interventions by terminal]** and **[Query][Interventions by day]**).

For all of these procedures, the **View** menu includes:

● A number of options (exclusive 2-to-2) than can be enabled or disabled and
allow the format and the data displayed in the main window to be modified
(**Day, Month, All terminals, Only with difference, Differences by cashbox,
Net differences** options).

● The **Another date** and **Include** options, that can be used for changing the
querying date for the c.d. and choosing another company in the group for
looking up the c.d.

Queries by Cashier

The **Queries by Cashier** process is used for looking up the c.d. reported for the
cashiers that use a terminal. This information will be available only for those
terminals that operate in cashier mode (not in salesperson mode).

By default, this window will display a listing with information about the cashiers
that have cash differences, broken down by cashbox group.
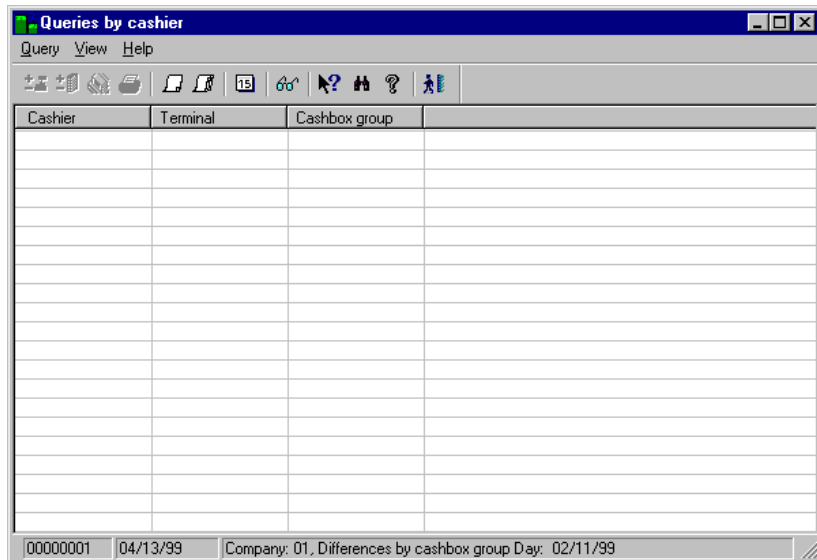
Fig. 10.21 Main window of the c.d. by cashier querying process

The **View** menu includes a number of options that enable the user to control the format and the data displayed in the program window. For more information, see this menu in the previous section.

Regularization of Differences

Upon closing the cash desk and performing the corresponding cashbox settlement operation, it is necessary to:

● Accept the c.d. and validate them in the system

● Add to the system those c.d. that have not been included automatically

Both tasks can be carried out from the **Regularization of Cash Differences** process. These tasks are described below.

To regularize a c.d. for a terminal operating in salesperson mode:

1. Launch the **Differences Regularization** process from the **Cash Differences** group.
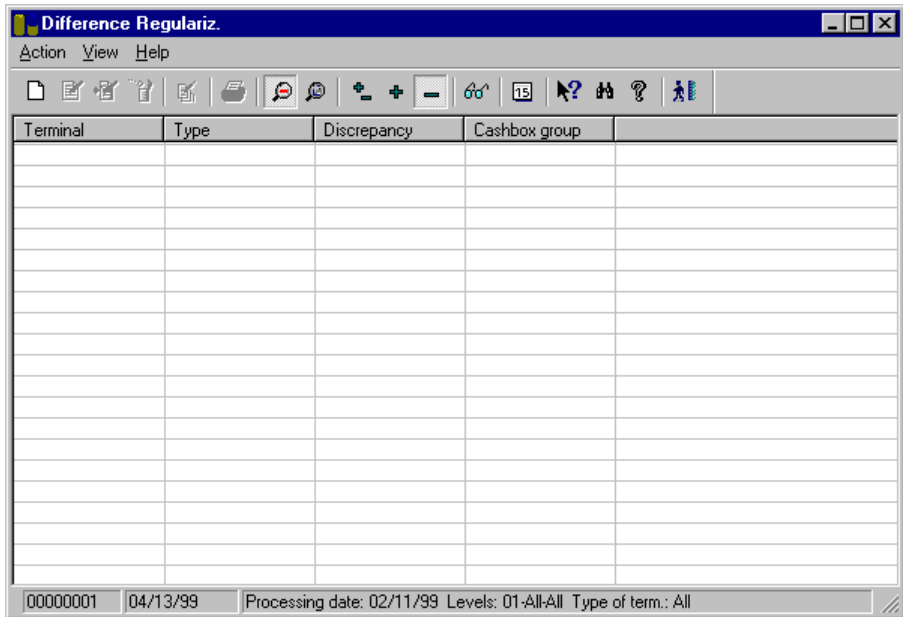
Fig. 10.22 Main window of the c.d. regularization process

2. Open the **Action** menu and select **New**.

The difference registration box will appear for the current date.

Fig. 10.23 Box used for registering new differences

3. Fill in the registration box as follows:

    - "Terminal": Enter the numerical ID of the terminal in question.
    - "Difference": Enter the difference recorded at the specified terminal.
    - "Cashbox group": On this list you select the cashbox group where the difference has been entered.

4. Click on "OK".

If the terminal is operating in cashier mode, the procedure will be identical to the one described above; simply click on the "Regularize cashiers" button in step 3. In this case, a dialog box will appear where you can freely distribute the reported c.d. among the cashiers that have been using the terminal.

In the two previous procedures it is necessary to know the identified c.d. divided by cashbox groups. If you do not want to detail the c.d. by groups, you can use the **General regularization** option in the **Action** menu.
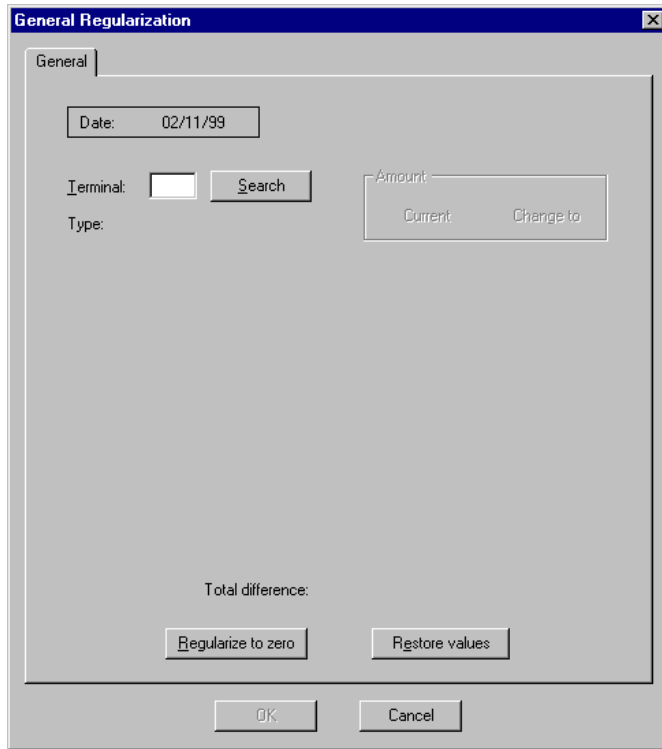
Fig. 10.24 General c.d. regularization box

The box shows the literals and the fields related to the different cashbox groups that exist for that terminal. Enter the values you want for each group. Click on "Regularize to zero" to reset the values of the cash differences for all the cashbox groups, and validate the action by clicking on "OK". The active differences in each field will be consolidated in the system.

If you inadvertently enter other values, click on "Restore values" to retrieve the values read initially.

The **View** menu enables the user to control the format of the data displayed in this process.

Cash Difference Reports

In SF-GV, c.d. are calculated and stored so that they can be analyzed in detail, in order to detect errors or irregularities in the system operation. This utility is accessed from the **Reports** process in the **Cash Differences** folder.
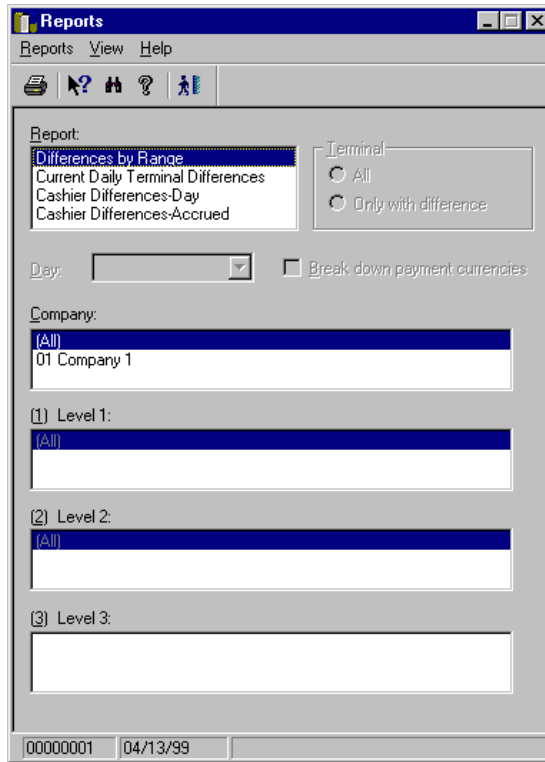
Fig. 10.25 Main window of the c.d. report generation process

Four types of reports can be generated and printed from this process:

- Differences by Range: The c.d. are displayed by ranges of terminals (by their IDs).

- Current Daily Terminal Differences: Daily accrued differences.

- Cashier Differences-Day: Differences broken down by cashier for the current date.

- Cashier Differences-Accrued: Differences accrued up to the current date by cashier.

In all of these reports you can choose the company level for which these items are detailed. In the main window, select the type of report you want in the "Report" field and select the company and level in the corresponding fields. Then, open the **Reports** menu and select **List**.

Cash Withdrawals

A cash withdrawal is an operation whereby the amount available at the POS terminal is taken to a central cashier's department or similar in order to prevent the accumulation of large amounts of cash in the terminal. Usually, withdrawals are effected regularly and based on a maximum amount established by the system administrator. The following variables are present in any withdrawal operation:

- Amount of money existing in the terminal
- Maximum length of time that the cash can remain in the terminal
- Sending of the amount withdrawn in an envelope (to the central cashier's department or similar)
- Confirmation of the receipt of the amount withdrawn

This process can be simplified in many companies. We must point out that of all the aforementioned variables, the actual amount withdrawn from the terminal is not determined by SF-GV, which does however control the rest of the variables.

In SF-GV, withdrawal management is carried out from the **Cash withdrawals** group, which includes the following processes:

- **Withdrawal Control:** Enables all the operations related to fund withdrawals to be managed, such as setting the maximum amounts, maximum length of time that the terminal can exceed the limit, etc.

- **Reports:** Enables the user to obtain withdrawal reports detailing the withdrawals by terminal and the cashbox settlement status of the terminals.

Both processes are described below.

Withdrawal Control

This process includes the management tools required for controlling cash withdrawals.
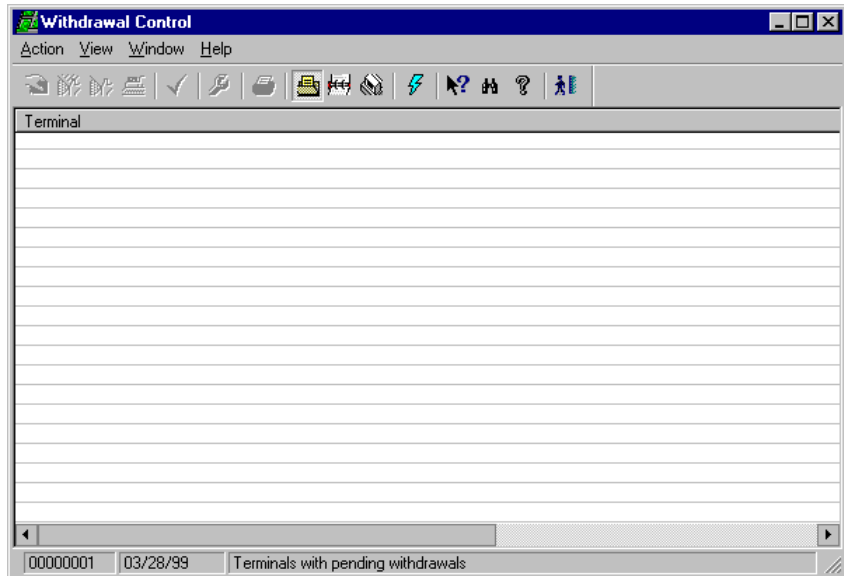
Fig. 10.26 Main window of the withdrawal control process

The **Withdrawal Control** process includes the following tasks:

- Configuring the cash limit for a terminal or the maximum length of time that can elapse between a cash withdrawal and its subsequent receipt.

- Real-time control of partial withdrawals in a POST, or total withdrawals for the entire system.

- Knowing whether the withdrawal has reached its destination.

You can configure the amount and the maximum length of time that the amount can remain in the terminal by using **[Action][Configure]** and filling in the associated dialog box.

To control what appears in the display area of main window of this process, open the **View** menu and choose one of the following options:

- **Terminals with pending withdrawals:** Shows a list of terminals that have performed a withdrawal, the receipt of which has not yet been confirmed by the central cashier's department or destination.

- **Terminals with excess cash:** Shows a list of terminals that have exceeded the established limit.

● **Terminal status:** Displays the **Terminal status** dialog box, where you can choose a specific terminal (by entering its ID) or choose one on the list of levels.

To determine in real time the status of a terminal as regards withdrawals, open the **Action** menu and select **Withdrawals control**.

To find out the total withdrawals made at all the terminals in the company, select **Look up total withdrawals** to display the withdrawals for all the terminals, broken down by means of payment.

The **Look up withdrawals** option allows the user to determine the withdrawals for a terminal and confirm whether they have been received at the destination.

Look up terminal shows information on the ID and location of a terminal.

The **Confirm withdrawals** option displays a dialog box where a confirmation can be sent to the central cashier's department informing of the arrival of the envelope with the amount of the withdrawal.

Reports

The **Reports** process is used for generating reports on cash withdrawals and terminal cashbox settlements. Depending on the type of report you select, the process will transmit a number of parameters to the server, which will generate the report and send it to the corresponding printer. In particular, information is printed regarding two aspects:

● The withdrawals made by terminal (groups or levels of terminals can be selected).

● The cashbox settlement status of the terminals. In this case, cashbox settlement means not only the distribution of the means of payment existing in the terminal, but also any possible receipts, provisions, payments, etc., made.

To generate a list of withdrawals:

1. Launch the **Reports** process form the **Cash Withdrawals** group.
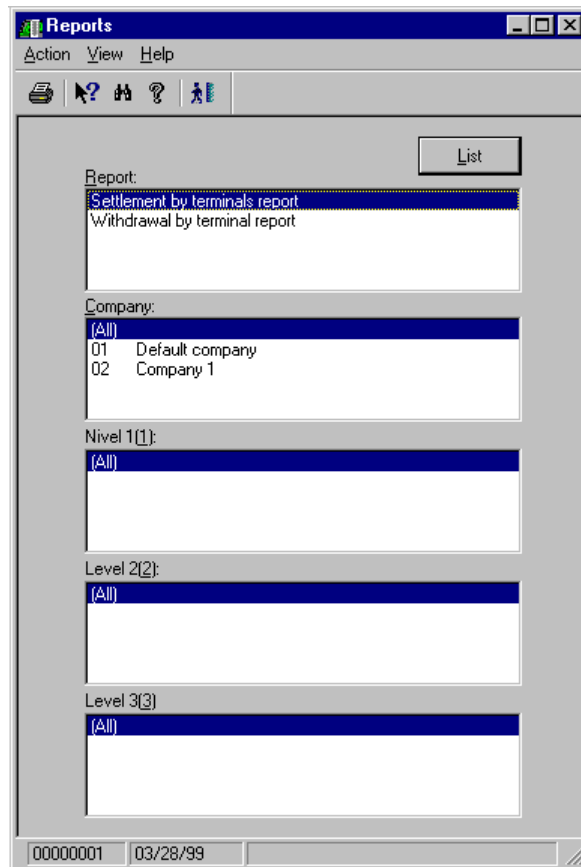
Fig. 10.27 Main window of the process for generating cashbox
settlement and withdrawal reports

2. Select the following data in the main window:

- "Report": The type of report to be listed, either "Withdrawals by terminal" or "Terminal settlement status".

- "Company": The company for which the listing will be generated.

- "Level i (i)": The various levels for which the total result will be displayed, i.e., those defined in the system configuration.

3. Click on "List" to print the chosen report.

Cashbox Settlement in Office

This group of programs has been created in order to integrate the bookkeeping processes for a type of cashier (floating cashier) into the office, so that a number of operations which were typical of the point-of-sale terminal can be executed from a client station, i.e., cash settlements, provisions, withdrawals and movement regularizations can now be performed from a client station.

StoreFlow Sales Management basically supports two types of cashier:

- **Fixed cashier:** The cashier's drawer is directly associated with the point-of-sale terminal and is managed from the POS terminal itself.

- **Floating cashier:** The removable drawer is the responsibility of the operator who handles it. The cashbox settlement in office process has been designed precisely for this type of cashier. This offers two cashbox settlement possibilities, which are configured at company level:

  - Mandatory settlement on logging off: When logging off, the cashier must necessarily cash up, with the possibility of leaving some funds as a remainder for the next operator.

  - Non-mandatory settlement on logging off: The cashier may or may not cash up on logging off.

Daily Operations

Two types of users are supported as regards management of a floating cashier's bookkeeping:

- The cashiers operating the point-of-sale terminals, who are directly responsible for their drawers and can operate with them at any time from the opening to the closing of the store by performing sales, refunds, provisions, withdrawals, etc.

- The office personnel responsible for managing the cashiers' bookkeeping. These employees start working before the first cashier shift begins, and finish once the last cashier shift has been completed. Their main functions are as follows:

  1. Check at the beginning of the day whether any problem occurred when opening the period after the previous day's closing.

2. Make arrangements so that the cashiers can start their shift: prepare the cash envelopes or drawers with the provisions necessary for the cashiers to be able to give change to the customers at the beginning of the day.

3. Confirm and regularize the cash withdrawals and counts made at the end of the previous day and those made during the day.

4. Obtain the final daily reports from the cashiers who operated the terminals the day before.

5. If a period was closed on the previous day, obtain the reports for the period and manually transfer them to the history logs, if necessary.

Application Configuration

Before analyzing in detail each of the programs that make up the Cashbox **Settlement in Office** group, the application needs to be configured according to the values that are to be defined. To do this, we will define the values required for entering the data needed for configuring the company. The programs containing data that directly affects the Cashbox Settlement in Office programs are as follows:

●   From the **Companies** program, which belongs to the **Branch Configuration** folder in the Basic module, one of the following options needs to be defined: choose whether the money held in the drawers must necessarily be counted (cashbox settlement) on logging off, or whether this operation can be performed later in the office. It is also necessary to define whether the company is operating with "actual provisions" or with "declarations", i.e., when a provision is declared at a client station, whether or not it corresponds to the actual placing of money in the drawer (first and second case, respectively).

●   In the **User Profiles** program included in the **Employees** group of the Basic module, you can select the cashier operating mode and define the authorizations granted to those employees who will belong to the "Cashier managed in the office" profile, which, in turn, is included in the "floating cashier" type.

●   The **Employees** program included in the Employees folder enables you to register the cashiers who will operated with the "Cashier managed in the office" profile.

All these actions are described in greater detail in the chapter corresponding to the company configuration

Accounting Periods
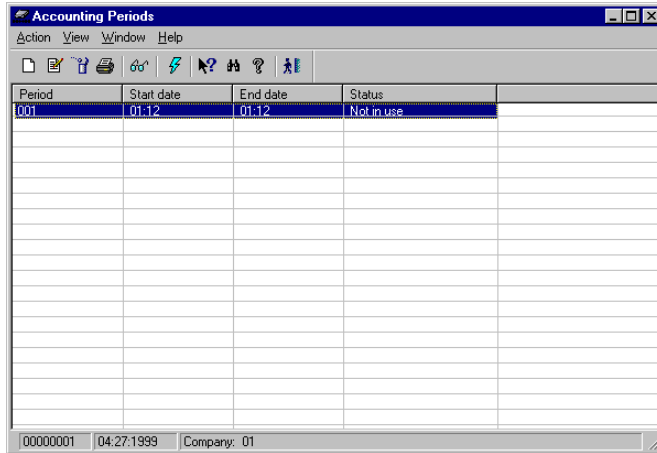
The bookkeeping periods for the cashiers are established from this program, although the cashbox settlement operation does not necessarily have to be performed within the range of dates established in this maintenance program: even if the cashiers are not present on this date, if the store was opened that day, the night strings will be run when it closes. One of these strings will launch the "change of period" process and, if it has expired, an automatic cashbox settlement operation will be performed for all the cashiers who have sales for that period, and the following period will be opened.

The first time the store is opened, and prior to opening the **Cashbox Monitor**, the bookkeeping periods must be defined. This operation can be performed manually from the Cashbox Monitor program, which is included in the **Cashbox Settlement in Office** folder, or the periods defined from the central office can be loaded.

The periods need to be created with an end date when the store opening and closing will normally take place. Otherwise, the next period will need to be opened manually, or enabled manually when the store is opened again from the monitor, or it will be necessary to wait until the next day so that the following period is enabled manually when the night strings are launched on closing the store.

For instance, if the periods are created from Monday to Sunday, on Saturday (presumably the last working day in the week) the next period will not be activated when launching the night strings on closing the store, since the current period has not yet finished (it ends on Sunday). When the store is opened on Monday, the active period will be the same period that was active on Saturday, since no change of period has taken place.

To define accounting periods manually, double-click on the corresponding program located in the **"Cashbox sett. in office"** group. The main window of the process will be displayed:
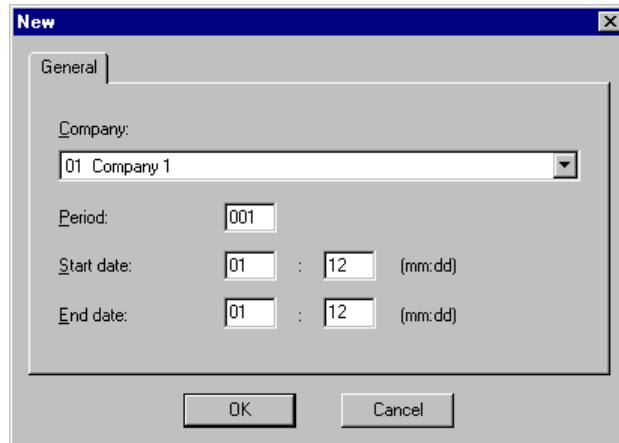
Fig. 10.28 Main window of the Bookkeeping Periods program

To define the periods, choose the **New** option in the **Action** menu. The following dialog box will appear, where you can enter the requested data:

Fig. 10.29 Box used for defining new bookkeeping periods

A period is defined by means of a range of dates (start day/month and end day/month) and is valid for for all the years, as only days and months are defined.

Four types of periods are available:

- Historical: Those periods which have already ended and for which all the cashiers have been regularized. You can look up the cashiers' totals for the historical periods and set the maximum number of periods to be kept in the history log from the company maintenance process.

- Pending regularization: Those periods which have already ended and contain operations which have not yet been regularized.

- Current: The open period.

- Not in use: Those periods which have already been defined, but show no movements.

The transition from the current period to the historical period takes place at the end of the last day in the period, when all operations subject to regularization have already been regularized; at that time, the movements for the period are deleted and only the totals are stored. These processes are run during the night strings; each transition to a historical period also generates an interface file for the central office containing the data stored in the history log.

Cashbox Settlement Monitor

This program processes the POS terminal's transaction log file by extracting from it the information needed for performing the salesperson or terminal cashbox settlement operation. This information is stored in the database and is therefore accessible from any client station.
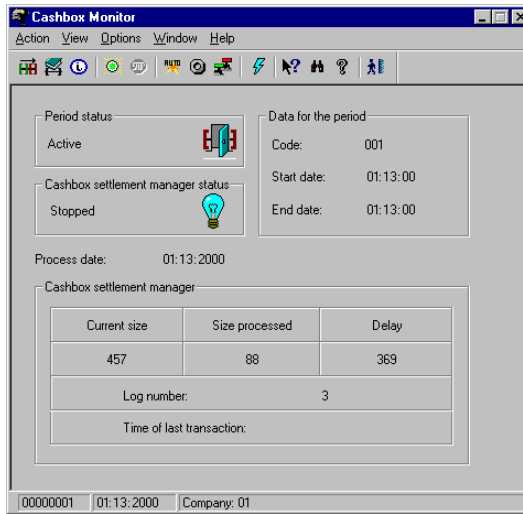
Fig. 10.30 Cashbox monitor main window

The first time the store is opened, the period needs to be changed manually (the periods must have been defined previously as described in the section above) and the period that includes today's date must be registered. The cashbox monitor will not be activated until you have created the periods corresponding to the center opening date for all the companies which have floating cashiers (or cashiers who perform the cashbox settlement operation at the office). This operation is performed from the **Change of Period** option in the **Action** menu:
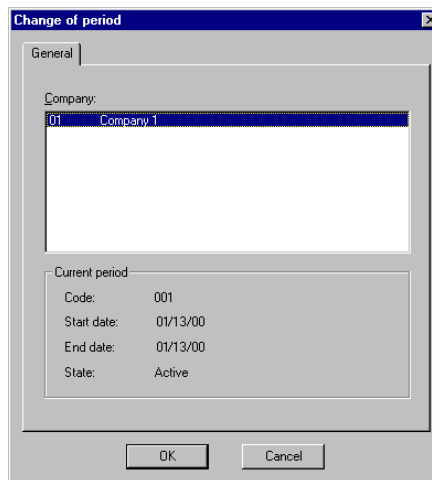
Fig. 10.31 Change of period box

Generate Information for Central Office

A dialog box appears where you must select the period for which the salespeople position file is to be generated for the central office. This box displays the following data:

- A list with the code and the description of the companies that have some bookkeeping period open and are accessible to the user who is logging on.

- A list with the various periods for which information exists on the list of salespeople settled for the company selected on the previous list.
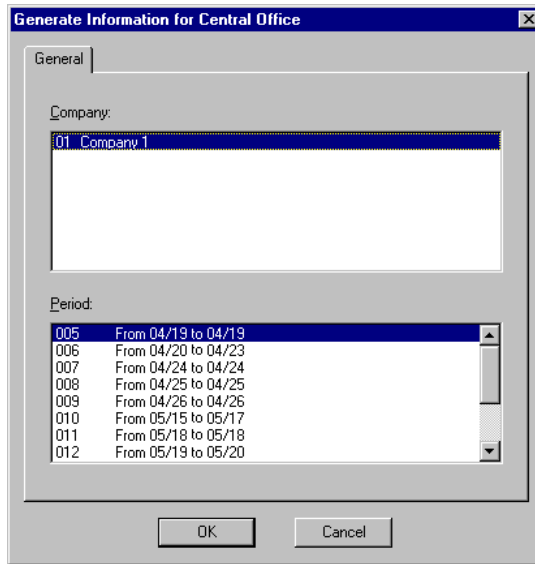
Fig. 10.32 Selection box for head office information generation period

The company with which you logged on to the application appears selected in the dialog box, but you can select any other company shown on the list. Each time you do so, the system will load the list of periods for which information exists in that company. Select the period you want and click on "OK" to validate it. The system will then run the server process for generating the salespeople position file for the central office corresponding to that period.

Transfer to History Log

This option is used for manually transferring a period to the history log when such action does not take place automatically.
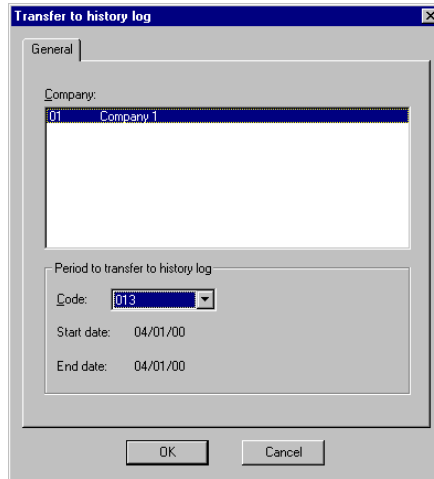
Fig. 10.33 Period transfer to history log box

Activate/Stop

These buttons activate or close the cashbox settlement monitor.

"Options" Button Options

By selecting the option **Automatic Update** in the **Options** menu, the system will directly update the contents of the main window of the **Cashbox Monitor** according to the time set by means of the option **Update Configuration** included in this same menu.

This latter option will be available only if the **Automatic Update** option is enabled; selecting it opens a dialog box where you can specify the interval for updating the information (minimum 1 minute, maximum 20 minutes).

From the option **Cashbox Settlement Terminal Number Configuration** you can also specify the number of the terminal that will be used for performing the cashbox settlement in the office.

Withdrawals and Provisions

From this process and from a client station the user can perform cash movement operations such as cash withdrawals and provisions, which are typical of a POS terminal.

As regards provisions, two situations (which are configured at company level) can occur: actual provisions or provision declarations.

Actual provisions are recorded with the cashier's totals and receive the same treatment as the provisions made at the POS terminal; i.e., for all purposes, these provisions are cash movements from the office to the drawer and, as such, must be regularized or confirmed.

If the provisions made from the office are not configured as actual provisions, they must be considered as provision declarations, and not as cash movements. These declarations will be compared later with an actual provision made from the point-of-sale terminal when confirming or regularizing the provision.

Before accessing the process, the system will prompt for information about the cashier who wants to make the withdrawal or provision. Enter the corresponding data on the following screen:
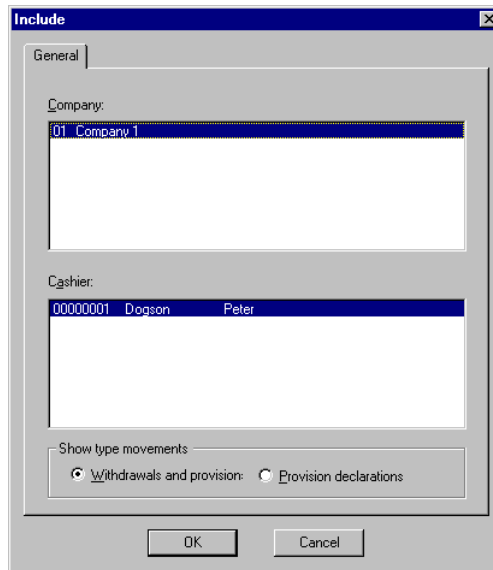
Fig. 10.34 Cashier selection criteria

Once you have selected the cashier, click on "OK" to access the main window of the **Withdrawals & Provision** process.
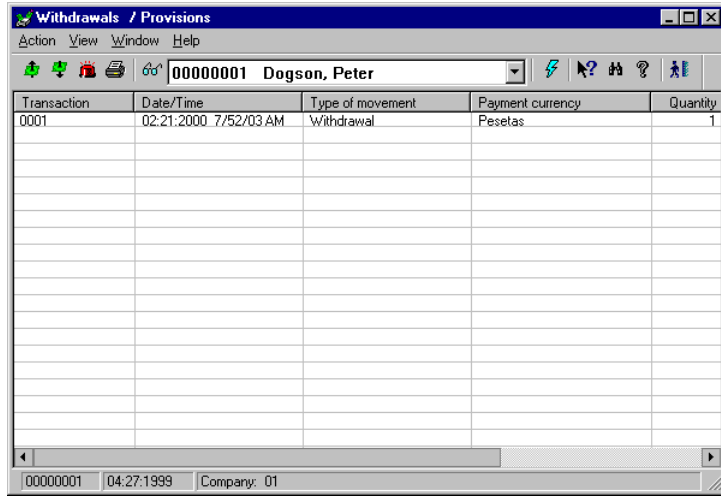
Fig. 10.35 Main window of the Withdrawals & Provisions program

The operations you must perform are exactly the same for cash withdrawals and for provisions

Select any of the options shown in the **Action** menu. Let us imagine that you want to make a withdrawal. The following dialog box will open.
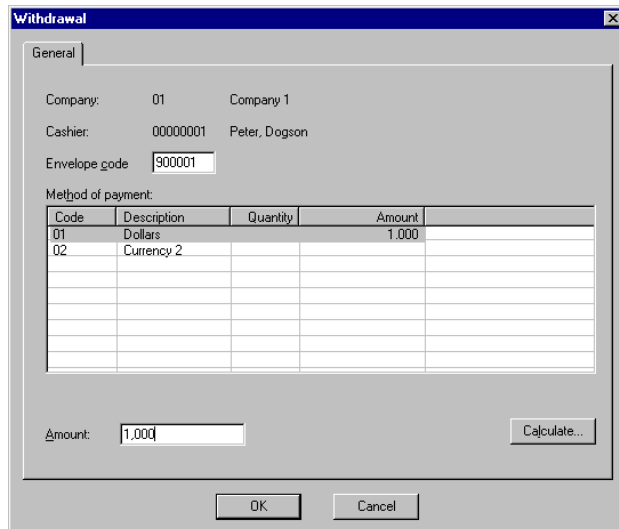
Fig. 10.36 Cashier withdrawal dialog box
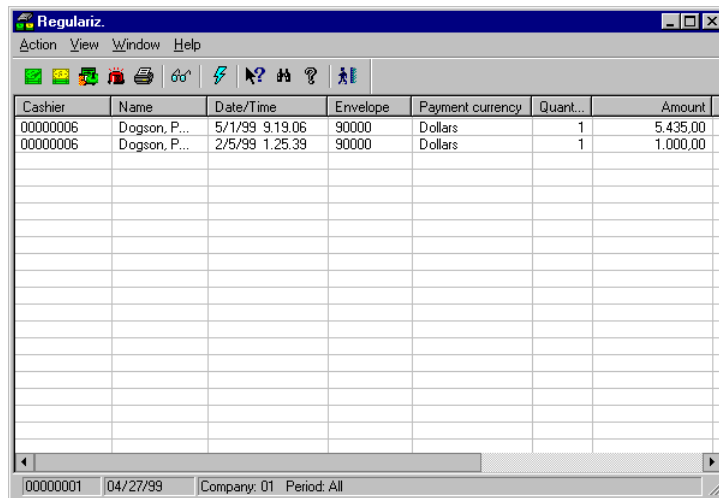
On this screen you must select the payment method for which you want to make the withdrawal, then enter the amount of the withdrawal and a code for the envelope where you will put the money, and click on "OK" to validate the withdrawal.

Withdrawal Regularization

From this program you can perform the functions required for managing cash and payment documents once they have been withdrawn from the drawer. Normally, these operations are carried out before the money is deposited in the company's cashier's department or in the bank, and their purpose is to check whether the amounts declared in the withdrawals and cashbox settlements match those shown in the corresponding envelopes.

To access the main screen of this process you must select the company and the rest of the information requested by the program in the box that appears when you select the icon corresponding to the regularization program.

Once you have entered the data, the following screen appears

Fig. 10.37 Main window of the Withdrawal Regularization process

On the list displayed on the main screen, select the withdrawal you want to check. The **Confirm** and **Regularize** options are selected in the **Action** menu.

Confirm

From this program you can confirm whether the amount of the selected movement shown on the list matches the money actually held by the envelope where the withdrawal was placed.
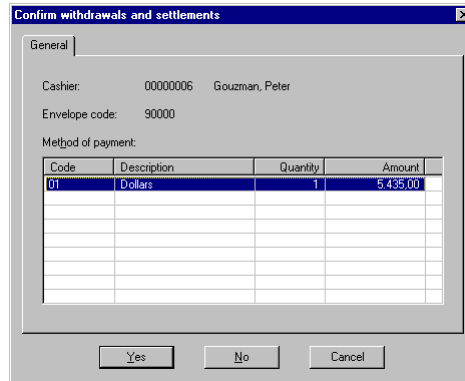
Fig. 10.38 Confirm dialog box

If the amount matches, click on "Yes"; the status of the movement will change to "Counted" and will disappear from the main list of the process.

If the amount does not match, click on "No" and regularize the detected difference.

Regularize

A dialog box appears for each selected movement, where you can generate a difference between the theoretical and actual amounts.
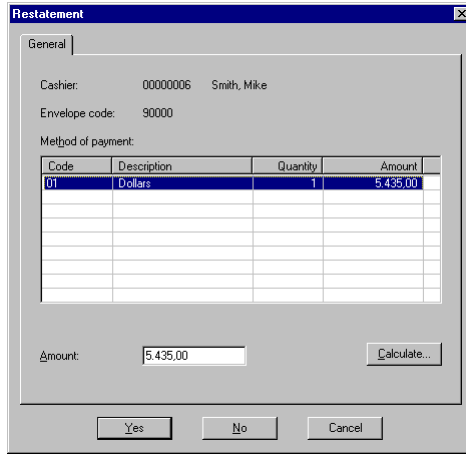
Fig. 10.39 Regularize dialog box

The box shows the cashier's name, the code of the envelope where the money was placed, a list of payment currencies specifying the quantity and the amount, and a field where the new amount must be entered.

After entering the actual amount recorded when the money existing in the envelopes was counted, click on "Yes" to generate a regularization movement for the difference between the new amount and the previous sum (the actual and theoretical amounts); the status of this movement will then change to "Counted" and will disappear from the main list the next time the window's contents are renewed. If the view is not renewed, you will be able to see that this movement has been regularized or counted by looking at the "Status" column shown on the main window of the process.

Cashier Settlement

From this program you can perform the cashbox settlement operation for a cashier from a client station located in the office and find out the money that should theoretically be held in the drawer at any given time.

To carry out any of these actions and others described below, double-click on the process icon located in the **Cashbox Settlement in Office** folder.

Once you have selected the cashier, click on "OK" to access the main window of the **Withdrawals/Provisions** process.
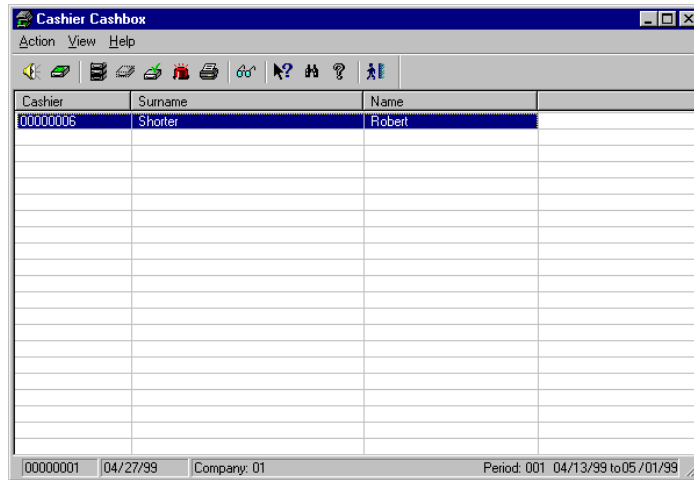
Fig. 10.40 Main window of Cashier Settlement

Intervention

On the list of cashiers displayed in the main window of the process, select the cashier(s) for whom you want to check the remainder that should theoretically be held in the drawer(s) at that very moment, and select the **Intervention** option in the **Action** menu. The following window will appear, detailing the quantity and the amount of the different payment currencies that are being held in the selected drawer.
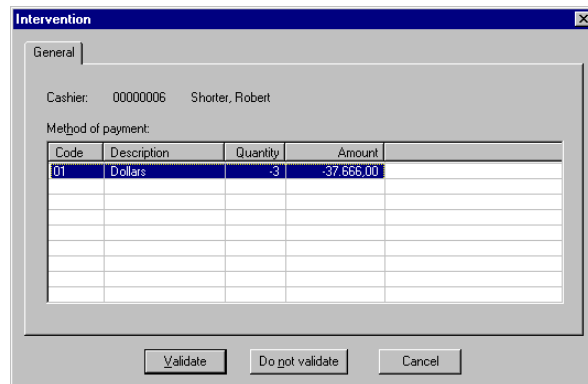
Fig. 10.41 Cashier intervention dialog box

The process enables you to validate or not validate the data shown.

Cashbox Settlement

On the list shown, select those cashiers who are to be settled and then select the **Cashbox Settlement** option in the **Action** menu. A dialog box will open where you can carry out this operation.
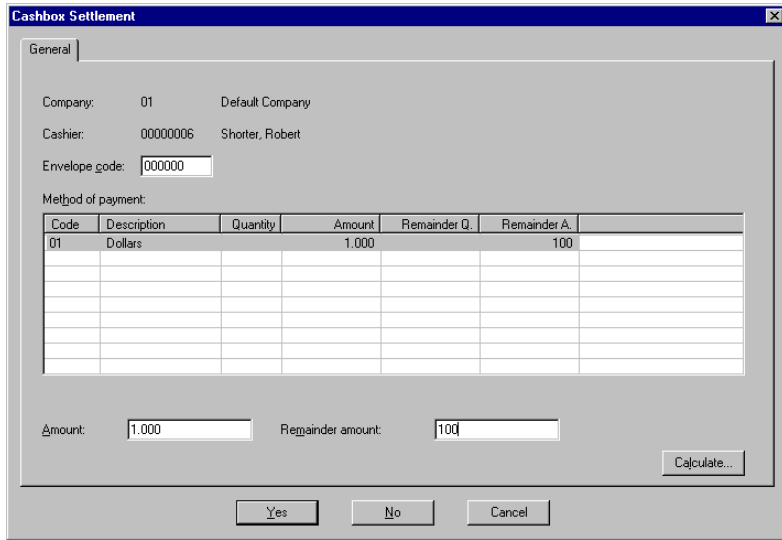
Fig. 10.42 Main window of the cashbox settlement process

The screen offers the following information for each of the selected cashiers:

- Selected salesperson to be settled.
- List of the payment currencies belonging to a cashbox group. If the **Theoretical cashbox** settlement option in the **Include** menu is enabled, two additional columns will appear with the number of documents and the theoretical amount extracted from the cash movement table.

Cashiers Pending Settlement

From this option you can look up the list of salespeople for whom cash movements exist and are still pending settlement for the open period.

The list includes the code and the full name of those salespeople.
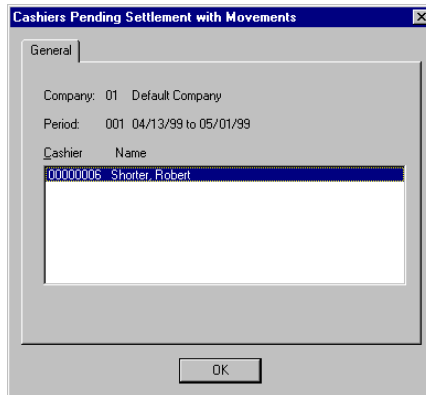
Fig. 10.43 Cashiers to settle dialog box

Cashiers Settled

This window displays a list with the code and the full name of the salespeople who have performed the cashbox settlement operation at least once during the current period.
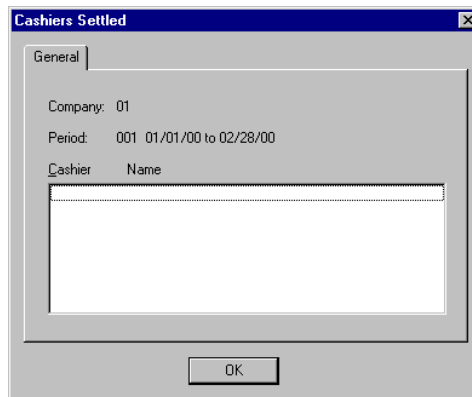
Fig. 10.44 Settled cashiers dialog box

Remainder Management

From this program you can view or modify the remainder generated after settling a cashier from the office and from the POS terminal.
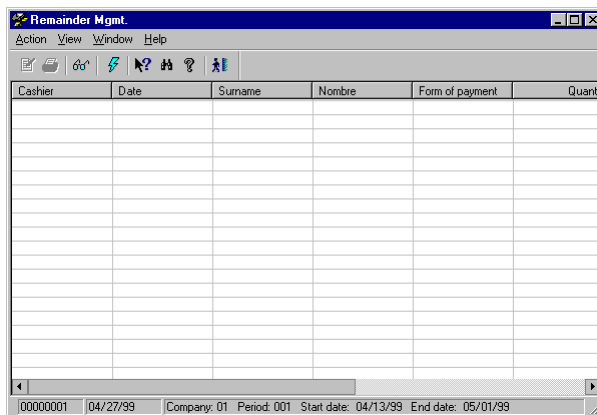
Fig. 10.45 Main window of the remainder management process

The main screen of this process displays the following data:

- Cashier code
- Cashier's full name
- Description of the payment currency
- Quantity of currencies in remainder
- Amount of remainder in payment currency
- Amount of remainder in local currency
- Remainder modification mark

Cashbox Settlement Reports

From this program you can look up and print listings with information regarding both cash movements and movement logs.

Fig. 10.46 Cashbox group reports main window

The program offers several types of reports, which are detailed below:

List of Closings by Cashier

This listing covers all the historical periods and shows the following information by cashier: remainder, receipts (sales – refunds – cancellations – payments + collections), provisions, withdrawals, cashbox settlements, regularizations and differences, broken down by payment currency.

Closing by Cashier Report

This listing covers all the historical periods and provides the following information for each cashier: amounts of sales, refunds, cancellations, payments and receipts. All this information is shown in the base currency

Interventions by Cashier

This applies to any type of period and shows the interventions undergone by each cashier.

Accrued Differences

This shows the differences accrued by cashier and historical period, broken down by means of payment.

Cashier Status

This shows online information about the cashiers' status.

Cash Movements by Terminal

This shows a listing with the movements that have taken place at the terminals.

Cash Movements by Cashier

This shows a listing with the movements for a specified cashier.

Cashbox Settlement Event Log

This shows the events detected by the cashbox manager, with an indication of the transaction that originated these events.

11

Merchandise management

- Typical sequence of operations in merchandise management
- Initial configuration
- Daily and periodic operations
- Merchandise Management reports

StoreFlow GV

This chapter describes the Merchandise Management module, together with its functions and processes. Although the Basic SF-GV module already includes stock management functions (see "Item registration and look-up" in the chapter on ➤ "Item Management"), this module extends these functions by adding various utilities able to handle, in particular, the internal management of stock by means of the additional consideration of orders, inventories, merchandise movements, etc.

To access to this module, click the corresponding icon on the icon bar of the Sales Management main screen. This icon will only be activated if you has purchased this module as it is an optional part of the group of modules that make up the application.
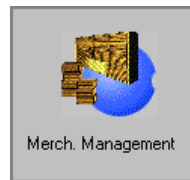
Fig. 11.1 Merchandise management module icon

The module comprises five folders which deal with the fundamental aspects of merchandise management:

- **Purchase catalog:** manages suppliers, including not only the details of each supplier, but also their catalogs and product lines. Each folder includes the following processes:

  - Suppliers

  - Merchandise formats

  - Supplier reports

- **Orders and delivery notes:** responsible for the generation and management of orders and delivery notes, with a view to facilitating restocking of items and ensuring that stock queries are permanently up-to-date. This folder includes the following processes:

    - Supplier orders

    - Delivery note entry

    - Order reports

    - Delivery note reports

- **Inventory:** responsible for the management of inventories and periodic counts of merchandise, in particular as regards the updating of stock. This folder includes the following processes:

    - Inventories and counts

    - Inventory monitor on the POST

    - Inventory reports

    - Stock reports

- **Merchandise movements:** responsible for supervision of merchandise leaving or entering the company in atypical ways. This folder contains the following processes:

    - Adjustment groups

    - Adjustment types

    - Sources / destinations

    - Incom. / Outg. Movements

    - Movement Reports

- **Supplier promotions:** responsible for the definition and control of the commercial armory available to the supplier to increase his sales. This folder only contains one process, of the same name.

> **!** Everything described in this module only affects those items with the "Stock control" box checked in their maintenance.

Typical sequence of operations in merchandise management

The figure below illustrates a possible sequence including the main phases that have to be followed for correct utilization of the Merchandise management module. The indicated order is not strict, but nor is there complete freedom.

Definition of:
- Merchandise formats
- Suppliers
- Product lines
- Catalogs
- Adjustment groups and types
- Merchandise sources and destinations

INITIAL CONFIGURATION

- Order placing
- Delivery note receipt and acceptance
- Unusual incoming and outgoing merchandise movement control
- Report generation

DAILY OPERATIONS

- Stocktaking
- Supplier promotions
- Report generation

REGULAR OPERATIONS

Fig. 11.2 Typical sequence of tasks associated with Merchandise management

As shown in the figure, in Merchandise management we can distinguish between the following main phases:

Initial configuration

- *Merchandise formats:* defines the basic formats available for use in orders placed with the supplier. These should not be confused with the formats used for presentation or sale of an item to the public, although they are related. In many companies the term "services units" is used.

- *Supplier registration:* company suppliers are registered by specifying their personal or commercial details and a number of operating parameters, such as delivery period, type of service given, etc.

- *Registration of product lines and catalogs:* a supplier is selected from the **Suppliers** process and the items included in his catalog are defined one by one, grouped in product lines (items previously registered from the **Items** process). This operation must be repeated for all the suppliers of the company or group.

- *Adjustment groups and types:* defines the main adjustment groups and types of movement associated with the former.

- *Sources/destinations:* defines the possible sources and destinations of atypical merchandise movements.

Daily operations

- *Supplier orders:* defines the details of orders that will be placed with suppliers so that they supply merchandise.

- *Delivery note entry:* merchandise is received at the store, accompanied by the corresponding delivery note. At this stage all the relevant details of the merchandise received are entered in the system.

- *Merchandise incoming/outgoing:* defines atypical merchandise movements (entry/exit, charge/payment, etc.) that do not follow normal procedures (orders/delivery notes).

Periodic operations

- *Inventories and counts:* the inventory is created and the basic data to initialize it correctly is registered. During the process it is possible to adjust it to take account of the variations due to internal consumption, deterioration of merchandise, errors, etc.

- *Supplier promotions*: the promotions are registered by defining the range of dates in which they will be in force and the items they include.

- *Inventory monitor on the POST:* from this program the server inventory process is opened and closed in order to incorporate the inventory data collected from the POSTs, so as to keep the inventory up-to-date.

- *Reports:* at any moment printed information can be obtained concerning all the aspects related with Merchandise management.

   Supplier reports: information on company suppliers is given in both printed listing file form.

   Order and delivery note report: listings are generated of the orders placed and delivery notes associated with the merchandise received.

   Stock and inventory reports: specific reports are generated on the stock available in accordance with various criteria.

   Movement Reports: listings are obtained with the precise information relating to atypical merchandise movements.

Initial configuration

This section gives a detailed description of each of the Merchandise management processes defining the basic data that it will be necessary to configure before starting normal working with the module.

Suppliers and catalogs of items

Suppliers are external companies which supply merchandise to companies managed by StoreFlow GV, delivering either to the Central warehouses or storage at the store.

Each supplier must have his catalog of items and product lines defined.

The supplier's catalog is the set of items he supplies. Given that this set may be very broad, it is divided taking various considerations into account, into subsets called product lines. This subdivision always takes into account the following points:

- the same item cannot belong to more than one product line of a given supplier, i.e. the intersection of product lines is null.

- all the items in the catalog belong to one or other product line, and therefore, all suppliers must have at least one product line defined.

Thus the product line is a grouping lower in the hierarchy than the catalog, but the catalog is handled through the product lines defined for the supplier.

Supplier registration

Supplier registration allows the personal details of each company's suppliers to be included on the system, together with other parameters of a commercial nature, such as:

- delivery period for merchandise, expressed in days

- the type of service offered

- the form of reception of the order

To register the suppliers of the company:

1. From the **Purchase catalog group,** start the **Suppliers** process.

    Initially the supplier selection **Include** box will be shown, in which you should select the company and supplier selection range in the "From" and "To" boxes. On pressing "OK" the main window is shown, displaying those suppliers which match the search conditions

Fig. 11.3 Main window of the supplier management process

Each row of the table contains the following information: the supplier's code, his company name, type of service, i.e. the place to which the supplier delivers the merchandise -at the central warehouse, at the store, or both- the supplier's contact person and telephone number. Double-clicking on any of the lines of the listing will bring up the **Modify** dialog box, allowing any of the supplier's details to be modified.

2. Select the **New** option on the **Action** menu to access the new supplier registration box.

Fig. 11.4 New supplier registration dialog box

3. Complete the box as follows:

- "Company": select the company to which the supplier provides merchandise. Note that, in line with the general methodology of SF-GV, if the supplier supplies to various companies, it should be registered separately for each of them.

- "Code": enter the code of the new supplier, using up to 5 digits.

- Personal details: include specific supplier data ("Company name", "Address", "Town", "Province", "Postal code", "Telephone 1", "Telephone 2", "Modem", "E-mail", "Fax", "Contact person"). The first six fields are mandatory.

- "Type of service": indicates whether the goods are supplied to the central warehouse, store, or both.

    - Central warehouse": this is the value which appears by default. In the case of a central warehouse supplier proceed as follows: the Central warehouse groups all orders placed with the same supplier which arrive from the various stores and sends the supplier a single order. The supplier sends the merchandise to the Central warehouse, and the latter is responsible for distributing it to the stores depending on the amounts they ordered.

    - "Store": in the case of a store supplier, the store places its order directly with the supplier and the supplier delivers the merchandise to the store.

    - "Both": in this case the supplier may deliver the merchandise both to the store and the Central warehouse.

- "Order issue mode": select the mode in which orders will be issued for this supplier. This can be any of the following:

    - "Print": the order will be printed for issue. This is the mode used by default.

    - "Transmission": the order will be saved in a file and sent, for example, to the Central warehouse or to the supplier, if there is a direct connection.

    - "Both": the order will be printed at the same time as being saved to a file for transmission.

- "Delivery period": indicates the estimated number of days elapsing between the issuing of the order and delivery at the store (not at the Central warehouse). This datum is used for internal purposes to calculate volumes and order points.

- Select the following boxes as required:

    - "Request cost price on delivery note": if this option is activated, at the time of entering the delivery note a box will appear in which to enter the total amount per line. This should be filled so as to give a delivery note with full price details.

    - "Delete order on issue": check this box if you do not want to store orders already issued so as to check them against the merchandise received.

- "Initialize units pending restocking": select this option if the supplier delivers the merchandise based on the units pending restocking as a result of sale of items. Units sold accrue from the time of the last delivery by the supplier up until the next time an order is made. Each time merchandise is received the counter is set to zero.

- "Allow product lines to be mixed on the delivery note": check this box if you are going to allow items from different product lines to be ordered together. This option can be useful if you want to receive the merchandise for each department separately, as normally the product lines and departments are more or less parallel in the system.

- "Product line": this button gives direct access to the product lines registration box, from which it is possible to define the references to the supplier catalog. This box is described in detail in the section on "Catalog and product lines".

4. Click "OK". It is possible to create a supplier without initially assigning him any product lines.

Other operations with suppliers

The **Action** menu for the process contains the options needed to perform the maintenance of suppliers and their catalogs of items. In other words, in addition to registering suppliers, this menu allows the following operations:

- **Modify:** enables details of previously selected suppliers and their product lines to be changed.

- **Look up:** use this option to look up the supplier's details, and those of his various product lines.

- **Delete:** use this option to delete the details of the suppliers selected in the program window from the database.

- **Print:** used to send to the printer the list of suppliers displayed in the main process window after using the "Include" filter. A previous view of the document is shown when this option is selected.

- **Product lines:** this option is used to add or delete production lines associated with the selected supplier or to modify the details of those already defined. From here it is possible to access the dialog box "Product lines" directly, as explained in more detail in the next section.

● **Initializing automatic restocking system.** The process of initialization of the sales automatic restocking system consists of zero-setting the counter that accumulates sales since the last delivery by the supplier until the next time an order is made. This is done only for those items in the supplier's catalog which have management of units pending sale restocking activated. This checkbox will only be available in the case of those suppliers which do not have the "Initialize units pending restocking" box checked. Remember that the counter is initialized order by order in the case of those suppliers for which it is activated.

Once the option has been selected, the following dialog box will appear to ask for confirmation of the operation. This box will appear cyclically for all the suppliers selected in the main window. The "All…" button will be visible and enabled only in the case of a multiple selection.
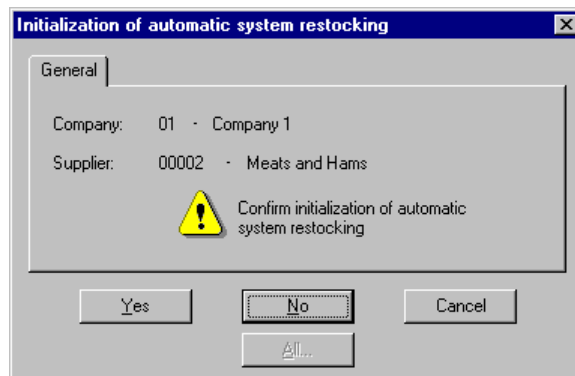
Fig. 11.5 Dialog box for confirmation of automatic restocking

Catalogs and product lines

In this phase the catalog and product lines are defined for each supplier. The product catalog is understood as a set of items supplied, and product lines are groupings of catalog items.

For the following description we shall suppose that the items supplied by the supplier have already been registered in previous phases (**Items** process described in the chapter on ➤ "Item management") and have the stock management mark.

2. Access registration of new lines pressing the "Add" button. The following dialog box will appear.

Fig. 11.7 New product lines registration dialog box

3. Complete the box as follows:

- "Company" and "Supplier", information given by the system, to which the new product lines are going to be added.

- "Code": enter the code of the new product line.

- "Description": short reference text describing the new product line.

- "Telephone" and "Contact person" for this product line. It is possible, for instance, that the supplier is a large sales center and that it has different lines of work and contacts for each of its products.

4. Click "OK". This will take you back to "Product line", having registered the new product line, but so far not having associated any items with it.

5. In order to associate items with product lines, click on the "Catalog" button. This will access the "Associate catalog" dialog box, which is described in detail in the next section. Remember that a supplier's existing catalog conditions both ordering operations and admitting of delivery notes.

6. When registration of the line is complete, click the "OK" button on the main "Product lines" dialog box.

Add items to the catalog

SF-GV only allows you to make orders or accept delivery notes from a supplier if these documents refer to items included in his catalog. Therefore, this operation is prior to any sending or receiving of merchandise.

The only way to add items to the supplier's catalog is by associating them with the product lines. In this way it is ensured that all the items belong to a line and that during this process a check is performed to ensure that no product belongs to more than one line for the same supplier.

However, as each item can be supplied by various suppliers, it is possible that it belongs to different product lines corresponding to different suppliers.

Remember that in order to group the items in each supplier catalog it is necessary to have checked the "Stock control" box in the **Items** program.

To associate items with product lines:

1. Click on the "Catalog" button on the "Product lines" menu. The following dialog box will appear.

Fig. 11.8 Dialog box to allow association of items with the catalog

2. Complete the box as follows:

- When you access the "Associate catalog" dialog box, the company, supplier and product line will already have been selected. Define the department and family of the items you want to assign and press the "Load items" button. All the items associated with the range you have defined will appear in the contiguous "Items" list.

- Select one or more items from the list. If more than one merchandise format is associated, a pull-down list will be enabled, from which you can specify which you want.

- Click on the "Add" button. The selected items will automatically be included in the "Supplier catalog".

- Once the item has been added, the supplier reference and merchandise format can be modified manually, if there is more than one defined. To do this select the item and press the F2 key or double click on the item in question.

- If you want to correct any operation or simply want to delete an item from the catalog, select it from the corresponding list and click on the "Delete" button.

Remember that for any operation performed in this dialog box to take effect it is necessary to click on the "Yes" button at the end of the operation.

Merchandise formats

Merchandise format is a predetermined grouping of units or specific quantity of an item that is usually contained in a single pack or packaging, and which is used for delivery from the supplier to merchandise reception at the store. Do not confuse merchandise format, which relates only to the supplier, with the format in which the item is sold. These may be the same, but refer to different concepts.

To define merchandise formats:

1. From the **Purchase catalog group**, start the **Merchandise formats** process.

   Initially the format selection **Include** box will be shown, in which you should select the company and reference selection range in the "From" and "To" boxes. You can select the items from one or all departments. On pressing "OK" the main window is shown, displaying those items which match the search conditions.

Fig. 11.9 Main window of the supplier merchandise format process

For each line of the listing the following are displayed: the reference and description of the item, the code and description of the supplier format, together with the number of units or quantity contained by each of them.

You can modify the format of each item by double clicking on any of the lines of the listing.

2. Select the **New** option on the **Action** menu to access the new format registration box.

Fig. 11.10 Supplier merchandise format registration box

3. Complete the box as follows:

- "Company": select the company for which you are working.

- "Department": specify the department to which the item whose format you are going to define belongs.

- "Family": specify the family, if applicable, to which the item whose format you are going to define belongs.

- "Item": shows the items resulting from the filter applied. Select the required item in order to define its additional format.

- "Format": enter a code (up to 2 digits) for the item format.

- "Description": brief text describing the format.

- ● "Units": number of units of measurement of the item making up the defined format.

4. Click "OK".

Adjustment groups

Before proceeding to create a specific adjustment type the basic adjustment type groups that the types will relate must be defined.

Registering an adjustment group is done by the standard registrations procedure. It involves nothing more than assigning a code and a description for each new group created by means of the **Adjustment groups** process in the **Merchandise movements** folder.
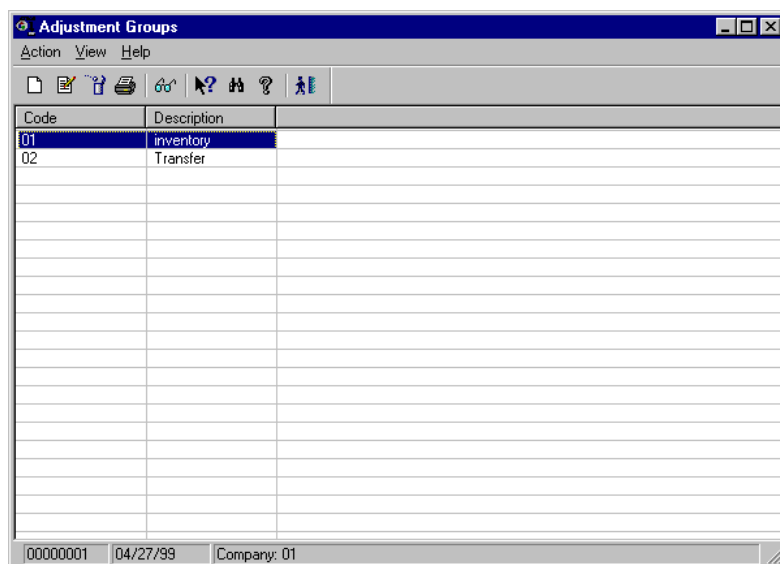
Fig. 11.11 Main window of the adjustment groups definition process

The adjustment groups are maintained from the main window of the process, i.e. new groups can be created, the description of existing groups modified, queried and deleted, provided that they have no adjustment types associated with them.

Adjustment types

In StoreFlow GV adjustment types are defined to modify the theoretical quantity of merchandise or stock that the system automatically calculates the company to have and so shows the real quantity detected when a count, inventory or atypical merchandise movement takes place in the store.
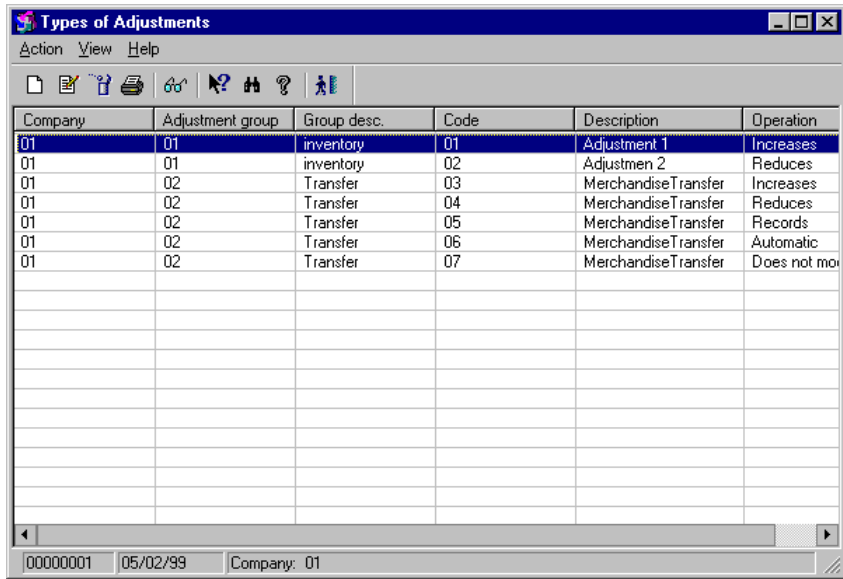
The adjustment types are associated with adjustment groups and may be of different classes depending on the effect they have on the stock.

- **Increment:** increases the stock by the indicated number of units.

- **Decrement:** reduces the stock by the indicated number of units.

- **Store:** the number of units involved directly replaces the current stock of the item.

- **Automatic:** the system undertakes stock control automatically allowing both positive and negative values. This is normally only used when closing inventory.

- **Do not modify:** does not modify the stock. Normally used to correct prices in atypical merchandise movements.

To define an adjustment type:

1. From the **Merchandise movements** group, start the **Adjustments type** process. The main process window will appear.

Fig. 11.12 Main window of the adjustment types definition process

Each line of the screen presents the information relating to the company in which the adjustment types are defined, the code of the adjustment group to which the adjustment type belongs, its code and a description of how it affects the stock, i.e. if the stock has to be increased, reduced, stored or updated directly, whether it is modified or if the system automatically performs stock control.

You can modify any selected adjustment type by double clicking on any of the lines of the listing.

2. Access the new adjustment type registration dialog box below using the **New** option on the **Action** menu:

Fig. 11.13 New adjustment type definition dialog box

3. Complete the registration dialog box as follows:

- "Company": select the company for which you are working.

- "Adjustment group": select one of those which appear on the pull-down list to associate it with this type of adjustment.

- "Code": enter a code of up to 2 digits for the type of adjustment you are registering.

- "Description": brief reference text on the concept to which the adjustment type refers.

- "Operation on stock": choose the appropriate option to determine the effect of the type of adjustment on stock (Increase, Decrease, Store, Automatic and Do not modify).

4. Click "OK".

It is important that an increment, decrement, save, automatic and "do not modify" type of adjustment is defined on the system in order to be able subsequently to perform inventories and atypical merchandise movements correctly.

Merchandise sources and destinations

Before proceeding to create an atypical merchandise movement you should first define who the source and destination of the movement are.

Creating a source or destination is done by the standard registrations procedure. It involves nothing more than assigning a code and a description to each new source/destination created by means of the **Sources and destinations** process in the **Merchandise movements** folder.
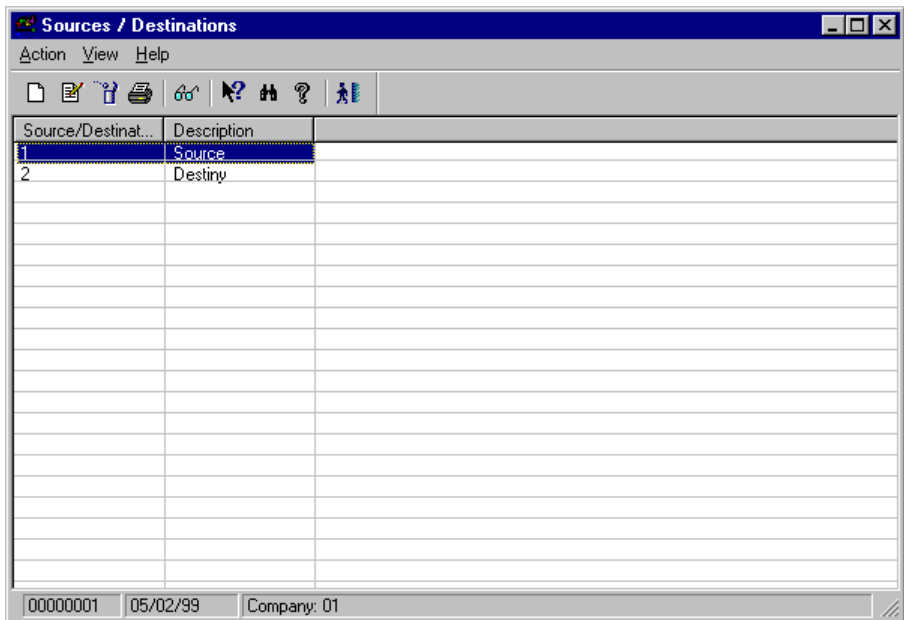
Fig. 11.14 Main window of maintenance of movement sources and destinations

Maintenance is carried out from the main window of the process, i.e. new sources and destinations can be created, the description of existing ones modified, queried and deleted, provided that they have no pending movements associated with them.

Daily and periodic operations

Once the basic data have been configured the Merchandise management module is ready to form part of the daily operation of the store.

This section describes the processes that are used regularly, whether every day or at fairly frequent intervals.

Supplier orders

This process is responsible for preparing proposals, and issuing and following up all orders placed with suppliers.

An order is a request for merchandise made to a supplier by the customer . The concept of an order is implicitly associated with the mode of restocking. SF-GV allows three basic modes of restocking (linked to their corresponding orders):

- **Restocking by manual capture:** in this mode the person responsible for management of orders decides on the basis of his/her own criteria and enters manually the details of the items, the quantity of units to order and the supplier.

- **Restocking by external capture:** in this mode the items and quantity of units to order is defined in a file which is generated externally or from restocking requests arriving from the POSTs, making use of function 51 of the POSTs. The proposal comes from an SF-GV client station and defines the company from which the merchandise is to come, the type of rounding to apply and the source (whether file or POST) of the order.

- **Restocking by external capture:** in this mode the SF-GV system itself calculates the quantity of order units that should be requested from the supplier, depending on the system parameters defined beforehand, such as normal stock, maximum stock, order point, units sold, etc.

Remember, however, that not all incoming merchandise is the result of an order. Incoming merchandise without a prior order (normally fast-turnover merchandise) is managed at the time of reception by a delivery note which includes the option to process this type of merchandise (see the section ➤ "Delivery note entry").

Order status

From the time it is generated until the time the merchandise is received at the store or warehouse an order goes through the following states:

- **Proposal:** orders in this state have been prepared and the items that are to be ordered from the supplier have been defined, but the order has not yet been sent.

- **Issued:** the order has been printed and/or sent to the supplier.

- **Received in full:** for an order to be in this state a delivery note has been received and a number of units of the item equal to or greater than that requested on the order have been received.

- **Partially received:** this case is similar to the above, with the exception that here the delivery note shows a quantity of units lower than that requested in the order, i.e. some merchandise is still pending receipt.

- **Cancelled:** in this case the order is sent to the supplier but cancelled before being received.
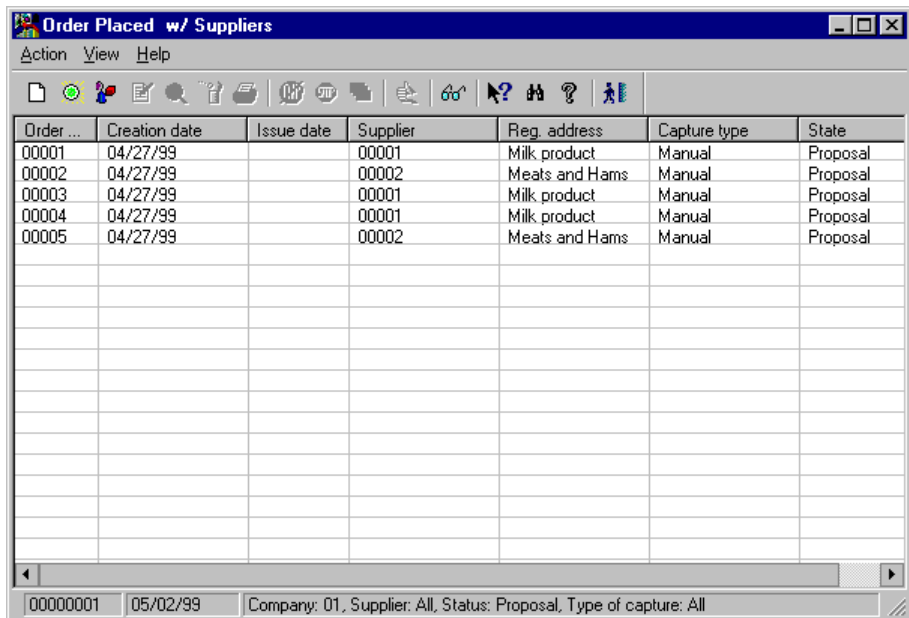
Order registration

To make an order:

1. From the **Orders and delivery notes** group, start the **Supplier orders** process.

    Initially the order selection box **Include** will appear. Here you have to select the company, order state (proposed, issued, partially received, totally received or all), the supplier and the type of capture (manual, external, automatic or all). On pressing "OK" the main window is shown, displaying those suppliers which match the search conditions.

Fig. 11.15 Main window of the supplier order process

Each row of the table contains the following information: the order number (assigned automatically), the date of creation of the order proposal, date of issue of the order (if already issued), the supplier code, supplier name, the current state of the order and the type of capture or means whereby the order was generated (manual, external or automatic).

Double-clicking on any of the lines of the listing will bring up the **Modify** dialog box, provided the state of the order is such that it allows modifications.

2. Open the **Action** menu and select the **New** option.

   A pop-up menu appears, with three order capture options: manual, external and automatic.

3. Select the required option. Depending on the type of capture it is necessary to access different dialog boxes. Their functioning is explained in the three sections below.

Manual capture

If the **Manual capture** option is selected from the **Action** menu on the main screen of the **Supplier order** process the following dialog box will appear:
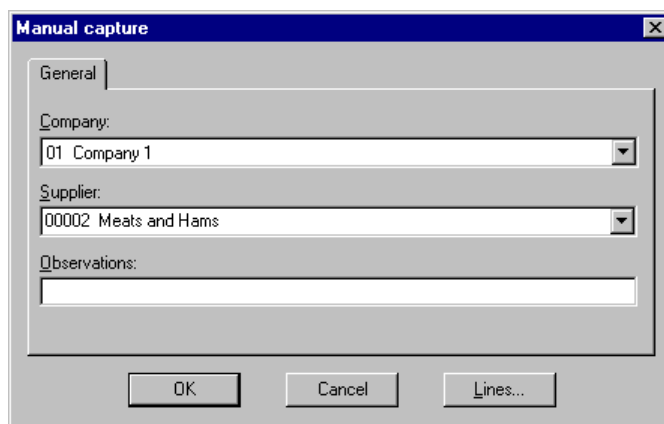
Fig. 11.16 Dialog box for requesting orders by manual capture

This mode of making an order proposal allows the user in the company responsible for order management to include, according to his/her own criteria, the items that he/she considers necessary in the store. To do so he/she will have to complete the order lines selected explicitly with the items and quantities desired.

Complete the box as follows:

- "Company": select the company with which you are working.

- "Supplier": select the supplier to whom the order will be sent. It is possible to search for a supplier by entering part of the name or the code, if you know it.

- "Observations": type in any observation or comment you wish to make on the order that is about to be issued.

- If you now click "OK" only the order header will be created; this can be useful when, for example, the store manager decides which suppliers orders are going to be sent to today and creates the headers of these orders. Later, other users are then responsible for completing the lines.

To avoid the risk of clicking on the button by mistake the system asks for confirmation that you want to generate an empty header with the message "No order lines exist".

- "Lines": click on this button to access the "Order lines" box. Select the format of the item and, if you wish, look for a particular item from among those whose references exist in the catalog by clicking on "Search". Select the items you want from those shown on the list and click "OK".

Fig. 11.17 Definition box for items requested for the order by manual capture

The purpose of this box is to perform maintenance of the lines of the order being created.

The upper part shows general information such as the code and description of the corresponding company and the supplier.

In the "Lines" box a table is shown in which each row corresponds to an order line and each of the eight columns corresponds to the following fields:

- "Code" or item reference.

- "Supplier ref." reference with which the supplier identifies the item.

- "Description" of the corresponding item.

- "Quantity" or number of units in the specified format.

- "Format" in which the default format is shown. If the item has more than one format defined, you can select the one you want from the pull-down list.

- "Qty. ordered" this value is calculated by the system from the value entered in the "Quantity" field and the selected format. For example, if the format is a pack of 4 units and the quantity is 10, the quantity ordered will be 40 units.

- "Stock" indicates the number of units of the item currently in the store.

- "Unit" shows the unit of measure defined for the item.

  It is possible to insert, delete or modify lines in this table.

  Only one line can be entered for each item and order format.

  There are two different ways of inserting new lines.

  1. The first is by means of entering an item reference in the "Code" column or entering the supplier reference, then displaying the corresponding details, taking zero as the "Quantity". The format taken by default is that defined as such in the supplier catalog.

  2. The second form is by the use of the "Search" button, which will show a dialog box whose aim is to allow an item's code to be found by filtering by product line and description. If you leave by clicking on "OK" the corresponding item code will be placed in the line of the table.

  Once a line has been inserted in the order it is possible to modify both the quantity and the format of the order by updating the relevant fields of the table.

  A line can be deleted from the order by selecting it in the table and clicking on the "Delete" button or the "Del" key. The corresponding dialog box will appear so as to request confirmation of the deletion.

On clicking on the "OK" button the system will ask if you want to issue the order. If the reply is "No" the order will remain in the proposal state; if the reply is yes the order will be issued by printing and/or transmission, depending on what has been defined for the supplier in question and therefore its state will change to issued.

External capture

If the **External capture** option is selected from the **Action** menu on the main screen of the **Supplier order** process the following dialog box will appear:
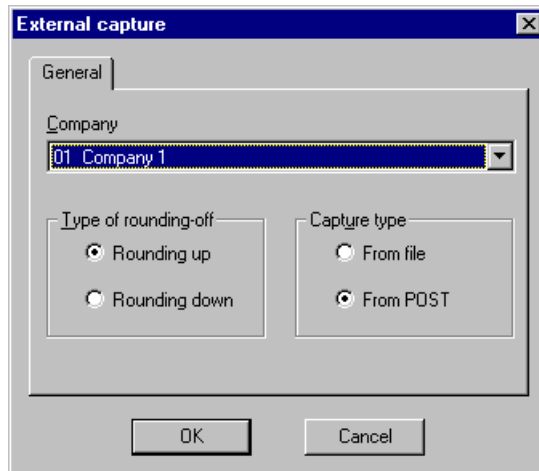
Fig. 11.18 Definition box for items requested for the order by external capture

Complete the box as follows:

- "Company": select the company with which you are working.

- "Type of rounding-off": This only makes sense when using different formats for the same item. In this case it means that if there is a service unit for the items ordered from outside, it will round up or down the quantity ordered to fit the format. For example, if the format is 4 units and the order asks for 18, either 16 will be supplied (rounding down) or 20 (rounding up) (4x4=16 < 18 < 20= 5x4).

- "Type of capture" you should select whether the capture is to be done from an external file with a predefined format or from the POST using function 51, supply request.

On clicking the "OK" button one or more orders will be generated. If items are requested from different suppliers, these orders will be in the proposal state and available for subsequent query, modification, deletion or issuing.

Automatic capture

In this mode of preparing proposals it is possible to select the items that will be included automatically.

Items which can be used as part of an automatic capture are those which have the automatic restocking attribute set in the stock control definition.

If the **Automatic capture** option is selected from the **Action** menu on the main **Supplier orders** process screen the following dialog box will appear:
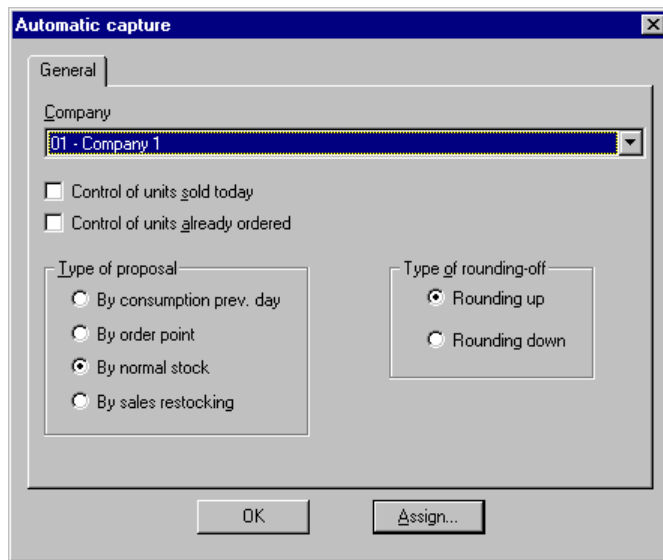
Fig. 11.19 Dialog box for requesting orders by automatic capture

Complete the box as follows:

- "Company": select the company with which you are working.

- "Monitoring of units sold today": check this box if you want the data to be exact, i.e. that when the order is prepared the number of units of the item sold the day the proposal is prepared are taken into account (as stock will be updated on closing the store). This checkbox is related to the controls for the "Type of proposal" group.

- "Monitoring of units already ordered": activate this checkbox if you want the number of units of the item already ordered from the supplier in previous orders to be taken into account, even if these have not yet been physically received at the store. This checkbox is related to the controls for the "Type of proposal" group.

- Type of rounding-off" box: choose the type of rounding applicable to the order, i.e. rounding down or rounding up. The functioning of the rounding type is identical to that described in the previous section.

- "Type of proposal" box: choose one of the following types of generation of order proposals.

    - "Consumption on previous day": indicates that the order is to include as many units as were sold on the previous day of all the items selected. In this case the monitoring of units already ordered is disabled.

    - "By order point": an order point will be taken into account for each item in the proposal. With an order point the order is determined by a series of parameters. These include the current stock, the minimum stock, the supplier's delivery period, the average number of units sold during a period of days, the number of days until the next time the supplier comes, whether it is possible to sustain sales until the merchandise arrives If not possible, the quantity needed to reach the maximum stock is ordered.

      It is possible to monitor units sold today and the units already ordered so they are subtracted from current stock.

    - "By normal stock": a comparison is performed to see if the current stock is below normal or minimum stock, in which case an order is made for as many units as are necessary to reach maximum stock. It is possible to monitor units sold today and the units already ordered so they are subtracted from current stock. This is the type of proposal selected by default.

    - "Sale restocking": only those items will be selected whose type of automatic restocking is "Management of sale restocking" (See **Items** process described in chapter ➤ "Management of items") and sold on dates prior to the issue of the automatic order. As many units are ordered as have been sold since the last order of this item.

      In this case it is obligatory to monitor the units sold today and those already ordered (both checkboxes appear checked and disabled and therefore the selection cannot be removed).

Clicking the "OK" button without having assigned any items returns you to the main window without creating the order.

Click the "Assign" button to access the next dialog box, where you can choose the items that will be included in the order, according to various selection criteria.
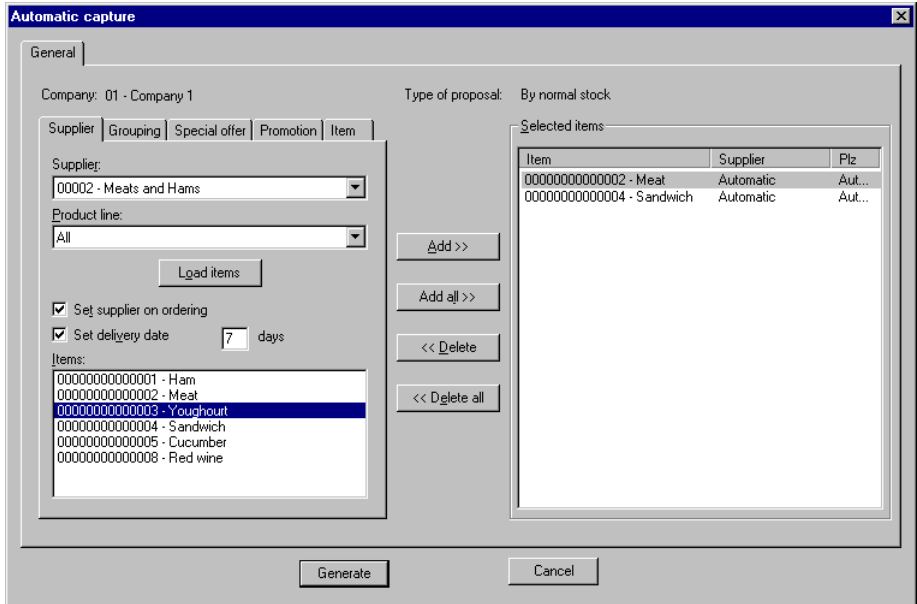
Fig. 11.20 Assignment box for items requested in the order by automatic capture

In the upper part of the box the company with which you are working is shown together with the type of proposal you are generating. This corresponds to that chosen in the previous dialog box.

There are five selection criteria for items, which are arranged on the tabs: Supplier, Grouping, Special offer, Promotion and Item. If the type of proposal is "Sale restocking", only the "Supplier" tab will be enabled.

In general, for all the types of item selection, independently of the tab in which they are found, there is a multi-selection box on the right called "Items selected", in which the items extracted from the "Items" box will be included. The supplier selected for the order, or the literal "Automatic" if there is no particular selection, is included on the "Selected items" list.

The "Delivery period" column is also included in this list, showing the envisaged delivery period for the selected supplier expressed in days. This cannot be changed. If there is no particular selection the literal "Automatic" will also be shown.

Also in a general way, in the lower left-hand part there is a list called "Items" which shows the items available for selection, on the basis of the particular filters defined in each tab, as explained below.

In the central part there are four buttons:

- "Add": includes the items marked in the "Items" list in the list of selected items. This operation can also be performed one by one, double clicking on each marked item.

- "Add all": includes the items on the "Items" list in the list of selected items.

- "Delete": deletes the marked items from the selected list. This operation can also be carried out one by one, double clicking on each item in the "Selected items" list.

- "Eliminate all": deletes all the items on the list from the selected list.

On all tabs, underneath the filter zones, there is a "Load items" button which executes the selection and loads the resulting items on the "Items" list.

The loading of items is conditional upon the type of proposal selected, bearing in mind that in the four cases the filtered articles whose definitions have the "Automatic restocking" box checked and "manager transfer order" box unchecked are included.

Lastly, and also in a general way, there are two more buttons:

- "Generate" in any of the four types of proposal, on clicking this button it is possible to generate a single proposal for each of the items, if they are ordered from the same supplier, or as many proposals as there are different items, if each is ordered from a different supplier. The selection of the destination supplier, unless set manually in the cases where this is allowed, will be calculated automatically.

- "Cancel" closes the dialog box and returns to "Automatic capture".

The selection of items appearing in the "Items" box situated in the lower left-hand part of the dialog box depends on the particularities of each tab, as described below:

Selection of items by supplier ("Supplier" tab)

Includes the following pull-down lists:

- "Supplier" in which the different suppliers defined in the company appear, and the literal "All", which is the default selection.

- "Product line" in which all the product lines defined for the supplier selected in the previous list are defined, together with the literal "All", which will be the value selected by default. This list will be disabled and the literal "All" selected if all the suppliers are selected.

There are also two further checkboxes:

- "Set supplier in order": this will only be available if a supplier was chosen on the previous list, i.e. if the selection "All" appears disabled. If this checkbox is activated it implies that all the items that are selected will be accompanied by the supplier in question. In those cases where items are selected without activating this checkbox in the list of selected items, the literal "Automatic" will appear.

- "Set delivery period": only enabled for order-point type proposals and if the checkbox above is activated. If activated, it should indicate in the box available the number of days envisaged as the delivery period. In this box (but only if it is available) the delivery period defined for the selected supplier is included by default. If this checkbox is activated it implies that all the items that are selected will be accompanied by the delivery period. In those cases where items are selected without activating this checkbox in the list of selected items, the literal "Automatic" will appear.

Selection of items by grouping ("Grouping" tab)

Includes the following pull-down lists:

- "Grouping": in which the different groupings defined in the company appear, together with the literal "All", which is the default selection.

- "Detail": in which all the grouping details defined for the grouping selected in the previous list are defined, together with the literal "All", which will be the value selected by default. This list will be disabled and the literal "All" selected if all the groupings are selected.

Selection of items by special offer ("Special offer" tab)

This tab contains the pull-down "Special offer" list on which the different special offers defined in the company are included (other than those in the "closed" state) together with the "All" literal, which is the default selection.

Selection of items by promotion ("Promotion" tab)

This tab contains the pull-down "Promotion" list, on which all the different promotions defined in the company are included (except those in the "closed" state and those which are not of the "By environment" type, i.e. those defined by department are defined, including the items in the department, and those defined by item, therefore including the items in the promotion). The list will also include the literal "All", which is the default selection.

Selection of items by range of items ("Item" tab)

Includes two text boxes, "From" and "To", to define the ends of a range of items.

Other operations with orders

The **Action** menu for the process contains the options needed to perform the maintenance of orders sent to suppliers. In other words, in addition to registering orders, this menu allows the following operations:

- **Modify:** only the observations and lines of orders which are in the proposal state may be varied.

- **Look up:** use this option to obtain information about orders, and obtain data regarding both the headers and lines, independently of their situation.

- **Delete:** orders can only be deleted when they are in the proposal state.

- **Print:** used to send the list of orders selected in the filter of the "Include" box to the printer. A previous view of the document is shown when this option is selected.

- **Cancel:** used to cancel orders in the issued state. As of this moment the order's state will become "cancelled". If required, a cancelled order can be reissued.

- **Confirm:** only orders in the "partially received" state can be confirmed. This would be if the decision were made not to wait for the rest of the merchandise to be received. When a partly received order is confirmed its state becomes "received in full" and the system asks for ratification by means of the "Confirmation of full reception of order" message. It then adjusts all the counters, such as units pending delivery, quantity ordered, etc.

- **Issue:** orders can be issued (by printing or transmitting) when they are in the proposed, issued (reissue) or cancelled states. In all of these three cases the order state is changed to "Issued".

- **Print proposal:** permits printing of an order proposal without the order going into the "Issued" state.

Delivery note entry

This process in the Merchandise management module handles aspects relating to the reception of merchandise and its associated documents, i.e. delivery notes.

All merchandise received at the store is accompanied by a delivery note. This is used for accounting, merchandise management and legal purposes, attesting to the delivery of the quantity of items requested from the supplier and their state. There are delivery notes for merchandise whose delivery is preceded by an order and for merchandise which is delivered periodically without an order being issued, as is the case for "direct suppliers".

SF-GV allows delivery notes in both paper and electronic form.

Types of delivery notes

Depending on their purpose, delivery notes may be of three types:

1. **Incoming:** delivery note for incoming merchandise received at the store, i.e. includes only the items that arrive.

2. **Return:** delivery note for return of merchandise, for whatever reason (defective goods, error in the delivery, etc.), i.e. exclusively for items that leave the store.

3. **Mixed:** contains accepted goods together with returns.

Delivery note status

A stock delivery note can be in either of the following states:

- **Not confirmed:** when it is already included in the system but has not been checked or accepted, thus the stock has not yet been updated.

- **Confirmed:** when the stock has been updated with the incoming or outgoing merchandise indicated on the delivery note by means of the **Confirm delivery note** option on the **Action** menu.

Delivery note registration

The process of validation of a delivery note is carried out in the case of both merchandise with a prior order and in that of direct entry merchandise for which no order was made.

To register incoming merchandise backed by a delivery note on the system:

1. From the **Orders and delivery notes** group, start the **Delivery note input** process.

   Initially the **Include** delivery note selection box will appear. In this dialog box you should select the company, supplier or range of suppliers, the status of the delivery notes (confirmed, not confirmed or both), the type of capture (manual, external, or both) the range of store entry dates on the delivery notes (by default the selection on the "To" field is the current processing date, and the "From" field is the first day of the month of the previous date). On pressing "OK" the main window is shown, displaying those delivery notes which match the search conditions.

Fig. 11.21 Main process window for management of incoming merchandise and associated delivery notes

2. Open the **Action** menu and select **New**.

The menu opens with the options **Manual capture** and **External capture**.

3. Select:

- **External capture,** to launch a server process which reads the file or electronic support of the delivery notes and incorporate them on the system.

- **Manual capture,** to enter the data on the delivery note received manually. On choosing this option the following dialog box appears:
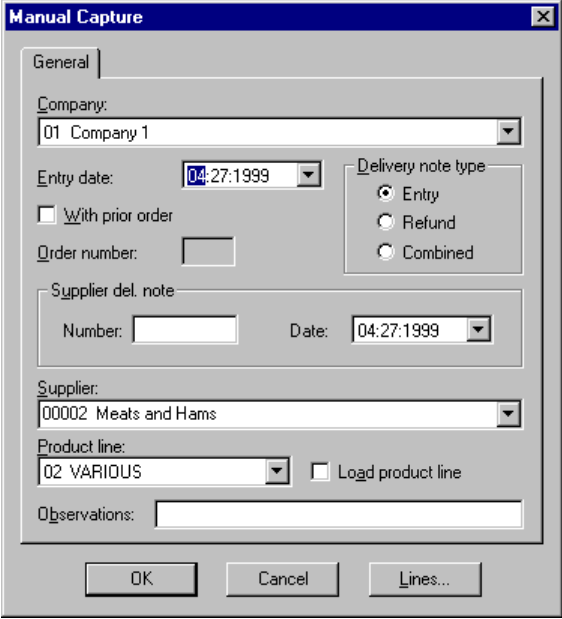
Fig. 11.22 Dialog box allowing manual entry of delivery note data

Complete the box as follows:

- "Company": select the company with which you are working.

- "Date of entry": type in the date of entry of the merchandise associated with the delivery note. By default the system process date is shown.

- "Delivery note type": select the type of delivery note: entry, return or mixed.

- "With prior order": check this box if the merchandise was delivered as a result of a prior order. Otherwise leave it unchecked in the case of direct entry merchandise.

  When this box is checked the "Order number" box is enabled (this box must be filled) and the "Supplier" and "Product line" boxes are disabled as they will be shown on the order.

- "Order number": type in the order number associated with the delivery note.

- "Supplier delivery note": type in the number and date of the supplier delivery note.

- "Supplier": select the supplier of the delivery note that has been delivered.

- "Product line": select a product line for the active supplier.

- "Load the product line"/"Load the order lines": the description of this checkbox will vary depending whether the "With prior order box" has been checked or not. If we are preparing a delivery note entry with a prior order and we activate this checkbox, when the "Lines" button is pressed we will find the order lines preloaded with the quantities requested (if the state of the order is partially received only the lines pending receipt will be loaded). If the delivery note entry is without prior order this checkbox offers the possibility that on pressing the "Lines" button the items belonging to the product line of the selected supplier will already be loaded.

- "Observations": enter a brief reference text for the delivery note.

- If the "OK" button is pressed without having entered the lines you will only create the delivery note header. This may be useful, for example, if you want to postpone entering the lines.

- If the press the "Lines" button you will access the dialog box below, where you have to define each delivery note line.
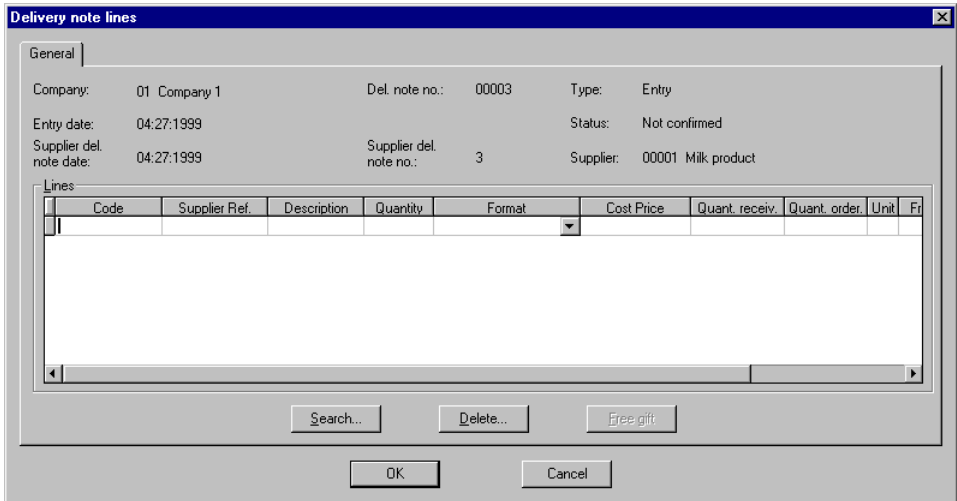
Fig. 11.23 Dialog box allowing entry of delivery note lines

The data shown will vary depending whether the delivery note has a prior order or not and whether the loading of order lines or supplier product lines was selected.

At the top you will find the following general information about the header of the delivery note with which you are working: company with which you are working, number (assigned automatically by the system), entry date, type and status of delivery note, order number (if applicable), supplier code and data relating to the delivery note (date and number).

Next, in the "Lines" box you will see the components of the delivery note in tabular form, or should enter this data. Only one line can be entered for each item code and format.

- "Code" or reference of item corresponding to the line.

- "Supplier ref.": reference used by the supplier for this item.

- "Description" of the item.

- "Quantity": number of units of the corresponding format being received or returned. In the case of a return the sign will always be negative.

- "Format" in which the item is received or returned. The default format will be used in the order line in the case of a prior order, otherwise the format defined as the service unit in the supplier's catalog will be used.

- "Cost price" if price details are required on the delivery note. This field is mandatory when the "Request cost price on delivery note" box is checked on the corresponding supplier's maintenance details.

- "Qty. received": the quantity received is obtained by multiplying the field "Quantity" by the number of units contained in the format.

- "Qty. ordered": number of units requested when ordering (only in the case of a prior order having been made).

- "Unit" of measure of item.

- "Free gift": can take values "Yes" or "No" and indicates whether the quantity received is to be billed or if it is free of charge.

- The "Search" button shows the dialog box "Search for item", the purpose of which is to locate the code of an item supplied by a given supplier by filtering by product line and description.

- The "Delete" button allows the deletion of the line of the table selected when it is clicked.

- On pressing the "Gift" button, the "Gift" field will automatically be filled with a "Yes" and the "Cost price" set to zero. This is the only case where two lines are allowed to have the same item and format, but one must be a gift and the other not.

4. Press the "OK" button; the delivery note will be created, with state "Not confirmed" and type "manual capture".

StoreFlow can manage orders and delivery notes from the central warehouse or from the store, but not both at the same time, because of the possible duplication of delivery note and order numbers.¤.

Other operations with delivery notes

As well as capture, manual or external, the following are possible from the **Action** menu of the main window:

- **Modify** the type of entry or return delivery note to mixed. It is also possible to change the creation date, the number and date of the supplier delivery note, the observations and the lines. This operation is only available if the delivery note has not been confirmed.

- **Look up** any delivery note independently of its status or type.

- **Delete** (only in the case of delivery notes in the "Not confirmed" state).

- **Confirm** that the delivery note status can be changed from "Not confirmed" to "Confirmed", i.e. that after checking it, the merchandise is accepted and the stock updated.

Incom. / Outg. Movements

In this section we will look at monitoring the merchandise that enters and leaves the company in an atypical way, i.e. outside the normal channels of supply and sale of merchandise and is therefore not associated with orders or delivery notes. When an anomalous situation occurs with respect to an item, an adjustment is applied to it which indicates whether it is necessary to increase or decrease the stock, and when the store is closed a server process is run which updates the stock in accordance with these data.

Normally these are internal movements of stock between stores (incomings and outgoings) and between the stores and the central warehouse (charges/payments).

Creation of a movement grouping

The atypical incomings and outgoings of merchandise must always belong to a higher entity. This entity is the movement grouping which gathers together the generic data for sets of movements.

To register an incomings/outgoings movement grouping on the system:

1. From the folder **Merchandise movements** start the **Merchandise incoming/outgoing** process.

   Initially the following movement grouping selection box will appear:

Fig. 11.24 Movement grouping selection box

2. Complete the dialog box shown above as follows:

- "Company": code of the company with which you are working.

- The "Grouping no." area has two boxes, "From" and "To" in which to set the range of grouping numbers. These fields are mandatory.

- The "date" area includes two text boxes, "From" and "To" which allow a range of dates to be entered. The default selection in the "To" field is the current process date, and the default in the "From" field is the first day of the month of the previous date.

- The pull-down lists "Source code" and "Destination code" allow the source and destination codes of the groupings to be selected. By default the literal "All" is selected.

- The list "Gr.Ref.No." contains all the groupings and movements that have been defined, together with the values "None" and "All". The latter is the default value.

- The "Origin" list includes the values "C. w/house", "Store" and "All". The latter is the default value.

- The list "Adjustment type" shows all the adjustment types defined, except those whose operation on stock is "Automatic". The initial value is "All".

- The "OK" button takes you to the main process window, which has a table with one line for each movement grouping fulfilling the conditions specified. This table shows the following information arranged in columns: grouping number, creation date, codes and descriptions of the source and destination of the movements contained in the grouping, type and description of the adjustment, origin (central warehouse or store), reference grouping number and observations.

3. Select the **New** option from the **Action** menu on the main screen of the process. The following dialog box will appear:

Fig. 11.25 Movement grouping registration box

4. Complete the box as follows:

- "Company": select the company with which you are working.

- "Date": indicate the date of creation of the grouping. By default the system process date is shown.

- "Source code" and "Destination code": indicate the source and destination of the movements contained in the grouping. All the places defined as possible sources and destinations appear in the pull down lists and in both cases any of them can be selected.

- "Type of adjustment": choose between the different types defined. The list includes the adjustment types available, except those whose operation on stock is "Automatic". It also includes the literal "None", which is the value selected by default. Bear in mind that if you have chosen an adjustment type for the grouping, all its movements will be assigned to this same type and no other type may be chosen. On the other hand, if the grouping is defined as "None", the moments can have an adjustment rate defined individually.

- Gr.Ref.No." choose the one that refers to the new grouping you are creating. By default the literal "None" is will appear.

- "Orig. movements", the value will be "Store", as this is what gives the source or creates the grouping.

- "Observations" enter any comment (alphanumeric) no longer than the defined field size.

- In the box "Incoming/outgoing movements", define the movements that make up the grouping one by one, using the dialog box accessed by pressing the "New" button, indicating the following data:

  - "Item": indicate the code of the item on which the movement operates (it must have stock management activated).

  - "Item desc." once the reference is indicated in the previous field the system automatically shows the description of the item.

  - "Quantity" indicate the number of units affected by the movement.

  - "Ut. measure": unit of measure of the item.

  - "Adjustment": indicate the adjustment code with which the stock will be updated. This will only be enabled if the adjustment type was not set for the corresponding grouping.

  - "Adjust. desc." once the code is indicated in the previous field the system automatically shows the description of the adjustment type.

  - "Updated" can take the values "Yes" or "No" and indicates if the stock is updated or not with the units indicated in this movement.

  - "Charged" and "Corrected" only contain data in the case of price corrections, in which case the adjustment is of type "Do not modify".

Moreover, on selecting any movement within the table, the "Observations" field shows the comment pertaining to this movement.

- Clicking on the "New" button or pressing the "Ins" key over the table accesses the "New movement" dialog, which allows a new incoming/outgoing movement to be created for this grouping.

- The "Modify" and "Delete" buttons are only available for those movements that have not yet been updated and allow the record in the table selected at the time to be changed or deleted.

5. Click on the "OK" button: this will register first the grouping and subsequently all its associated movements. At this moment the system asks for confirmation of the grouping created by means of the message "Do you want to update stock with the movements entered?". Depending on the response, the state of the grouping will be "Updated" or "Not updated".

   If you click on the "Cancel" button all the data entered will be discarded.

Other operations with movement groupings

As well as creating movement groupings, the following are also possible from the **Action** menu of the main window:

- **Modify:** it is only possible to modify the general details of the grouping (date, source code, destination code, adjustment type and reference grouping number), if all the movements are in the "Not updated" state. Otherwise, only the observations field may be edited and all the other fields will be disabled.

- **Look up:** any grouping may be queried regardless of its status.

- **Delete:** only groupings having all their movements in the "Not updated" state may be deleted.

- **Print:** a printout of the query performed is obtained.

- **Update:** the process of updating the groupings of incoming/outgoing movements consists of calling a server process which updates the corresponding stock of the items included in the movements. This action is only enabled for those groupings of incoming/outgoing movements whose movements are in the "Not updated" state.

   Once the option has been selected, the following dialog box will appear to ask for confirmation of the operation. This dialog box appears cyclically for each of the records selected in the main window, unless you click on the "All" button (visible and enabled only in cases of multiple selection), in which case all the selected groupings are updated without the need to ask for confirmation of each of them.
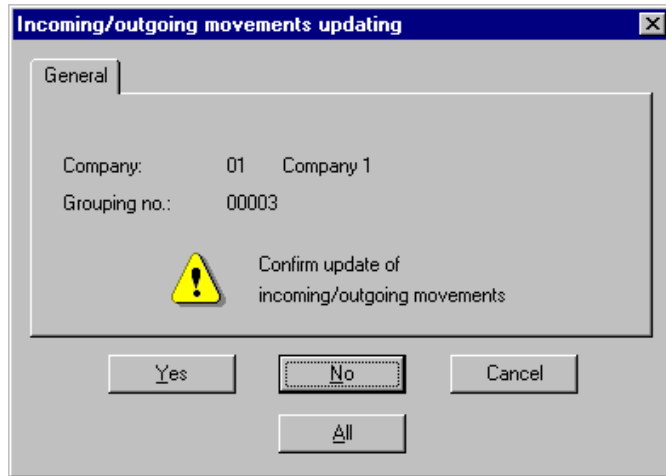
Fig. 11.26 Movement grouping update confirmation box

Inventories and counts

The correct management of a store demands knowledge at all times of the real stock available for sale. The calculation of current stock is obtained by incrementing or decreasing the number of units or quantity of the product obtained from the stock inventory operation, to which a correction or adjustment is applied before final closing.

The **Inventories and counts** process allows the creation of an inventory and looking up the items on it for the purposes of controlling stock in the store, and for the subsequent updating of stock where discrepancies are detected.

SF-GV allows you to perform inventories or counts. An inventory is a check on all the items in the store. A count is a partial inventory of a set of articles and is normally limited to a department or particular family of items. Therefore there can only be one inventory active or being closed, i.e. logically, when there is an inventory in any state other than closed no counts will be possible. Nevertheless, various counts can coincide, provided there is no intersection of items.

As a general rule, in descriptions any allusion to inventory refers both to inventories and counts, unless explicitly stated otherwise.

The most common process in stores is to carry out rotating counts so as to know at all times what stock of items is present.

SF-GV allows three methods or sources of data for carrying out inventories or counts:

- **Inventory data capture from the POSTs:** in this mode, by means of function 45 (Inventory capture) the items and quantities can be entered either through an optical reader or manually via the keyboard. In this case it is essential that the store be open and the terminals and inventory manager active.

- **Inventory data generated or captured from the client stations:** in this mode the inventory is obtained from the data entered manually from the SF-GV client stations.

- **Inventory data contained in a file:** which will be processed by means of external capture.

Typical sequence for taking an inventory

The typical sequence in which an inventory is carried out includes the following phases:

1. *Inventory registration:* in this phase, and from the **Inventories and counts** process, a new inventory is created. It takes the "Created" state.

2. *Close store:* in order to have the real stock.

3. *Item initialization:* in this phase, from the same process as before, the inventory for the first phase is initiated and the quantities or real stock of each item loaded.

4. *Open store.*

5. *Inventory monitor on the POST:* from the **Inventory manager** process, supposing that you want to update the inventory with the values entered manually from the POSTs (using POST function 45, Inventory capture), the server process which updates the values of the file ilog.dat, in which the state of stock is stored, is activated and closed daily.

6. *Inventory update:* in this phase the inventory is updated by means of manual capture or by adjustments.

7. *Close inventory:* from the **Inventories and counts** process the inventory is closed (the inventory manager must be closed).

8. *General or detailed inventory reports:* printed listings of the inventory state, or details such as the most frequently sold items over a range of dates or the mark-up on items, are generated.

Inventory status

An inventory can go through six states:

1. *Created:* when registered and the initial data have been defined and before entering stock data. Once created the inventory can only be initialized or deleted.

2. *Initialized:* the system enters the details of the inventory of current stock in the table in order to allow a contrast. The inventory must go into the initialization phase before starting data entry, and therefore before physically carrying out the inventory. Once initialized the inventory may only be deleted or data captured.

3. *With data:* the inventory is in this phase when it starts to be carried out and real stock data are entered. An inventory in the "With data" state allows data to continue to be entered and can also be adjusted, closed or deleted.

4. *With adjustments:* the inventory is in this state when the adjustments begin to be used to vary the total stock due to losses, damage, etc. This step is necessary in order to indicate to the system that the resulting inventory units do not coincide with those accounted by the system itself. "With data" and "With adjustments" are two states that can coexist, i.e. during the same count, one user can be adjusting the data for the items in one department while another is entering data for items in another department.

5. *Closure in progress:* once the data has been entered and the required adjustments carried out, if the system goes down for any reason before the inventory close was finished, it will go into this intermediate state in which it will not be possible to enter more data or make more adjustments.

6. *Closed:* the inventory is in this state when it has been closed because the adjustments necessary have been carried out and accepted as valid before stopping work on it. It is in this state that SF-GV updates the stock of items with the quantity actually counted.

Moreover, an inventory in the active state allows counting or adjustment data. That is to say, this state groups together the counts initialized, with data and with adjustments.

Registration of inventories/counts

This process allows you to create a new inventory and register the basic data to initialize it before actual execution.

To create a new inventory:

1. From the **Inventory** group, start the **Inventories and counts** process.

Initially the inventories and counts selection box will appear, **Include,** in which the company and inventory status should be chosen. On pressing "Accept" the main window is shown, displaying those inventories which match the search conditions.

Fig. 11.27 Main window of the Inventories and counts process

Each row in the table corresponds to an inventory and the following data are shown: inventory number (which the system assigns to it automatically in the moment it is created), type (inventory or count), start date, close date, description, state (created, initiated, with data, with adjustments, close in progress, or closed) and observations.

The **View** menu includes the option **View adjustments**, which allows you to see special columns of adjustments that will be indicated when appropriate. So that this option can be used, the corresponding permission must be given by the **User authorizations** process of the Basic module.

2. Open the **Action** menu and select the **New** option. This will only be active if there is no general inventory in a state other than closed. Remember that only one open inventory can exist per company, although several counts can be open at a time.

The inventory registration dialog box will appear.
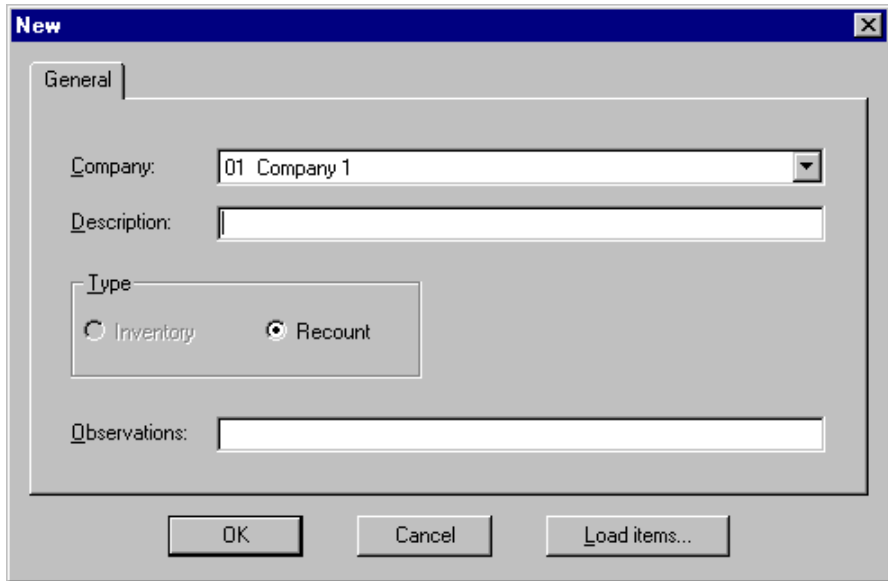
Fig. 11.28 New inventory registration box

3. Complete the box as follows:

- "Company": select the company in which you are going to create the inventory.

● "Description": brief reference text about the inventory.

● "Type": choose the corresponding option. This may be inventory (stock of all the items in the company) or count (stock of a set of items, for example, those in a department). If there is already an inventory or count in a state other than closed, the "Inventory" button will be disabled.

● "Observations": annotations that you want to incorporate in the inventory.

4. Click on "OK" or "Load items".

● If it is a count and you click on "OK" without having assigned any items you will create the header of an empty count.

● "Load items": click this button (only active in the case of counts) in order to access the dialog box of the same name. This dialog box, which is explained in more detail in the following section, allows you to select the items that are to be counted.

Other operations with inventories/counts

The **Action** menu for the process contains the options needed to perform the maintenance of inventories and counts. In other words, in addition to registering the inventory, this menu allows the following operations:

● **Print:** allows you to print out the data currently shown in the main window.

● **Modify:** it is possible to change the description and observations. In the case where the state is "Created" the "Load items" button will be enabled so items can be added to or deleted from the count.

● **Delete:** only available when the inventory manager is stopped or closed and only counts whose states are "Created", "Initialized" or "Closed" can be deleted.

● **Initialize:** to initialize the inventory or count it has to be in the "Created" situation and the store must be closed, as it is when the store is closed that the process of updating with sales details takes place and so the actual stock is known. It must also be the case that there is not inventory in a state other than "Closed" and in the case of inventories, nor may there be any count in any state other than closed.

To reiterate slightly, remember that the difference between initialized and created is that in the initialized case the theoretical stock data are available and it is possible to start entering data manually from maintenance, a POST or an external file.

- **Close:** in order to close an inventory or count it is necessary (obligatory) that the inventory manager at the POST is closed in order to be sure that it is not trying to write data to the inventory that you are trying to close. Also, the inventory must be in the active state, with adjustments, with data or close in progress (if the state is initialized it is enough to delete it).

  The adjustment type used for an inventory close must always be "Automatic" as a quantity greater or smaller than that indicated in the theoretical stock may be found, thus it may be necessary both to increase or decrease the stock (only this adjustment type allows both).

  When an inventory is closed the stock is updated, such that the count becomes the theoretical stock.

- **Capture query:** the dialog box shown is the same as that for manual data capture explained in this section. However, it is essential here to underline the importance of using this option when you only want to look up the data a in this way you do not block the count.

- **Load items:** the dialog box shown below can be accessed either by the option **Load items** on the **Action** menu, or by clicking on the button of the same name on the count registration and modification boxes. This option will also be available when the type is "Count" and the state "Created".
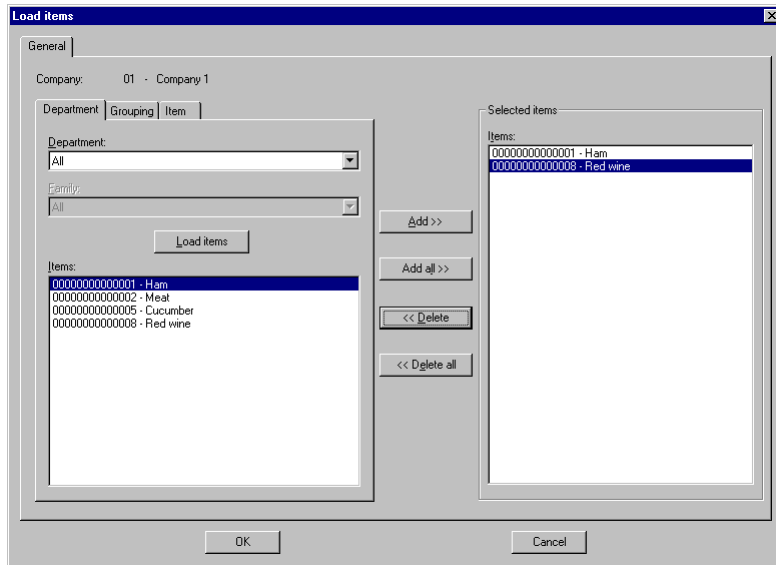
Fig. 11.29 Dialog box assigning items to a count

The upper part of the box shows the code and description of the company with which you are working.

There are three selection criteria for items, which are set out on the tabs: Department, Grouping and Item.

In general, for all the types of item selection, independently of the tab in which they are found, there is a multi-selection box on the right called "Items selected", in which the code and description of the items extracted from the "Items" box will be included.

Also in a general way, in the bottom left-hand part of the box there is an "Items" list which shows the items available for selection as a function of the particular filters set on each tab. These must also have stock management activated and not belong to any other unclosed counts, as explained below.

In the central part there are four buttons:

- "Add": includes the items marked in the "Items" list in the list of selected items. This operation can also be performed one by one, double clicking on each marked item.

- "Add all": includes the items on the "Items" list in the list of selected items.

- "Delete": deletes the marked items from the selected list. This operation can also be carried out one by one, double clicking on each item in the "Selected items" list.

- "Eliminate all": deletes all the items on the list from the selected list.

  On all tabs, underneath the filter zones, there is a "Load items" button which executes the selection and loads the resulting items on the "Items" list.

Lastly, and also in a general way, there are two more buttons:

- "OK" on clicking this button the count goes into the "Created" state.

- "Cancel" closes the dialog box returning to the registration box or the main window, depending on the point of origin.

The selection of items appearing in the "Items" box situated in the lower left-hand part of the dialog box depends on the particularities of each tab, as described below:

Selection of items by department ("Department" tab)

Includes the following pull-down lists:

- "Department" in which the different departments defined in the company appear, and the literal "All", which is the default selection.

- "Family" in which all the families defined for the department selected in the previous list are included, together with the literal "All", which will be the value selected by default. This list will be disabled and the literal "All" selected if all the departments are selected.

Selection of items by grouping ("Grouping" tab)

Includes the following pull-down lists:

- "Grouping": in which the different groupings defined in the company appear, together with the literal "All", which is the default selection.

- "Detail": in which all the grouping details defined for the grouping selected in the previous list are defined, together with the literal "All", which will be the value selected by default. This list will be disabled and the literal "All" selected if all the groupings are selected.

Selection of items by range of items ("Item" tab).

Includes two text boxes, "From" and "To", to define the ends of a range of items.

- **Manual capture/Capture query:** the dialog box shown below can be accessed from the corresponding option on the **Action** menu. Moreover this option will always be available in the case of a query or of a capture when the state of the selected inventory is "Initiated", "With data" or "With adjustments".

Although the data shown in the case of capture and query are the same, it is important not to use the manual capture option when all you want is information about the count as doing so blocks other users, unlike the query option.
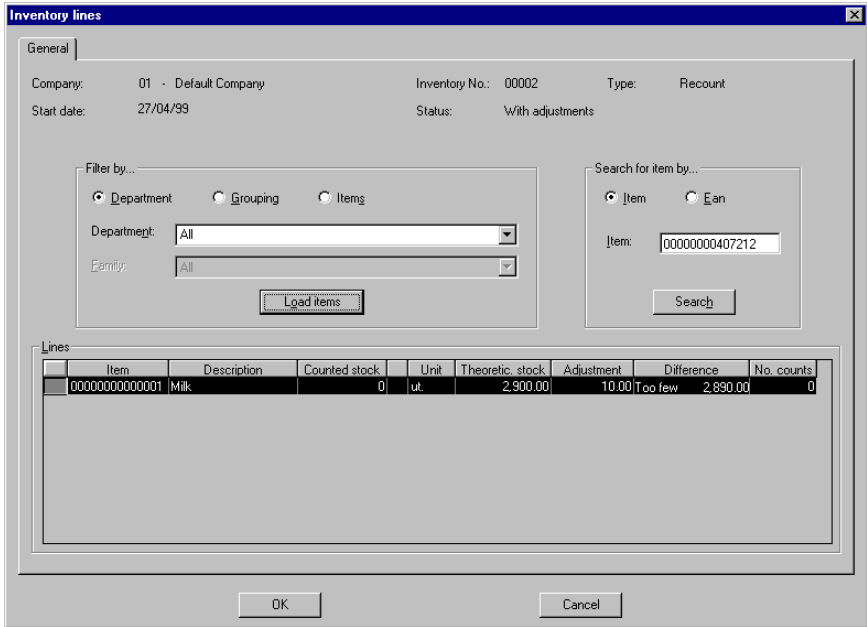
Fig. 11.30 Inventory lines box

The upper part of the box shows the general details of the inventory: code and description of the company with which you are working, number and type of inventory, start and end date (if applicable), status, description and observations.

Underneath this area there are three boxes:

● "Filter by …": enables a selection of items for inclusion in the "Lines" box. There are three selection criteria for items: Department, Grouping and Item. Depending on this selection the elements of the box change: "Department" and "Family", "Grouping" and "Detail", "From" and "To".

In this box there is also the "Load items" button, which, depending on the selection made, loads the inventory lines into the table in the "Lines" box.

● "Search for item by…": enables a search for the items contained in the "Lines" box in order to place the cursor directly over an item indicating either its reference or its EAN code. This is extremely useful in the case of counts dealing with a lot of items and, in particular, in the case of inventories, which can become unmanageable.

On clicking on the "Search" button the search is carried out on the filtered items present in the "Lines" table. If it is not possible to locate it, an error message , "Item not present in the selection", will be shown.

- "Lines" shows the lines of the count that fulfil the search conditions set in the filter. This table consists of the following columns:

  - "Item": reference code.

  - "Description" of the item.

  - "Counted stock" number of items the operative has counted. When working with formats the "…" button is available (calculator).

  - "Unit" of measure of item.

  - "Theoretical stock": number of units the system believes exist.

  - "Adjustments": number of units the operative has found damaged.

  - "Difference": number obtained by subtracting the counted and adjusted quantity from the theoretical stock.

  - "No. counts": shows the number of times you have entered to count the same line of the count.

  - On clicking "OK", if the situation before entering was "Initialized", the state becomes "With data". In all other cases it remains unchanged.

The last four columns will only be visible if the option **View adjustments** is activated on the **View** menu of the main screen.

- **External capture:** permits entry of the count data from an external file and is only enabled if there is an inventory in the "Initialized", "With data" or "With adjustments" state. This option limits itself to calling a server process which reads the file and incorporates the data on the system. As it reads the file the system knows what count it should add each line to as any given article can belong to only one active count. Therefore, an external file can include items counted in different counts.

  It is possible to do part of a count using the external capture and continue it with a manual capture, i.e. it is possible to combine both modes and data capture from a POST.

● **Adjustments/Adjustment query:** the dialog boxes for adjustment creation and query are very similar, so only the registration box is shown here.

When creating an adjustment you are indicating to the system how many units less have been considered of each item in the count and the reason (breakage, poor appearance, expiration, etc.). To do this, and so in order to be active, it is necessary that the state of the inventory selected is "Initialized", "With data" or "With adjustments"; in the case of a query this option will be enabled for inventories in any state except "Created" or "Initiated".
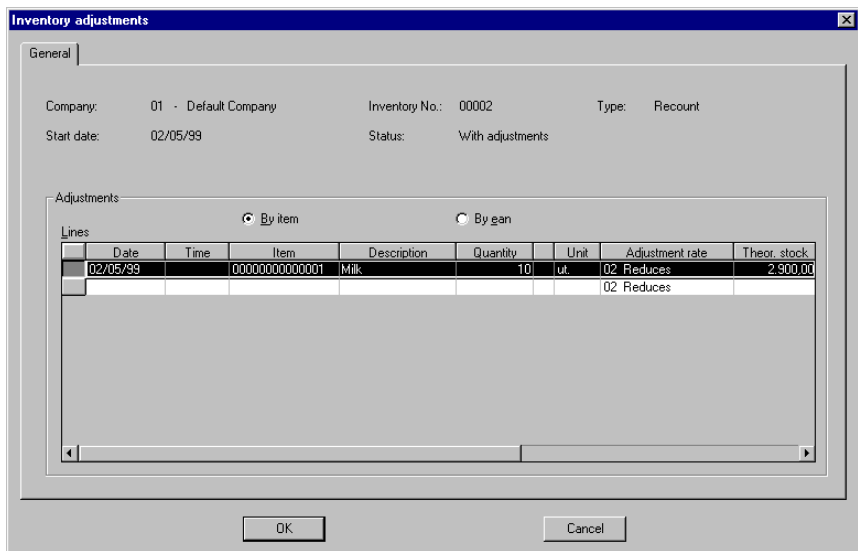
Fig. 11.31 Inventory adjustment creation dialog box

The top part of the dialog box shows the general details of the inventory in question: "Company", "Inventory no.", "Type" (inventory or count), "Start date", and "End date" (if applicable), "Status", "Description", and "Observations

Next the "Lines" box appears, in which the mutually exclusive option buttons "By article" and "By EAN" are initially shown. These define the way in which the items are entered in the following table, which has the following columns:

● "Date" and "Time" of the adjustment, set automatically by the system.

- Item", which allows the item's reference or EAN to be entered, depending on which of the previous buttons was selected. In the case of an EAN the system shows the code of the item associated with the EAN entered, replacing the entry made by the user. In the case of an item that does not belong to the inventory being handled, the system shows the "Item does not belong to inventory" error message and the insertion of the item is cancelled. If the data is valid, finally the description of the item is shown in this column.

- Quantity" allows entry of the adjustment quantity, and also includes the "…" button (calculator).

- "Unit": shows the unit of measure of the item.

- "Adjustment type": only those types of adjustment whose effect is to reduce stock are possible (by default that with the lowest code will be selected).

- "Theoretical stock": shows the number of items the system believes exist.

- "Counted": shows the total quantity counted.

- "Difference": calculated subtracting the quantity counted and the adjusted quantity from the theoretical quantity. In the case of a positive difference, the literal "Lacking" is shown, followed by the calculated value. Otherwise, the literal "Excess" is shown, also followed by the value.

The last four columns will only be visible if the option **View adjustments** is activated on the **View** menu of the main screen.

The records entered in the table cannot be edited or deleted once validated.

It is possible to enter more than one adjustment line for the same item.

The first time adjustments are entered for an inventory, on pressing the "OK" button, the state changes from "Initialized" or "With data" to "With adjustments". This status prevails even when count data are subsequently entered.

Inventory monitor on the POST

Before going in depth into the POST Inventory monitor (MDI) it is worth pausing a moment to briefly explain the Inventory manager.

Basically its functioning can be schematized in the following way: when function 45 is used, point of sale terminals store the information online from the counts they perform in a log file called ilog.dat located on the server. The inventory manager is a server program that reads the log to translate the information held and store it in inventory tables or inventory error tables. These tables are also located on the server, where the client stations can use them.

The **POST Inventory monitor** is a process whose main aim is to start the manager and monitor its status.

The following two conditions must be met in order to be able to activate the inventory manager:

1. The store must be open, so that the point of sale terminals can save data in the ilog.dat file.

2. There must be at least one inventory or count active and in a state that allows data, i.e. initialized, with data or with adjustments.

To access the **POST Inventory monitor,** select the process of the same name in the **Inventory** folder. The following window will appear:
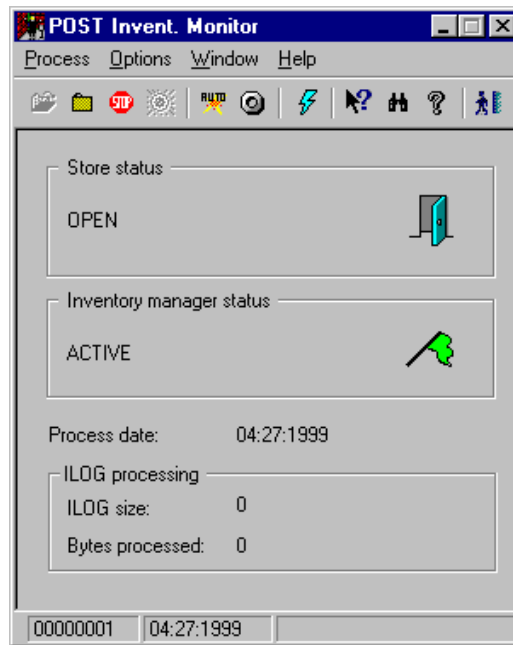
Fig. 11.32 Main window of the POST inventory monitor

On opening the monitor the following information is given:

- Store status: open or closed.

- Inventory manager status:

  - Active: when it is processing the ilog.dat file.

  - Closed: not recording; moreover the previous ilog.dat finished processing and closed definitively.

  - Stopped: temporarily not recording to the log, but the same file is kept, i.e. when reactivated the system will continue recording to the same ilog.dat file.

  - Closing: when the manager receives the order to close, it does not allow more data to be recorded in the ilog.dat but finishes processing its contents.

  - Stopping: the same as closing, but the order received was to stop not close definitively.

- Process date.

● State of file ilog.dat, indicating the total volume in bytes of the inventory log and the amount already processed, i.e. passed to the tables by the inventory manager.

To control the state of the inventory with respect to the readings from the POSTs, open the **Process** menu and select the option:

● **Opening:** at this moment the ilog.dat file is being prepared. This option is only accessible if the store is open.

● **Closure:** stops the inventory manager process, updating the corresponding values of the ilog.dat file.

● **Stop:** as above, but with the possibility of restarting the process.

● **Resume:** resumes a previously stopped update process.

If you want the update to be carried out automatically, open the **Options** menu, select **Automatic update** (to activate it) and then the **Update configuration setting**. This gives access to a box in which it is possible to define how often (in minutes) the data are to be renewed. This is shown by the POST Inventory monitor.

Supplier promotions

Supplier promotions are intended to encourage sales of the items they supply. For this purpose campaigns are run offering customers discounts or reductions on the total value of their purchase or for the purchase of specific items.

This process allows the maintenance of the supplier promotions table used by the point of sale terminals to apply the promotions.

All the concepts relating to promotions are explained in a general way in the section "Special offers and promotions" in the chapter "Item management". Therefore we will only look here at a particular type of promotion, namely those offered directly to customers by suppliers.

The general procedure for registering a supplier promotion is as follows:

1. From the **Supplier promotions** group, start the process of the same name. The main process window will appear.

Fig. 11.33 Main window of supplier promotion maintenance

Each of the rows of the table contains the following information on promotions: code and description of the supplier with whom the promotion has been agreed, code and description of the promotion and its validity period.

Double clicking any of the lines of the table will bring up the **Modify** dialog box.

2. Access supplier promotion registration, selecting the **New** option from the **Action** menu. The following dialog box will appear.
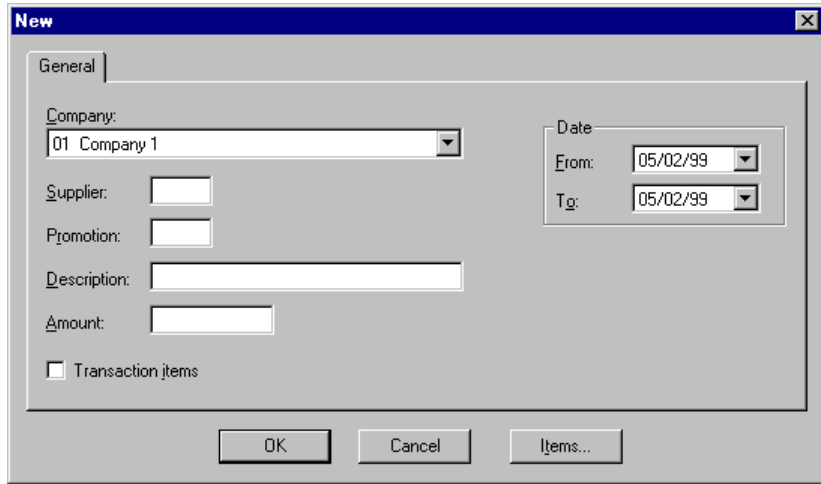
Fig. 11.34 Supplier promotions registration box

3. Fill out the dialogue box shown above as described below (follow the stated order when completing the fields):

- "Company": select the company which is going to register the promotion.

- "Supplier": code of the supplier carrying out the campaign.

- "Promotion": type in an internal identification code for the promotion (up to 6 digits).

- "Description": reference text about the promotion.

- "Amount": the quantity the customer will receive as a bonus or discount.

- Check "Transaction items" if you want the promotion to involve specific items. These items should be selected using the "Items" button.

- "Date": specifies the period during which the promotion is valid.

4. Click the "Items" button to associate items to the promotion. The following dialog box will appear.
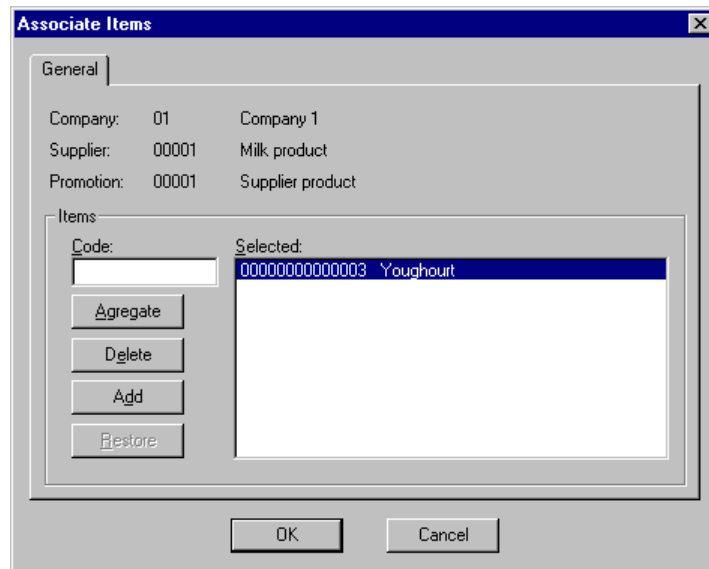
Fig. 11.35 Associate items with supplier promotion dialog box

The dialog box shows the code and description of the company with which you are working, together with the supplier and promotion data.

5. Enter the item reference and click the "Add" button to include it in the promotion. Or click the "Include" button. This will bring up the "Include" dialog box, allowing you to include an item grouping or all items related with a family within a department. As you select items for inclusion in the promotion they will appear on the "Selected" list.

    If you want to remove an item from the promotion, select it from the "Selected" list and click on "Delete". This button is not enables unless at least one article has been associated with the promotion.

    The "Restore" button allows you to undo all the changes made so far using the dialog box. It is not enabled until an operation has been performed.

6. If you click the "Include" button in the previous step you will access the dialog box described in the "Include dialog box" subsection of the "Promotions and special offers" section of the chapter on ➤ "Item management".

7. Clicking "OK" several times closes all the dialog boxes opened up until the completion of the registration.

Merchandise Management reports

Apart from merchandise management proper, this module makes it possible to obtain various types of listings, which are available whenever they are required during the working day: Although the generation of printed information belongs to area called **Daily operations** and **Periodic operations** in the previous figure, owing to the large number of reports available (18 grouped into six processes), they have been extracted to a different section

On entering any of the six report processes the main window will be shown, with the working area empty. Subsequently, once the type of report has been chosen and the selection criteria set, it is in this working area that the generated listing is shown. The report is displayed in full screen mode, with improved editing and zoom possibilities.

Given that the retrieval of queried information is not an immediate procedure, the **Action** menu gives the possibility of accessing the five last reports requested directly.

Supplier reports

This process is responsible for issuing supplier reports, permitting the production of both printed listings and independent files.

Thus, from the **Supplier reports** process it is possible to obtain two types of reports:

Supplier listing

Allows the creation of a listing of suppliers, including supplier product line and catalog data if required. In other words, this process can give a listing of:

- only the details of the selected suppliers

- all the product lines of each supplier selected

- the catalog, grouped by product lines, of each supplier selected

If the maximum level of detail (supplier catalog) is included the data shown are the following: supplier range, type of service and its description, supplier code and company name, telephone, e-mail, fax, contact person, type of service,

delivery period, product line and its description, telephone, contact person, item, supplier reference and its description, default order format, unit of measure, date of last entry and last purchase price.

In this case a page jump is generated for each supplier listed.

Supplier entry

Enables the creation of a supplier listing showing the data in a format allowing a printed file of supplier to be generated.

Each of these entries contains the following data: supplier code, company name, company, address, town/city, province, postal code, telephone 1, telephone 2, modem, e-mail, fax, contact person, issue mode, type of service, date of last entry, delivery period, zero set units pending sale restocking, request cost price on delivery note, delete order on issue, and allow product lines to be mixed on delivery note.

The criteria used to filter the data so as to obtain the reports are very similar in both cases and so are only shown once here.
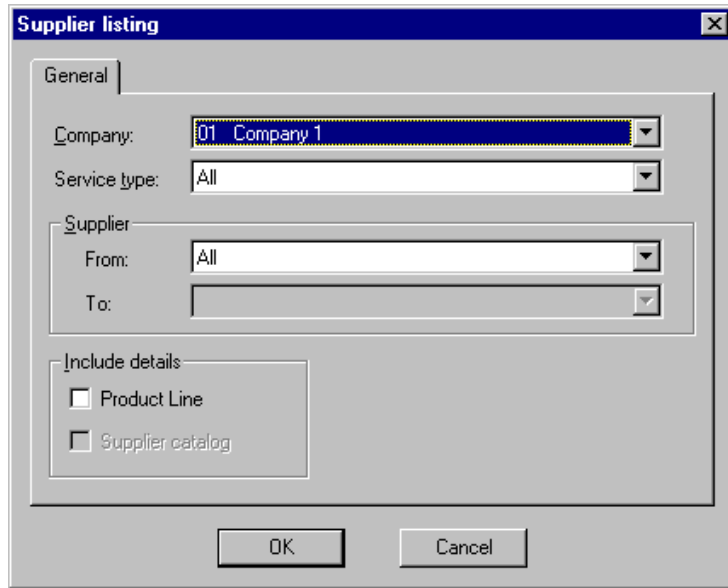
Fig. 11.36 Selection criteria for obtaining supplier reports box

You have to select the company you are working with and on the pull-down list, "Type of service", you should indicate if you want to list suppliers who deliver merchandise only to the central warehouse, only to the stores, or to both locations, or all suppliers (the latter is the default option).

To indicate if you want a range of suppliers, the "Supplier" box contains two pull-down lists, "From" and "To", which contain all the suppliers defined for the company. In addition, the first list includes the literal "All", which is the default selection and in which case the "To" list is disabled. In the case where a specific supplier is selected from the "From" list, the "To" list will show only those suppliers whose code is equal to or higher than the first.

Lastly, the differences in each case are:

- In "Supplier listing" you have the possibility of requesting, by indicating in the "Include details" box, that in addition to the basic supplier details you also want their product lines included and also, whether within each product line you want a list of all the items of which it is made up. By default neither of these boxes are selected and the second, "Supplier catalog" will only be enabled if the first, "Product line" has been checked.

- In "Supplier records" the "Records per page" control should be used to set the number of records that will be included on each page. The possible values are: 1, 2 and 3, and the default value is 1.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Order reports

In the day-to-day running of the company you frequently need to consult listings of the orders made. SF-GV offers this utility through the **Order reports** processes.

This process allows you to obtain a listing of all or part of the elements of interest, always at the level of the company you are working with, filtered by the main order parameters.

From the **Order reports** process it is possible to obtain four types of report:

Items under normal stock

Allows a list to be created of all those items whose current stock is less than the normal or minimum stock set for them.

The data furnished depend on the selection made in the filter. In its broadest form these data are: department range and family range or range of groupings and range of details, department code and description, family code and description or grouping code and description, detail code and description, item code and description, maximum stock, normal stock, current stock, units pending sale restocking, pending issue, pending delivery, order point and unit of measure.

Also, a page break is included for each department/family (grouping/detail) listed.

On choosing this option the following criteria-selection dialog box appears:
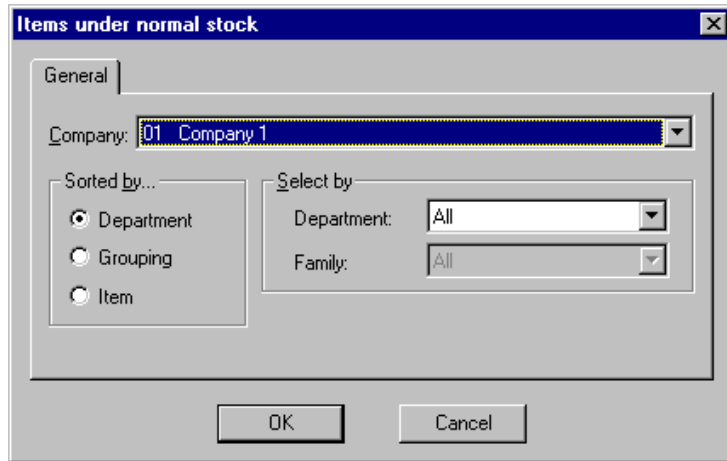
Fig. 11.37 Dialog box for selection criteria for listing of items under normal stock

The company with which you are working should be selected. The items can be classified by:

- Department, selecting all or only one, and within this one family or all.

- Grouping, selecting all or only one, and within this one detail or all.

- Item, selecting a range of references.

The state and content of the "Selected by" box will depend on the selection made in the "Ordered by" area.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Listing for manual order

Enables the creation of listings that can be given, for example, to the various departmental heads, so that they can fill out manually the quantities of the different items and then, within a set number of days, pass it on to the store manager for him/her to place the order.

On choosing this option the following selection criteria dialog box appears:

Fig. 11.38 Selection criteria for obtaining order listing box

You should select the company with which you are working, the type of service on the basis of which the suppliers will be filtered in the pull-down list that follows. In this list you should select the supplier and choose a range of product lines, or all product lines, in which case you should choose a range of items. The line spacing of the report should also be selected.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Listing of capture errors

Enables the creation of a listing of the error data generated during external order capture, whether from the POST or a file. This report furnishes the following information: date of error, capture number, order number, code and description of supplier, code and description of item, supplier reference, quantity ordered, code and description of format and description of error.

On choosing this option the following selection-criteria dialog box appears:

Fig. 11.39 Selection-criteria dialog box for obtaining a listing of capture errors

You should select the company and range of capture dates ("From" and "To") being consulted. The default selection in the "To" field is the current process date, and the default in the "From" field is the first day of the month of the previous date.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Order listing

Allows the creation of a listing or orders, showing the details of the items ordered, and enables a breakdown of their formats to be included.

The information provided varies in the following way, depending whether it is a proposal or an order:

- Proposal: department, family, grouping, detail, order number, supplier, creation date, capture type, observations, item, maximum stock, normal stock, current stock, pending, sale restocking, pending issue, pending delivery, order point, quantity ordered, format, total quantity, and unit of measure.

- Order: department, family, grouping, detail, order number, supplier, creation date, date of issue, date of delivery, capture type, status, observations, item, quantity ordered, quantity delivered, quantity pending, format, total quantity and unit of measure.

Also, a page break is included for each order listed.

On choosing this option the following selection-criteria dialog box appears:

Fig. 11.40 Selection-criteria dialog box for obtaining a listing of orders

First, you should select the company you are working with and, in the pull-down menu, you should choose between the following order states: proposed, issued, partially received, fully received, and cancelled (the value "All" is not allowed).

Seven options are shown in the "Order by" area: "Order no." (default selection), "Supplier", "Department/Family", "Grouping/Detail", "Creation date", "Issue date" and "Entry date" (the latter two are disabled in the case of proposals).

The "Order no." area allows you to enter a range of order numbers ("From" and "To"). Initially they will contain the maximum and minimum values allowed (00001 and 99999).

In the pull-down list "Supplier" you should select one or all of the suppliers.

Next there are three boxed areas: "Creation date", "Issue date" and "Delivery date" each of which contain two edit boxes, "From" and "To", permitting a range of dates to be entered. The default selection in the "To" field is the current process date, and the default in the "From" field is the first day of the month of the previous date. The "Issue date" and "Delivery date" areas will be disabled if the order is still a proposal.

If the status of the order is "Issued", "Expected delivery date" will appear instead of "Delivery date".

Lastly, it is possible to detail the formats of the items if required.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Delivery note reports

In the day-to-day running of the company you frequently need to consult listings of the delivery notes received. SF-GV offers this utility through the **Delivery note reports** processes.

This process allows you to obtain a listing of all or part of the elements of interest, always at the level of the company you are working with, filtered by the main delivery note parameters.

From the **Delivery note reports** process it is possible to obtain three types of report:

Delivery note listing

Allows a listing of delivery notes to be created in which details of their lines can be included.

The data furnished depend on the selection made in the filter. In its broadest form these data are: range of departments, range of families, range of groupings, range of details, department, family, grouping, detail, range of delivery note numbers, range of entry dates, range of order numbers, range of suppliers, range of supplier delivery note numbers, range of supplier delivery note dates, delivery note number, entry date, delivery note type, supplier, product line, order number, type of capture, status, supplier delivery note number, supplier delivery note date, total value of purchase, total value of sale, percentage margin, observations, gift, item, supplier reference, quantity received, item format, quantity of units received, unit of measure, purchase price, sale price, total purchase value per line, total sale value per line, and percentage margin.

On choosing this option the following dialog box, enabling the data to be filtered, will appear:

Fig. 11.41 Selection-criteria dialog box for obtaining a listing of delivery notes

As always, the first thing that should be selected is the company with which you are working, then, using the pull-down list, one or all suppliers should be chosen (the latter being the default selection).

The boxed area, "Internal delivery note", allows you to enter a range of delivery note numbers ("From" and "To"). Initially they will contain the maximum and minimum values allowed (00001 and 99999).

You can also indicate whether you want to list the delivery notes corresponding to a particular range of prior orders, and as in the previous box, this initially takes the limit values permitted.

The boxed areas, "Entry date" and "Supplier delivery note date", each contain two edit boxes, "From" and "To", permitting a range of dates to be entered. The default selection in the "To" field is the current process date, and the default in the "From" field is the first day of the month of the previous date.

You can also filter the data by indicating the type of capture and the status of the delivery notes.

If the "Include details" box is checked, it will be possible to order the delivery notes in the listing by department and family or by grouping and detail.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Delivery note report

Enables the creation of a report in document format, that shows the following delivery note details: delivery note number, entry date, supplier code and description, order number, type and description of capture, supplier delivery note number, delivery note type and description, date of supplier delivery note, product line and description, observations, status, product line, gift, code and description of item, supplier reference, quantity received, item format, quantity of units received, unit of measure, purchase price, sale price, total purchase value, total sale value and percentage margin.

A page break is inserted after each delivery note listed.

The selection-criteria dialog box is similar to that of the previous report, with the difference that here details cannot be included.

Errors in external capture

Enables the creation of a listing of the following error data, generated during the capture of delivery notes from files: date of generation of error, capture number, delivery note number, entry date, supplier, order number, product line, supplier delivery number, date of supplier delivery note, gift, item, supplier reference, quantity received, item format, purchase price and text describing the error.

On choosing this option the following selection-criteria dialog box appears:
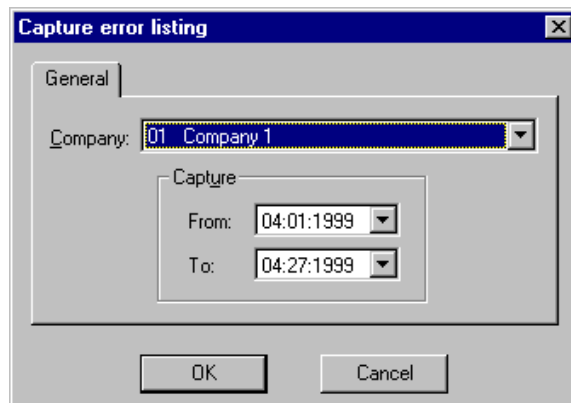
Fig. 11.42 Selection-criteria dialog box for obtaining a listing of delivery note capture errors

You should select the company and range of capture dates ("From" and "To") being consulted. The default selection in the "To" field is the current process date, and the default in the "From" field is the first day of the month of the previous date.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Inventory reports

Once an inventory has been taken, SF-GV offers you the possibility of generating various on-screen reports with various levels of detail.

From the **Window** menu, using the **View adjustments** option, it is possible to include the data considered confidential in the different reports and which refer to stock adjustments and theoretical stock data. Initially the option appears disabled, but it is possible to select it in the normal way if the user has sufficient authorization.

Thus, from the **Inventory reports** process it is possible to obtain five types of reports:

Items for count

Enables the creation of a listing in which the items that are going to be accounted are shown, leaving enough space for the operative to simply fill in the amount counted manually. Thus, the data furnished are the following: inventory number, type of inventory, start date, observations, department, family, grouping, detail, item, item EAN, quantity associated with the EAN, quantity counted and unit of measure.

Also, there is a change of page for each department/family (grouping/detail), as well as for each inventory.

On choosing this option the following selection-criteria dialog box appears:
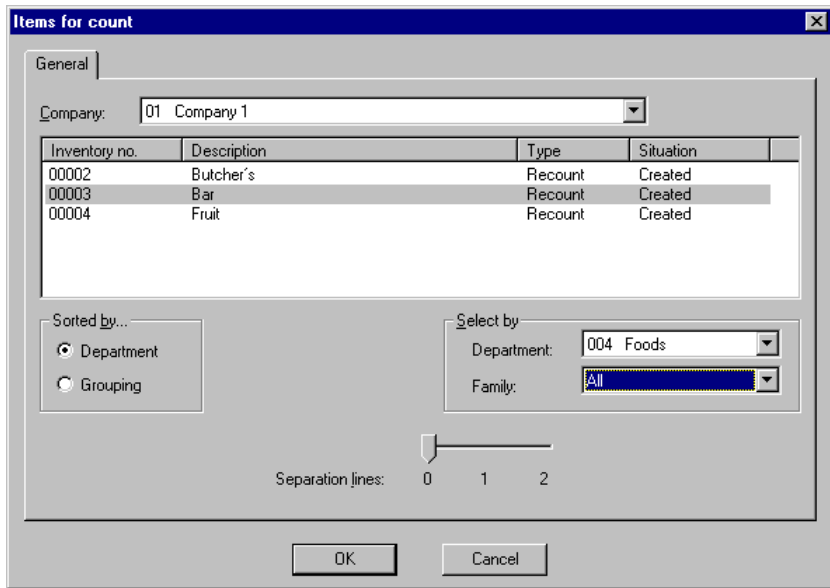
Fig. 11.43 Selection-criteria for listing of items for count

First your should select the company with which you are working.

Next choose one or more of the inventories on the associated table showing just the inventories defined the company whose states are: "Created", "Initiated", "With data", or "With adjustments", as these are the only states in which item accounting may be performed. From each inventory the following data are furnished: inventory number, description, type (Inventory or Count) and status.

In the boxed area, "Ordered by", you should select whether you want the items to be classified by "Department" or by "Grouping".

The content of the boxed area, "Selected by", depends on the selection made in the previous ordering box, showing the details of the departments and families, or groupings of items and grouping details.

These boxed areas will only be enabled if a simple selection has been made from the list of inventories.

Lastly, the line spacing of the report should also be selected.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Capture errors report

Enables the creation of a listing of the error data generated during external inventory capture, whether from the POST or a file. This report furnishes the following information: date of generation of the error, capture number, inventory number, item, item EAN, quantity associated with the EAN, quantity counted, adjustment type and description of error.

The faults may be due to various causes, such as for example, the format of the file being incorrect; or, when the manager tries to save to the table it is found to be locked and so a message is written to the error table; or incorrect data, either because an item does not belong to the store or because it does not belong to any active inventory, etc.

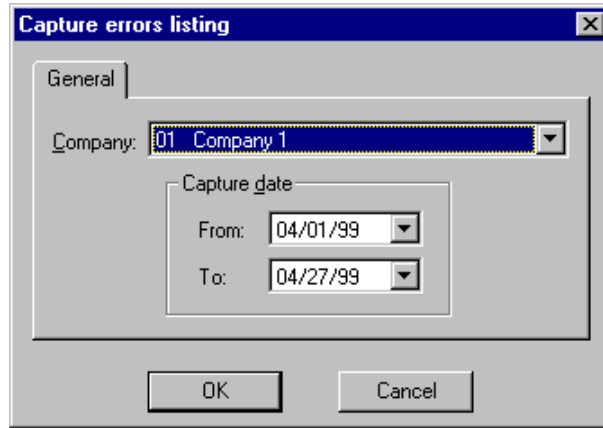On choosing this option the following selection-criteria dialog box appears:
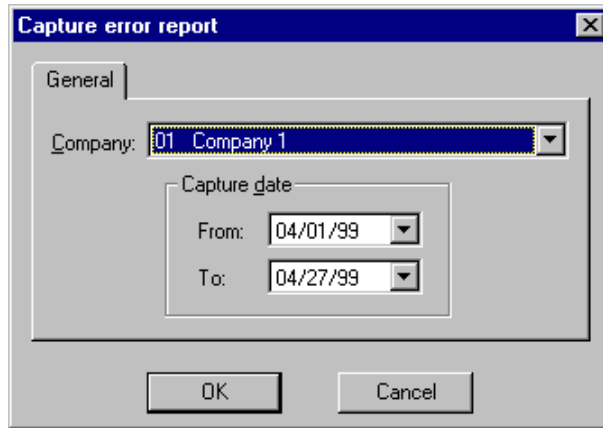
Fig. 11.44 Selection-criteria dialog box for obtaining a report on capture errors

You should select the company and range of capture dates ("From" and "To") being consulted. The default selection in the "To" field is the current process date, and the default in the "From" field is the first day of the month of the previous date.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Count report

Enables the creation of inventory count reports by different criteria:

- without count: lists all the items in which the number of counts is zero, i.e. items for which no count has yet been performed.

- with count at zero: obtains those items which have not yet been counted, but which have been adjusted.

- with difference: extracts those counted items whose theoretical stock differs from the amount counted, independently of whether they have been adjusted or not.

- with unadjusted differences: lists those counted items whose theoretical stock differs from the quantity counted and which have either not been adjusted or still do not square, as the counted quantity plus the adjusted quantity does not equal the theoretical quantity.

- with adjusted differences: obtains those counted items for which the quantity counted plus the adjusted quantity matches the theoretical stock.

- without differences: obtains those items for which the quantity counted matches the theoretical stock.

The following data are furnished in these reports: inventory number, type of inventory, start date, observations, department, family, grouping, detail, item, quantity in stock (*), quantity counted, quantity adjusted, difference (*), unit of measure, adjustment date/time, adjustment type and quantity adjusted.

The fields marked (*) are only visible if the menu option **Detail adjustments** is active.

Also, there is a change of page for each department/family (grouping/detail), as well as for each inventory.

On choosing this option the following selection-criteria dialog box appears:

Fig. 11.45 Selection-criteria dialog box for obtaining a count report

As usual, the first thing you should do is select the company with which you are working.

Next choose one or more of the inventories on the associated table showing just the inventories defined the company whose states are: "With data", "With adjustments", "Closure in progress", or "Closing". From each inventory the following data are furnished: inventory number, description, type (Inventory or Count) and status.

In the boxed area, "Ordered by", you should select whether you want the items to be classified by "Department" or by "Grouping".

The content of the boxed area, "Selected by", depends on the selection made in the previous ordering box, showing the details of the departments and families, or groupings of items and grouping details.

These boxed areas will only be enabled if a simple selection has been made from the list of inventories.

Also, in the pull-down list "Type of report", you should choose one of the following values: "All" (default selection), "Without count", "With count at zero", "With differences", "With unadjusted differences", "With adjusted differences", "Without differences".

Lastly, the checkbox "Detail adjustments" (deactivated by default) will not be enabled if the report type is "Without count", "With unadjusted differences", or "Without differences".

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Adjustment report

Permits the creation of inventory adjustment reports showing the following data: inventory number, type of inventory, start date, observations, department, family, grouping, detail, item, quantity in stock (*), quantity counted, quantity adjusted, difference (*), adjustment date/time, adjustment type, quantity adjusted, and unit of measure.

The fields marked (*) are only visible if the menu option **Detail adjustments** is active.

Also, there is a change of page for each department/family (grouping/detail), as well as for each inventory.

On choosing this option the following selection-criteria dialog box appears:

Fig. 11.46 Selection-criteria dialog box for obtaining an adjustment report

As usual, the first thing you should do is select the company with which you are working.

Next choose one or more of the inventories on the associated table showing just the inventories defined the company whose states are: "With adjustments", "Closure in progress", or "Closed". From each inventory the following data are furnished: inventory number, description, type (Inventory or Count) and status.

In the boxed area, "Ordered by", you should select whether you want the items to be classified by "Department" or by "Grouping".

The content of the boxed area, "Selected by", depends on the selection made in the previous ordering box, showing the details of the departments and families, or groupings of items and grouping details.

These boxed areas will only be enabled if a simple selection has been made from the list of inventories.

Also, in the pull-down list "Type of report", you should choose one of the following values: "All" (default selection), "Without count", "With count at zero", "With differences", "With unadjusted differences", "With adjusted differences", "Without differences".

Lastly, in the boxed area, "Break on …", you should choose whether you want to change page on "Adjustment type" or by "Item code".

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Closure report

Enables the creation of inventory closure reports, with the possibility of displaying the report with the values of margins and profits.

This report furnishes the following information: inventory number, type of inventory, start date, end date, observations, department, family, grouping, detail, item, quantity in stock, unit of measure, adjustment date/time, adjustment type and quantity adjusted, depending on the filter selected:

- last purchase price or average purchase price

- last sale price or average sale price

- purchase total or purchase average total

- total sales or sales average total

- sales margin (%) or average sales margin (%)

- profit or average profit

Also, there is a change of page for each department/family (grouping/detail) listed, as well as for each inventory.

The columns "Total purchase amount", "Total sale amount", "Margin" and "Profit" are totaled for each family or grouping detail and for each department or grouping of items, as well as at the end of each inventory.

On choosing this option the following selection-criteria dialog box appears:

Fig. 11.47 Selection-criteria dialog box for obtaining a closure report

The first thing you have to do is select the company with which you are working.

Next choose one or more of the inventories on the associated table showing just the inventories in the "Closed" state. From each inventory the following data are furnished: inventory number, description, type (Inventory or Count) and status.

In the boxed area, "Ordered by", you should select whether you want the items to be classified by "Department" or by "Grouping".

The content of the boxed area, "Selected by", depends on the selection made in the previous ordering box, showing the details of the departments and families, or groupings of items and grouping details.

These boxed areas will only be enabled if a simple selection has been made from the list of inventories.

Also, in the following two boxed areas you should indicate whether you want a report with values and the type of amounts you want to list. The first of these boxed areas, "Cost price", contains three options: "Do not show", "Show cost price", and "Show average cost price". The second, "Sale price", also contains three options: "Do not show", "Show sale price", and "Show average sale price".

Lastly you should indicate whether you want to detail the adjustments or not.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Stock reports

The Stock reports program allows various types of listing to be produced, using different selection criteria, with statistical information about stock, sales and profit margins. This information will make it possible to monitor the items and know about all the sale/purchase operations in which they have been involved, in this way tracing an evolutionary profile of the effect of the item on total company sales and its accounting valuation.

Thus, from the **Stock reports** process it is possible to obtain three types of reports:

Stock listing

Enables the creation of a listing with the main information about the stock of items:

Thus a variety of data may be obtained, such as: the item code and its description, the unit of measure, the current, normal and maximum stock, the units pending sales restocking, the units pending issue (those included in orders in the proposal state), units pending delivery (those included in orders in the issued or partially received state), order point, latest purchase price, average purchase price, average units purchased, latest sale price, average sale price, average units sold, etc.

Also, a page break is included for each department/family (grouping/detail) listed.

Stock report

Enables the creation of a listing in file format with the main information about the stock of items: department, family, grouping, detail, item, current stock, maximum stock, normal stock, unit of measure, automatic restocking management, management of units pending sale restocking, management of transfer order, order point, last supplier, date of last sale, date of last entry, date of last inventory, last purchase price, average purchase price, average units bought, days study for purchase, last sale price, average sale price, average units sold, days study for sale, quantity pending sale restocking, quantity pending issue, quantity pending delivery and dates for transfer order.

Margin report

Enables the creation of a listing in file format with the main information about the margins on items: department, family, grouping, detail, item (code and description), current stock, maximum stock, normal stock, unit of measure, date of last entry, date of last sale, last purchase price, average purchase price, average units bought, last sale price, average sale price, average units sold, current profit per unit, margin on current sale in %, margin on current purchase in %, average unit profit, average sales margin in %, and average purchase margin in %.

The last six value fields are calculated as follows:

- "Current unit profit": obtained subtracting the "Last sale price" from the "Last cost price".

- "Average unit profit": obtained subtracting the "Average sale price" from the "Average cost price".

- "Current sales margin (%)": obtained by the formula (100* "Current profit (PTAs)" / "Last sale price". This will be set to the maximum value allowed if no last sale price exists.

- "Average sales margin (%)": obtained by the formula (100* "Average profit (PTAs)" / "Average sale price". This will be set to the maximum value allowed if no average sale price exists.

- "Current cost margin (%)": obtained by the formula (100* "Current profit (PTAs)" / "Last cost price". This will be set to the maximum value allowed if no last purchase price exists.

- "Average cost margin (%)": obtained by the formula (100* "Average profit (PTAs)" / "Average cost price". This will be set to the maximum value allowed if no average cost price exists.

The criteria used to filter the data so as to obtain the reports are similar in all three cases and so are only shown once.
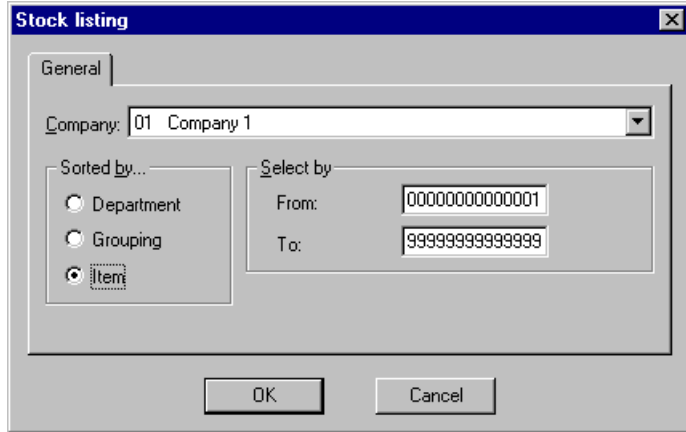
Fig. 11.48 Selection criteria dialog box for obtaining stock reports

The company with which you are working should be selected. The items can be classified by:

- Department, selecting all or only one, and within this one family or all.

- Grouping, selecting all or only one, and within this one, selecting the detail.

- Item, selecting a range of references ("From" and "To").

The state and content of the "Selected by" box will depend on the selection made in the "Ordered by" area.

Lastly, the "Records per page" control should be used to set the number of records that will be included on each page. The possible values are: 1, 2 and 3, and the default value is 1. This control is only available in the case of stock or margin reports and not in the case of a filter for a stock listing.

If you click on the "OK" button a preview of the report will be shown. Otherwise, clicking on "Cancel" closes the dialog box and returns you to the main screen.

Movement reports

From the **Movement reports** process the following listing can be obtained:

Groupings listing

Enables the creation of a listing with the following information regarding groupings and merchandise incoming/outgoing movements: grouping range, date range, source code range, destination code range, reference grouping range, origin range, adjustment type range, grouping number, creation date, source code and description, destination code and description, origin of movements, reference grouping number, observations, item, movement adjustment type, movement quantity, unit of measure, price charged, corrected price, update state, and observations.

Also, a page break is included for each grouping listed.

On choosing this option the following selection-criteria dialog box appears:

Fig. 11.49 Selection-criteria dialog box for obtaining a listing of movement groupings

- "Company": select the code of the company with which you are working.

- The "Ordered by" boxed area lets you choose between six classification criteria for the groupings included in the report.

- The "Grouping no." area has two boxes, "From" and "To" in which to set the range of grouping numbers. These fields are mandatory and will initially contain the minimum and maximum values permitted, respectively.

- The "date" area includes two text boxes, "From" and "To" which allow a range of dates to be entered. The default selection in the "To" field is the current process date, and the default in the "From" field is the first day of the month of the previous date.

- The "Source code" and "Destination code" pull-down boxes allow you to select the source and origin codes of the groupings. By default the literal "All" is selected.

- The list "Gr.Ref.No." contains all the groupings and references that have been defined, together with the values "None" and "All". The latter is the default value.

- The "Origin" list includes the values "C. w/house", "Store" and "All". The latter is the default value.

- The list "Adjustment rate" shows all the adjustment rates defined, except those whose operation on stock is "Automatic". The initial value is "All".

- On clicking the "OK" button a preview of the report is shown.

12

Label Design and Printing

- **Label Configuration**
- **Label Printing**

StoreFlow GV

This chapter describes the Labels module used for generating price and shelf labels, store posters, and in general any type of graphic document related to labels.

The Labels module is independent of the rest of the Sales Management modules and is not included in the standard package.

The Labels module includes two program groups:

- *Label Configuration*, used for configuring the available label models and associating them with the various elements that exist in a business organization (companies, departments, families and items) .

- *Label Printing,* used for generating labels and printing them either manually or automatically.

Label Configuration

Label Editor

This program is responsible for launching Label Matrix's own label editing program, by unloading the label formats located in the server so that they can be edited from the client station.
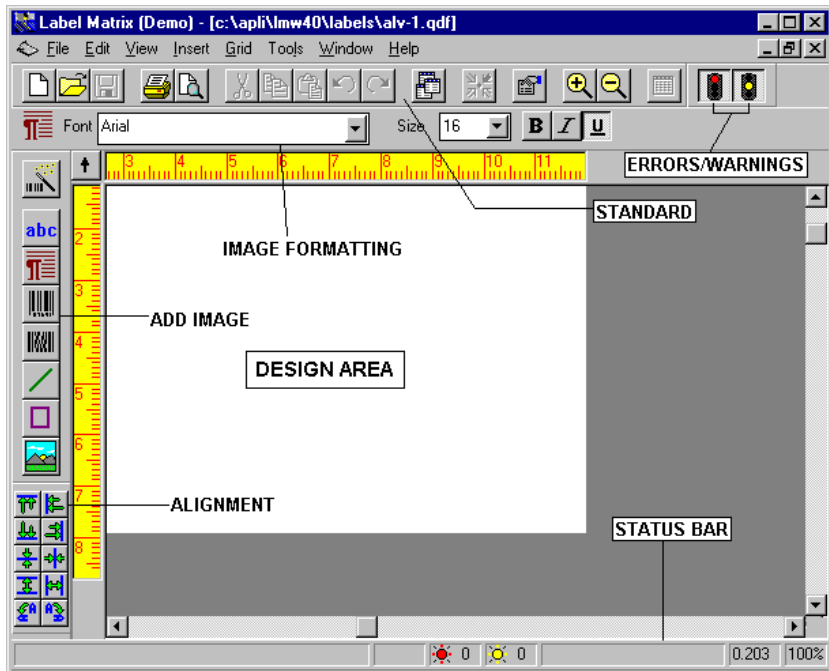
Fig. 12.1 Main screen of the Labels module

The main items in this interface are as follows:

Menu Bar

Menus available in the application.

Standard Toolbar

Located below the menu bar, it includes buttons for the general functions performed on the label as a whole.

Error/Warning Icons

These two traffic light icons, located next to the standard toolbar, warn you about possible problems that may arise while designing a label (for instance, an item placed beyond the label's limits).

Image Format Toolbar

Located below the standard toolbar, this indicates the type of image item of the label in question and enables you to modify the font type, size, style, etc. This bar is visible only when a label item is selected with the mouse.

Image Addition Toolbar

Use this toolbar to select a type of image item you want to include in the active label (text, paragraphs, linear and two-dimensional bar codes, lines, rectangles or images). It also gives access to a wizard that explains step by step how to design any item in the image.

Alignment Toolbar

This enables an item in the active label to be aligned in relation to another one selected previously. It also includes page centering and item rotation functions.
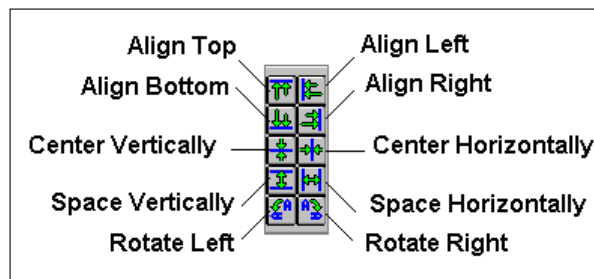
Fig. 12.2 Alignment toolbar functions

Status Bar

This informs you in real time of the active action and the current status of some of the program's operating parameters. It also displays possible warnings and errors.

Label Design Area

Located in the middle of the screen, this is where you carry out the actions associated with the design of the label. It also shows the items that make up the label.

Label Items

The components that can be used for designing a label are usually called label items or images. To avoid confusion, we will use the first designation, since images are one of the items that can be used in the label generation process.

The available items that can be input when designing labels include:

1. Text
2. Paragraphs
3. Standard bar codes
4. Two-dimensional bar codes
5. Lines
6. Rectangles
7. Images

The above items 1 to 4 also accept different data sources. This makes it possible to increase the power of the Labels module so that it can calculate the value of some fields based on others, number the labels sequentially, etc. The accepted data sources include:

- **Constants:** Invariable items that appear on a label, such as text, numerical values, etc. For instance, imagine that you want all your labels to include the name of the company that sells your products, the "Retail price" literal, or a similar text. This invariable text would be a constant.

- **Copy:** These items appear repeated in different places on the same label, but need to be designed only once. The variable from which the items are copied can be a database, a keyboard entry or a counter.

- **Combination:** These items, in turn, are formed by groupings of other items that exist on the label. They can also be used for performing calculations, concatenations and functions with variables or constants, in order to obtain data from any of them.

- **Date/time:** These data sources enter the date and time as variables according to the system's active information. The American format is used for entering the date.

Selecting Items on the Label

To edit an item on the label, look up or change its properties, copy it, etc., it must necessarily be selected first.

To select an item, simply click on it. To select several items, keep the SHIFT key pressed while you click on the items you want. Multiple selections allow you to group together items so that they can be processed later as if they were a single object.

Multiple selections are made in the Labels module especially for applying alignment operations to several items. If you want to align an item in relation to other items selected previously, always remember that the first item you choose will be used as a reference and the alignment (or other similar) action will always be applied to the last item you select.

Label Design

The standard label design procedure includes the following steps:

- **Definition of the label's properties:** Here, you determine aspects such as the page size, whether it will contain one or more labels, its margins, etc.

- **Definition of the label's items:** Here you define one by one the geometric, text, code, and image items that make up the label's design. You can use the wizard, or opt for designing the items directly.

- **Final label formatting and printing:** The label's format aspects are corrected, particularly the alignment and the interactions between the various items. Once the label is ready, it is sent to the printer.

As we mentioned earlier, in the Labels module the designs are made by means of a process whereby the components of the label as a whole are laid out and each of the constituent items are added. Each of these items must be designed separately, by assigning its properties one by one. Thus, a "standard" label might include text describing the product, a bar code that will be read by the POS terminal, complementary customer-oriented text, and an image with a given format.
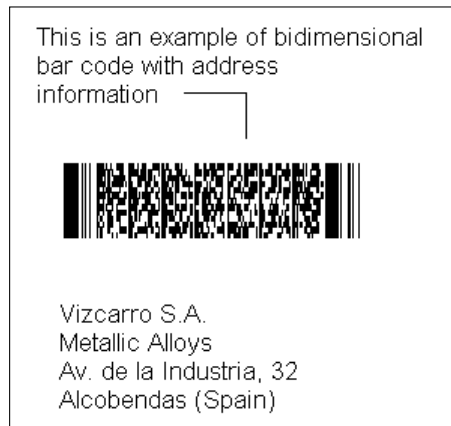
Fig. 12.3 Example of a typical label and its constituent items

The options and basic boxes displayed by the application are described next, in the order shown for the label design process.

Label Properties

Labels are characterized by a number of *general parameters* that affect their appearance, size, colors, etc., which we will call label properties. At any time during the label editing stage, and particularly before the original label is printed, its properties should be verified and, if necessary, modified prior to the final printing stage.

To access the properties of the new label you are designing, open the **File** menu and select **Label Properties**. The **Label Properties** dialog box will be displayed.
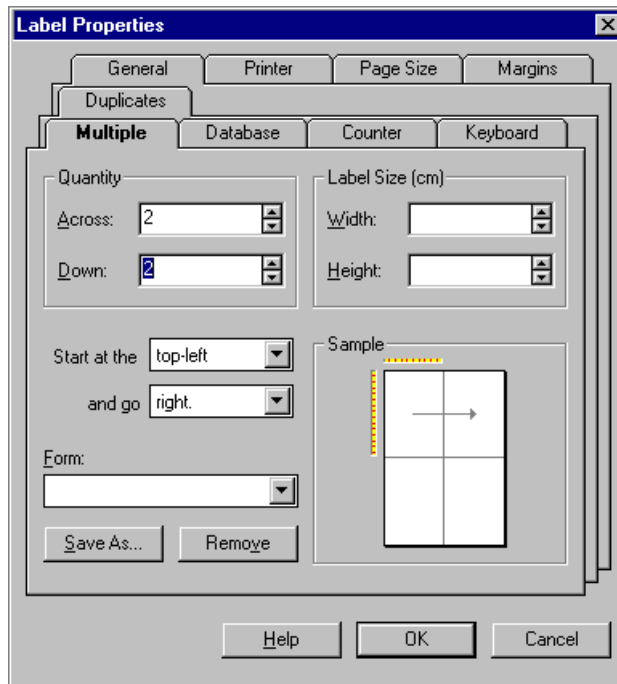
Fig. 12.4 Box used for configuring the general properties of a label

This dialog box includes the following tabs:

General

Here you can assign a name and general description to the label, which appear on the list of images.

Page Size

You can define the page size for the current label by choosing a form or creating a new one (which can be saved).

Multiple

This enables you to print several labels in horizontal and vertical dimension (different values are accepted for each dimension). The result of multiplying both values will give the total number of labels per page. Set the number for each dimension in the "Quantity" box and the completion order in the "Start with" and "and continue" fields.

Counter

You can add, delete or change the properties of the counter variables. *Counter variables* are those which are increased sequentially up or down on a label (for instance, to represent serial numbers, purchase tickets, etc.). To add a new one, click on "Add" and define a counter variable with its name and the applicable increase. Counter variables can be numbers, letters, hexadecimal characters or other custom characters, and can be entered via the keyboard.

Duplicates

A duplicate is the number of repeated labels that are issued for each data line. How the number of duplicate labels is set will depend on the selected source. The possible sources are as follows:

- "Constant": Enter the number of labels that will be issued each time the data changes.

- "Database": The number of duplicates is taken from a database file.

- "Keyboard Input": In this mode, the number of duplicates is requested when printing.

- "Combination": The number of duplicates can be the sum of several items or fields.

- "Copy": In this mode, an item's copy is chosen as the number of duplicates.

Keyboard

You can add, delete or change the properties of the keyboard variables. Keyboard variables are those which are requested prior to the printing stage and can vary from one label to another. Thus, for instance, you can make a basic label design and create a keyboard variable for the description that will be printed. To add a new keyboard variable, click on "Add".
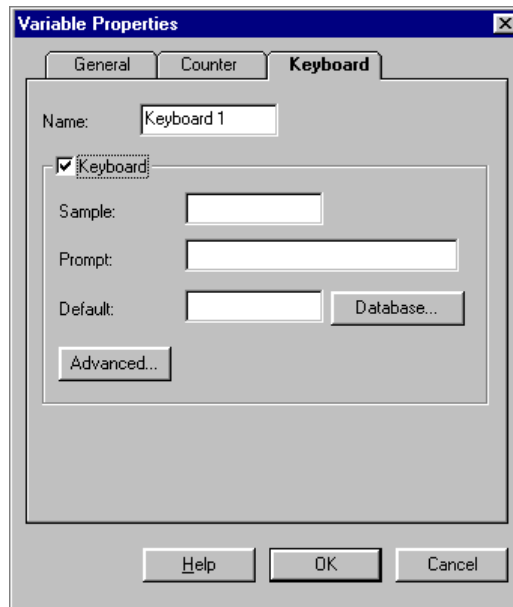
Fig. 12.5 Keyboard variable definition box

In the **Variable Properties** dialog box, fill in the following fields:

- "Name": The variable name. If you leave this field blank, the Labels module will assign a default value.

- "Sample": Value displayed on the label and printed exactly as it appears if the design has not been modified, for practical purposes.

- "Prompt": Message that will be displayed when requesting the print data, for informational purposes. This is a required field. For instance, you can enter a message such as "Enter an address (maximum 40 characters)".

- "Default": This value will be printed if the user does not enter a different one via the keyboard. Keep in mind that although keyboard variables are designed for fields that are modified frequently, in many cases the default value can save you time and effort.

Database

You can manage the properties of a database file. Connection with the StoreFlow applications takes place through text files. The following types of files are supported:

- .dbf (DBase, Database)
- .mdb (Access)
- .xls (Excel)
- .ddf (Btrieve)
- FoxPro (.dbf)
- Paradox (.db)
- Text (.txt, .csv, .tab, .asc)

Margins

You can set the left, right, top and bottom margins of the page when printing the labels. These margins will vary depending on the type of printer.

Printer

You can select a printer, add new ones or change their setup. Moreover, the Labels module enables you to have multiple setups for the same printer, by using different aliases.

Label Item Properties

The specific properties of each item on the label will vary depending on the type of item. Once the label's properties have been defined, you can design the items that the label will contain.

If you want to access the properties of an existing item, place the cursor on that item and click with the right button. In the pop-up menu displayed, select the last option, **Properties**. You can also access this menu by double-clicking on the item.
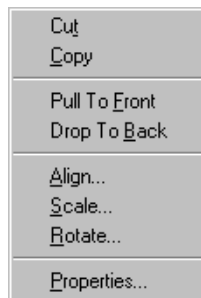
Fig. 12.6 Pop-up menu for an item, which includes its properties
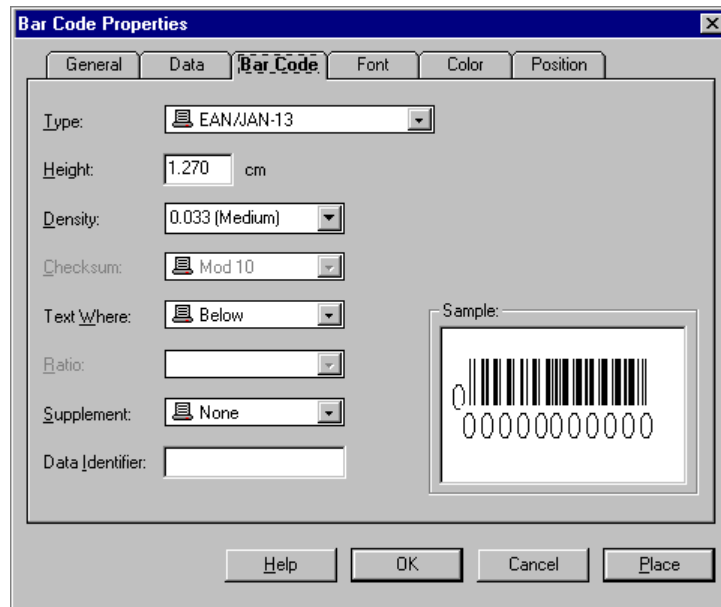
Fig. 12.7 Box showing a bar code's properties

If you want to define a new item for the label, click directly on the image addition toolbar. In both cases, the properties box will appear for the selected item.

This box includes the following tabs:

General

You can include a name and a description for the selected item, which will appear on the list of images. The Disable image check box enables you to place an image on the design screen, but prevents it from being printed. This option can be useful, for instance, when printing on preformatted labels. Just mark on the design screen the areas that already exist on the preformatted label and enable this option; its design will be easier.

Data (does not exist for geometric items)

You can choose the data source for text, paragraphs or one- or two-dimensional bar codes. Based on the selected type of item, the tab will display different fields.

Font (does not exist for geometric items)

You can choose the font, the size in points and the style of the text item's typeface.

Color

You can choose the foreground colors and, depending on the active item, also the background color.

Position

You can configure the following parameters:

- Horizontal and vertical position
- Item size
- Type of justification
- Text or item rotation

The standard design procedure consists in generating the label at general level and then, before it is printed, applying the finishing touches to the details of each item. During this final stage you will most frequently use the properties of specific items.

Image (only for image items)

You can select the image file and the type of insertion (linking, request via keyboard, built-in, database). The supported formats include:

- .img (GEM/Ventura img)
- .jpg
- .pcx
- .dcx
- .tga
- .tif
- .wpg (WordPerfect graphic).
- .gif (CompuServe gif).
- .bmp
- .dib

Bar Code (only for one- or two-dimensional bar codes)

You can define some of the code's presentation aspects, such as:

- Type of code that will be represented
- Height
- Line density
- Code number position

List of Images

Given the large amount of items that are included in an image, once it has been designed it may be necessary to look up which items have been defined and obtain a brief description of their properties.

These functions are available via the image list function, image meaning the items included in an image, whether text, paragraphs, bar codes or images proper.

To determine the items that make up a label, open the **Tools** menu while the image is displayed on-screen and select **Images List**.
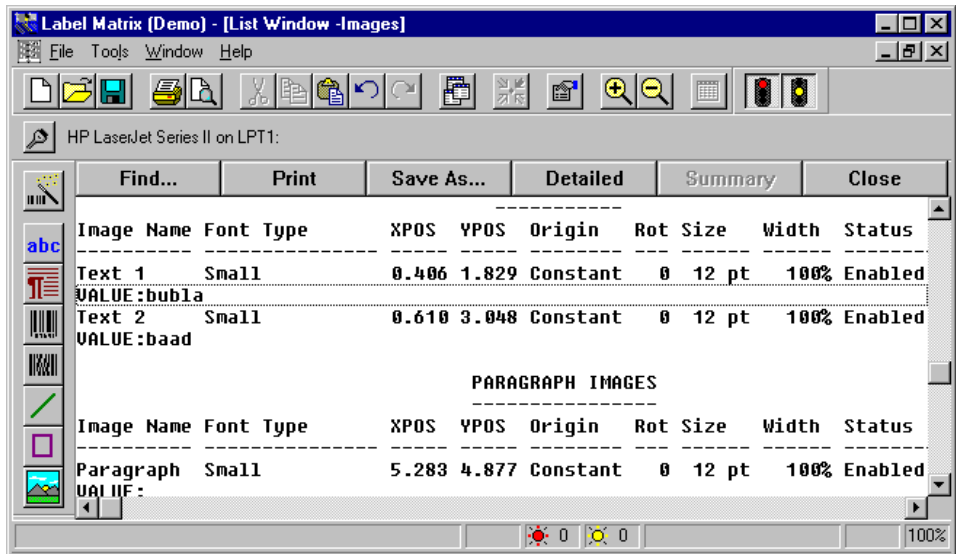
Fig. 12.8 Descriptive list of the images that make up a label design

The Labels module displays a description of the items that make up the active label. The main properties are shown for each of them, including:

- Name identifying the item
- Horizontal and vertical position coordinates
- Item capture source (keyboard, database, file, etc.)
- Type of item (in text, font used; in codes, type of code; etc.)
- The item's geometric parameters (height and width, fill-in, line thickness, rotation, etc.)
- The item's effective value (text content, string defining the bar code, etc.)

Using Label Forms

As happens with a text editor, label and poster designers frequently use the same format repeatedly for different labels. To simplify this task, you can create a template or form and load it before you start filling in the label's contents, without the need for repeating the format definition in each case.

To create a label form, follow these steps:

1. Design a label and apply the configuration you want to use for creating the form.

2. Open the **File** menu and run the **Label Properties** option.

   The **Label Properties** dialog box will be displayed.
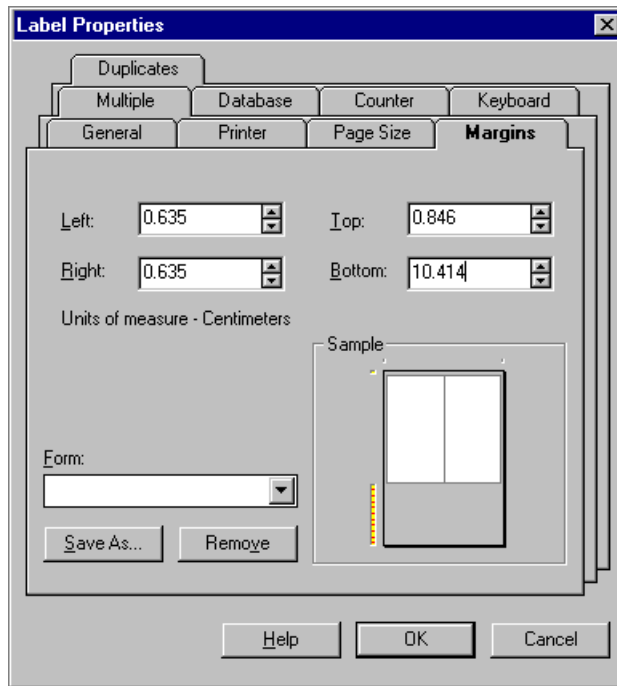
Fig. 12.9 Label configuration box, where you can create a template.

3. Click on one of the tabs, **Margins, Page size** or **Multiple** and then click on "Save as".

   The **Form name** dialog box will be displayed.
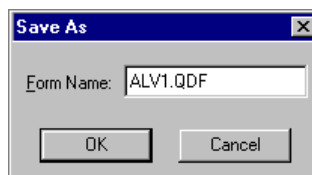
Fig. 12.10 Form naming box

4. Enter the form name and validate it.

5. Click on "OK" to validate the form's creation in the main dialog box and save it.

Next time you create a label with the wizard, enable the "Change page size, define margins and/or print several labels per page" check box. When the "What type of media will this label file be printed on?" prompt appears on the screen, select the option "One of the following forms".

On the drop-down list, choose the form you created for this occasion. This predefined form will be used for defining the new label.

Other Facilities Offered by the Design Program

In addition to the functions described so far, the Labels design program offers other tools that enhance the label generation process and are described below.

Label Zoom

The label can be enlarged or reduced by choosing the **Zoom** option in the **View** menu. The program offers zoom-in and zoom-out capabilities, as well as other common zoom management functions (zoom to page height or width, or specific zoom values).

Rotation and Scaling of Items on the Label

The items on the label can be rotated (90, 180 or 270 degrees) by means of the **Rotate** option in the **Edit** menu.

The size of one or more images can also be enlarged or reduced by a factor set by means of the **Scale** option in the **Edit** menu.

Both options are also available from the pop-up menu.

Print Preview

The **Print preview** option in the **File** menu enables you to see what the designed label will look like before you print it. The **Rotate view** option in the **View** menu rotates the label's image on the screen without changing the label's final appearance.

Overlaid Images and Text

In those labels containing overlaid items or composite images, you can vary a specific item's presentation plane by selecting it and choosing the following options in the **Edit** menu:

- **Pull to front:** This option brings the selected item to the foreground plane.
- **Drop to back:** This option sends the selected item to the background plane.

Label Printing Program

The label printing program is located in the same folder as the design program, and its use is very intuitive. To print a label, open the Labels module's program group or icon and launch the corresponding icon.

The access screen offers the possibility of printing one of the created labels from the predefined list or searching for a specific label. In the first case, choose the file an click on "Print". In the second case, browse the disk's contents and choose the corresponding file.

The label's print setup is specified in the **Print** box shown in the figure below.
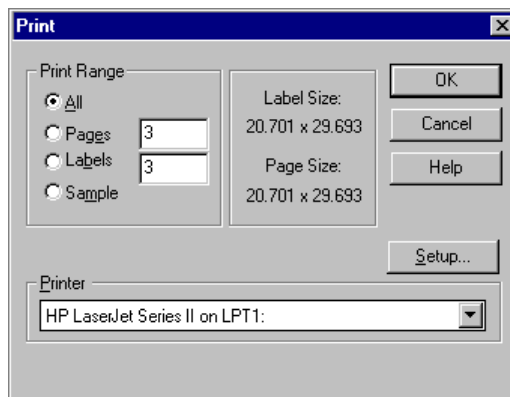
Fig. 12.11 Label print setup box

This box includes the following options:

- "All": The label(s) will be printed until the print job has been completed. If the data is being taken from a database file, a label will be printed for each database record until the end of the file is reached.

- "Pages": Enter the number of pages you want to print (depending on whether there is more than one label per page, this may not match the number of labels).

- "Labels": Enter the number of labels that will be printed. This will affect the number of pages if there is more than one label per page.

- "Sample": Select this option to print a single label or test page.

- "Printer": Select the printer where you want to send the print job.

- "Setup": Click on this button to access the standard label configuration setup box.

The label and page sizes are fixed and will depend on the file you have chosen. Click on "OK" to start the label print process.

Label Model Maintenance

This program enables you to register label models that can subsequently be used and printed.
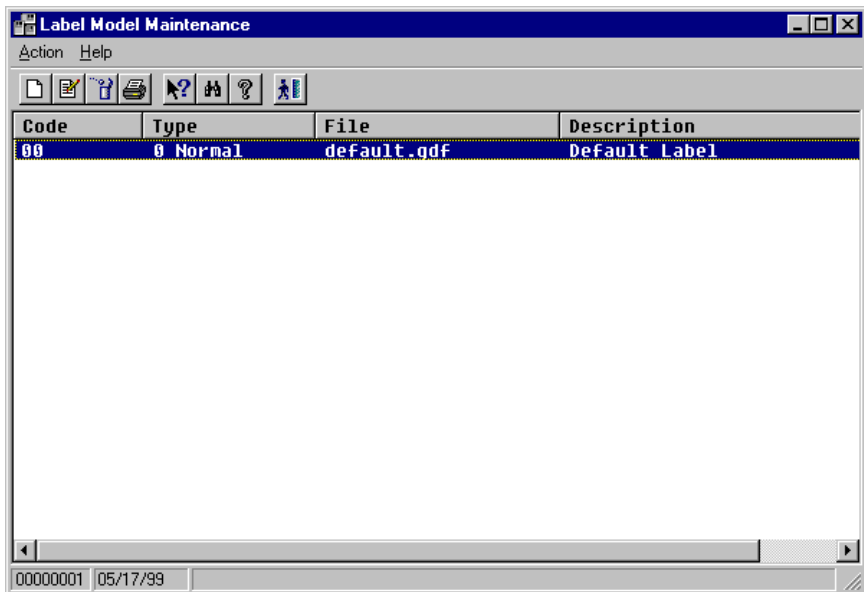
Fig. 12.12 Label model maintenance main window

To register a new label model, select the **New** option in the **Action** menu.
The following dialog box will appear:
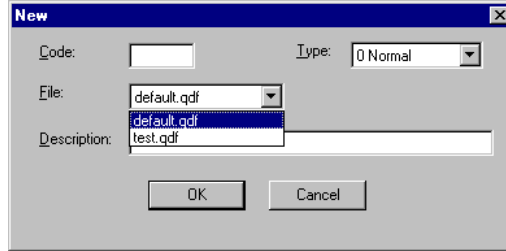
Fig. 12.13 Label model registration dialog box

Select a type of label and the file that the label will be extracted from; this data
will be the same as the information you registered in the **label editor**.

Next, enter an ID code and a description for the new label and validate them
by clicking on "OK".

Associate Labels with Companies

From the **Companies/Labels** program you can associate a specific type of label
with a particular company. Thus, all of the company's items will use by default
the label model associated with the company.

To associate a type of label with a company, select the **Associate** option in
the Action menu on the process' main screen.
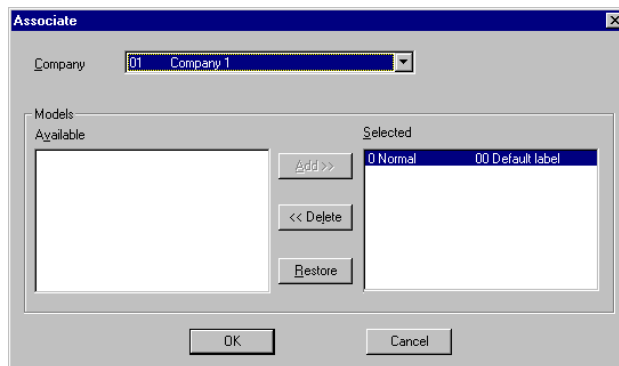
Fig. 12.14 Label model/company association dialog box

On the drop-down list, select the company you want to associate the label with and the available label models which are to be associated with the label, and click on the "Add" button. The selected models will appear in the "Selected" box.

Validate the operation by clicking on the "OK" button.

Associate Labels with Departments

The **Departments/Labels** process enables you to associate a specific type of label with a department so that all the items belonging to that department will use that label by default.

To do so, select the **Associate** option in the **Action** menu. The following dialog box will appear.
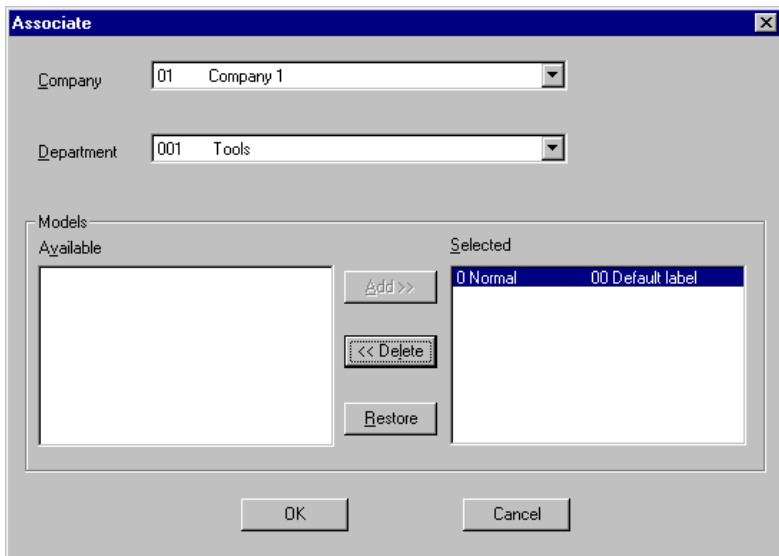
Fig. 12.15 Label model/department association dialog box

First, select the company and department you want and choose one or more of the different types of labels available in the bottom box. When you click on the "Add" button, they will appear as selected in the box located to the right. To complete the operation, validate with the "OK" button.

Associate Labels with Families

The **Families/Labels** process enables a specific label model to be assigned to a family of items so that all those belonging to the same family are associated by default with this type of label.
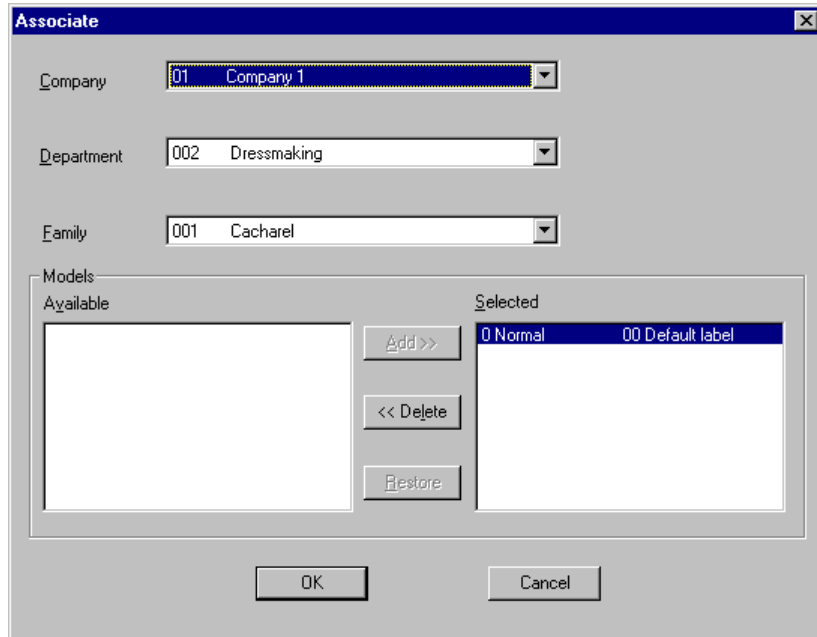
Fig. 12.16 Label model/family association dialog box

In this dialog box you select the company, the department and the family you want to associate with a specific type of label. Choose the type of label on the list of available models, add it to the list of selected models and validate your action by clicking on the "OK" button.

Associate Labels with Items

From the **Items/Labels** program you can associate a specific type of label with an item so that it is used as the default label.
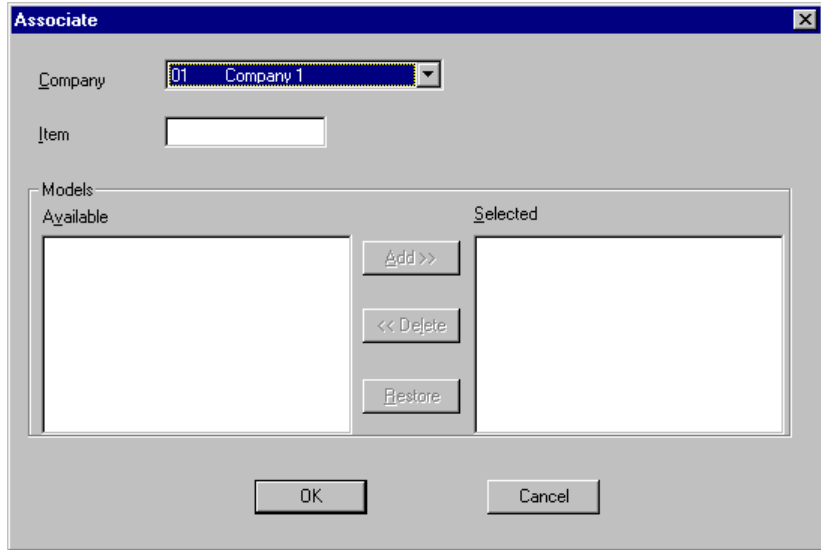
Fig. 12.17 Label model/item association dialog box

Select the company and enter the code of the item you want to associate with a specific type of label. Choose the label model, click on "Add" so that it appears as "Selected" and then validate the operation by clicking on the "OK" button.

Label Printing

Label Generator

From this program you can create batches of labels to facilitate their subsequent printing. Two criteria exist for selecting how these batches will be generated:

- Manual generation
- Generation by changes

Each of these has its own tab in the process' main window.

Manual Generation
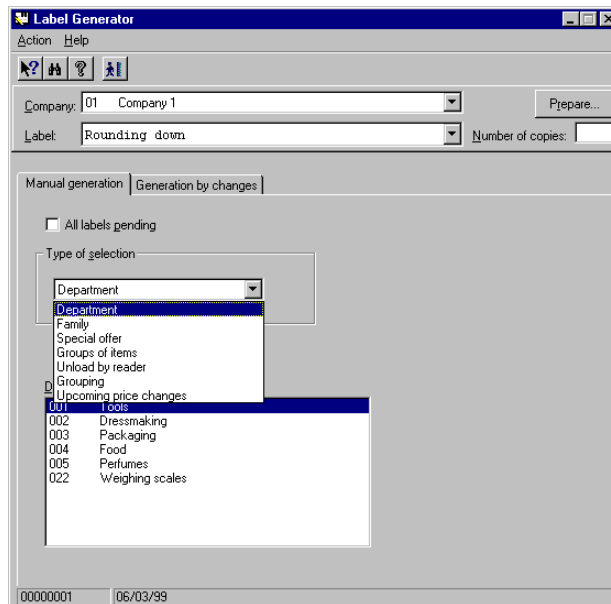
Fig. 12.18 Manual label generator main window

To generate batches of labels manually:

1. Select the company and the type of label you want to generate.

2. Enter the number of copies you want to print in the corresponding box.

3. Enable the "All labels pending" check box if you want to print all the labels which have not yet been printed.

4. If you do not want to print all the labels waiting to be printed, the program also offers the following criteria in the "Type of selection" drop-down list:

- Department
- Family
- Special offer
- Groups of items
- Unload by reader
- Grouping
- Upcoming price changes

Department
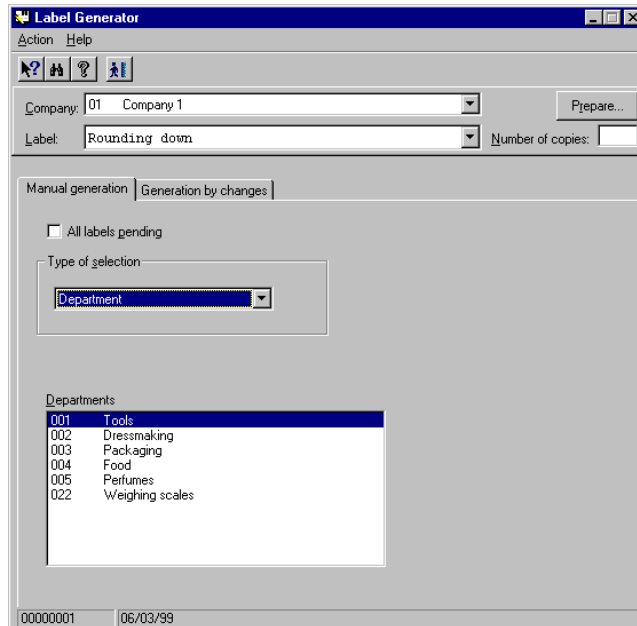
Fig. 12.19 Manual label generator (Department) main window

Select the department you want to print the labels for and then click on the "Prepare" button. The following box will be displayed:
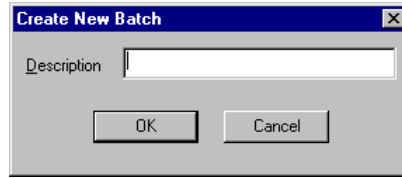
Fig. 12.20 Label batch creation dialog box

Enter a description for the new batch of labels you want to print and validate the action by clicking on "OK".

Family
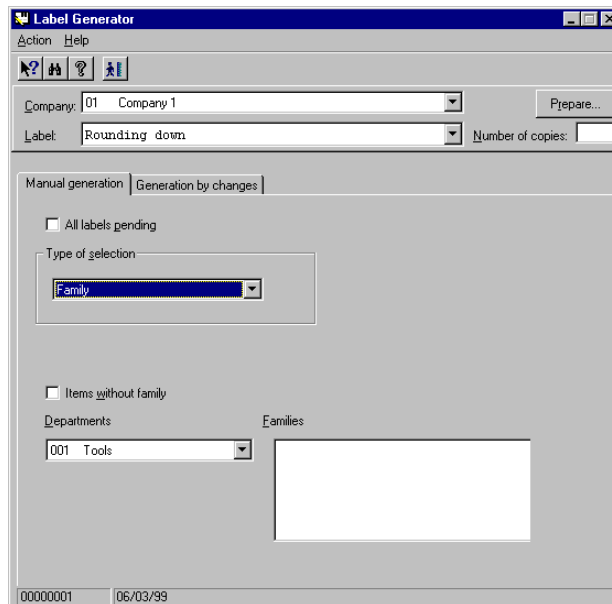
Fig. 12.21 Manual label generator (Family) main window

If you want to print labels for those items which are not assigned to any family, select the corresponding check box in the dialog box.

If you want to print labels for the items belonging to a specific family, first select the department where the family is located and then the particular family.

To generate the batch, click on the "Prepare" button, enter a description for the new batch in the corresponding field, and validate your action by clicking on "OK".

Special offer
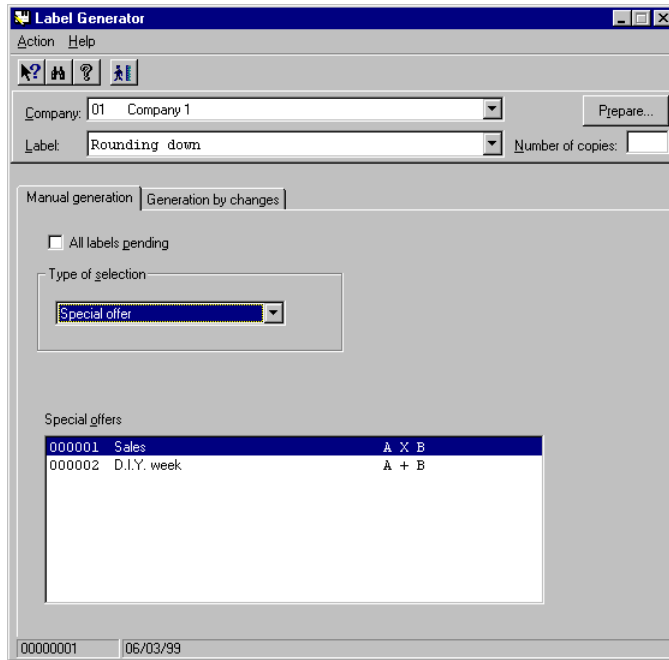
Fig. 12.22 Manual label generator (Special offer) main window

If you want to print labels for items on special offer, select the corresponding option. In the bottom window, choose the special offer in progress for which you want to generate a batch of labels.

Next, click on the "Prepare" button, enter a description for the batch of labels that you are going to generate, and validate the action by clicking on "OK".

Groups of items
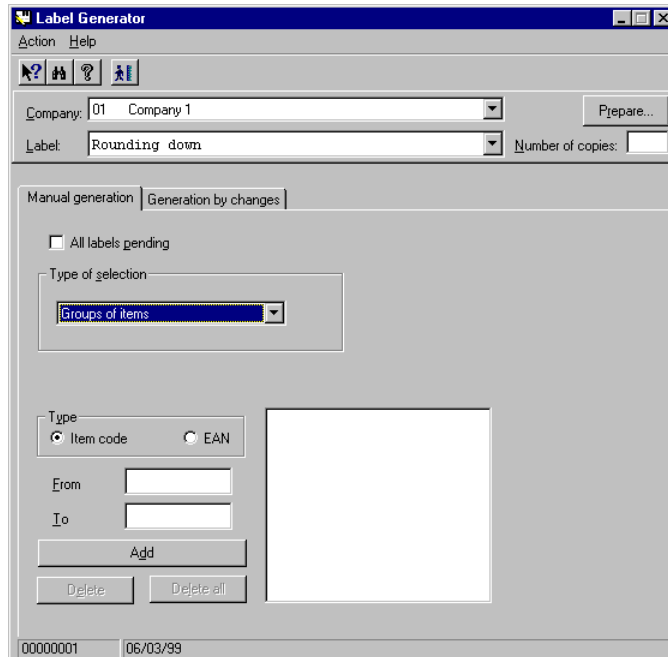
Fig. 12.23 Manual label generator (Item groups) main window

If you want to generate a batch of labels for the items associated with a specific group, select the criterion you want and choose from among the items grouped together by specifying their associated item or EAN code.

Next, use the "From" and "To" boxes to enter the range you want to generate labels for, and click the "Add" button to compose the list of groups of items whose labels you want to print.

Click on the "Prepare" button, enter a description for the new batch in the corresponding box, and validate the action by clicking on the "OK" button.

Unload by reader
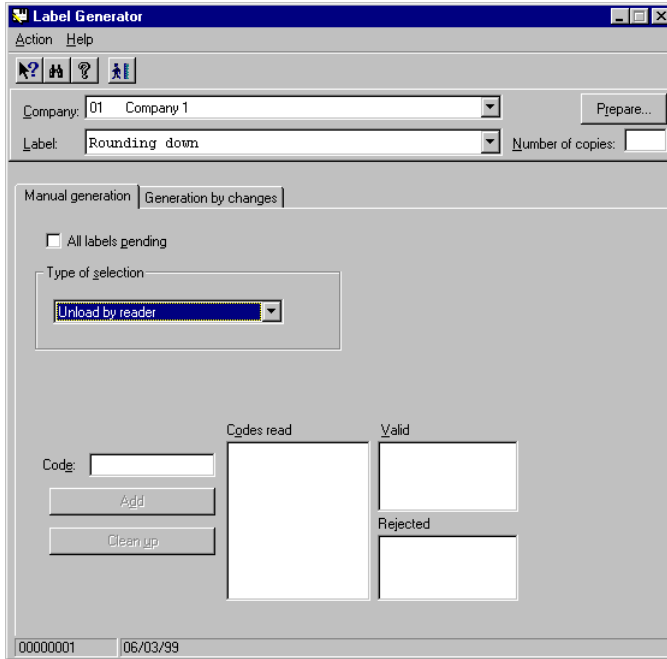
Fig. 12.24 Manual label generator (Optical reader download) main window

From this program you can generate batches of labels for those items that have undergone price changes or other modifications that require new labeling.

The process for generating this type of batch is as follows:

1. Enter the item's code in the corresponding field and click on the "Add" button. If this item has experienced some modification, it will appear on the "Valid" list, indicating that a new label must be generated for it.

2. If the item is labeled correctly, it will be added to the "Rejected" list, confirming that in this case it is not necessary to print a new label for it.

3. The "Clean up" button offers the possibility of deleting all the item codes entered up to that point.

4. Once this operation has been completed, click on the "Prepare" button, enter a text describing the new batch you are going to generate, and validate the action by clicking on "OK".

Grouping
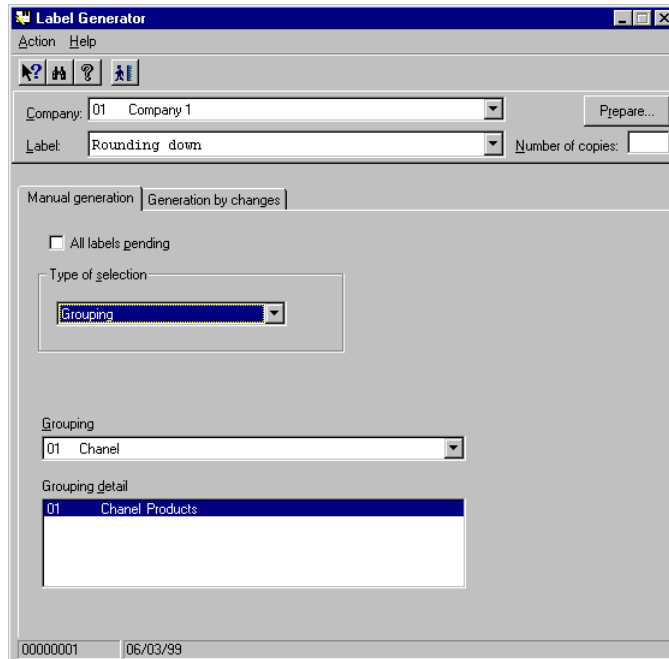
Fig. 12.25 Manual label generator (Grouping) main window

If you want to print labels for a specific group of items, select the grouping on the drop-down list displayed in the program window. Its description will appear automatically in the "Grouping detail" box. Click on the "Prepare" button, enter a description for the new batch, and validate the action by clicking on "OK".

Upcoming price changes
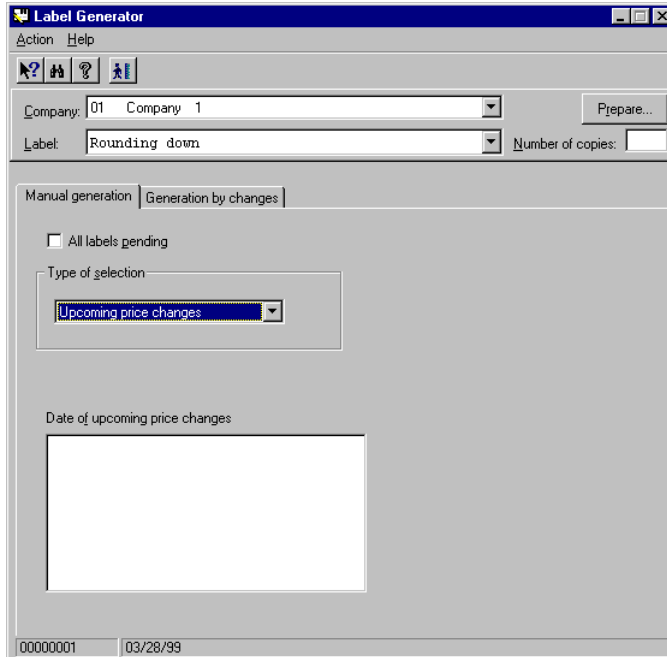
Fig. 12.26 Manual label generator (Forthcoming price changes) main window

If you want to generate labels for those items that will soon experience price changes, choose the corresponding option. If such price changes are planned, a list will appear with the dates when those price changes will take place.

Select the dates you want and then click on the "Prepare" button. In the corresponding box, enter a description for the new batch of labels and validate the action by clicking on the "OK" button.

Generation by Changes
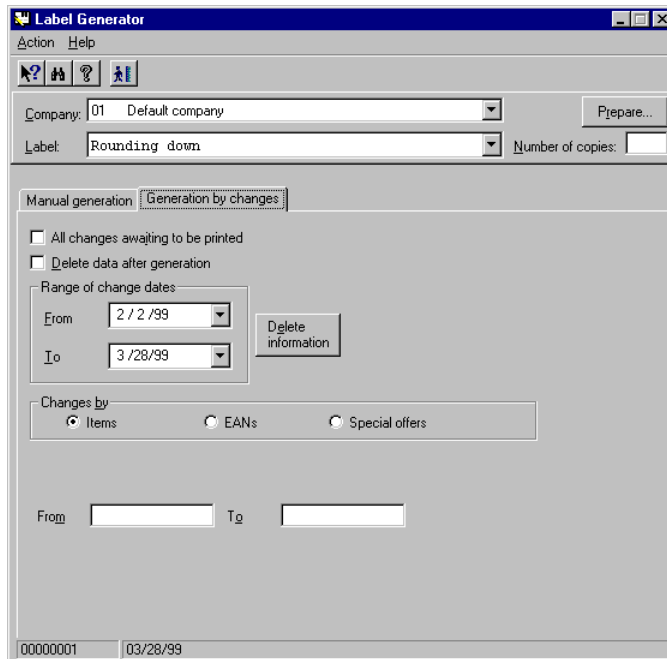
Fig. 12.27 Manual change label generator main window

If you want the program to automatically generate batches of labels when the items or their EAN codes undergo changes, or when a special offer is activated or deactivated, select this tab and enable the corresponding boxes.

In any of the above cases, in the "From" and "To" boxes you should then enter the item or EAN codes or the special offers you want to print.

This program also offers the possibility of generating batches of labels for all the changes which are waiting to be printed and deleting their data once they have been printed.

Label Printing

Use this program to print batches of labels created from the **Label Generator**, and also to find a specific label you want to print.
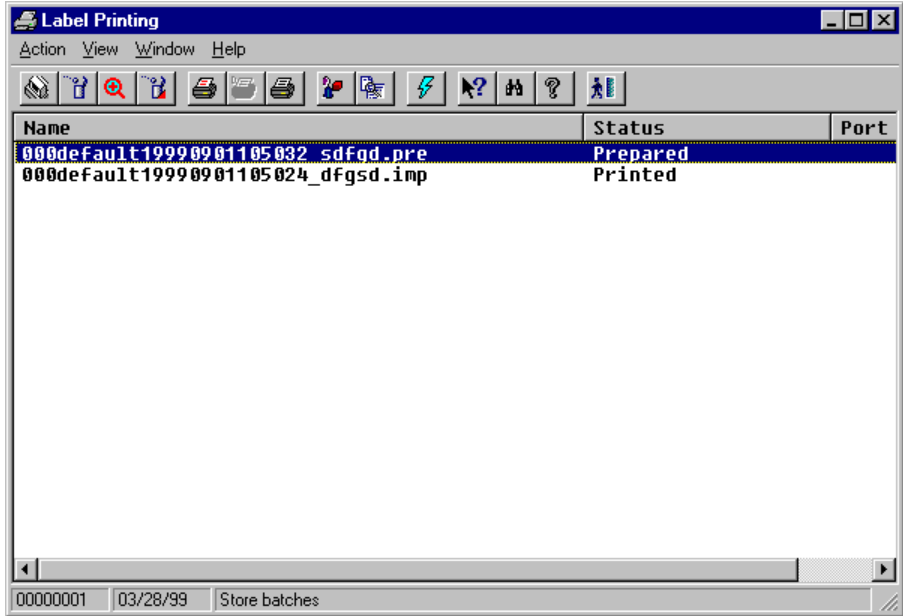
Fig. 12.28 Label print main window

From the main screen of this program you can look up or print the generated batches of labels (whether store or central office labels). These options are selected in the **View** menu.

The program also offers the following possibilities, which are accessed from the **Action** menu:

- Change the default printer port: If you want to set up a printer other than the default one.

- Delete: You can delete the batch selected on the screen.

- Query: If you choose this option you will see a list of the items included in the selected batch.

- Delete batches after printing.

- Print labels: You can print all the labels or only the ones you select.

- Print: From this program you can print listings showing the batches of labels that have been printed.

Automatic Labeling

This program operates in background mode. When a command is issued, it prints the generated batches automatically.

The main screen of this process displays the two tabs described below:

Configure
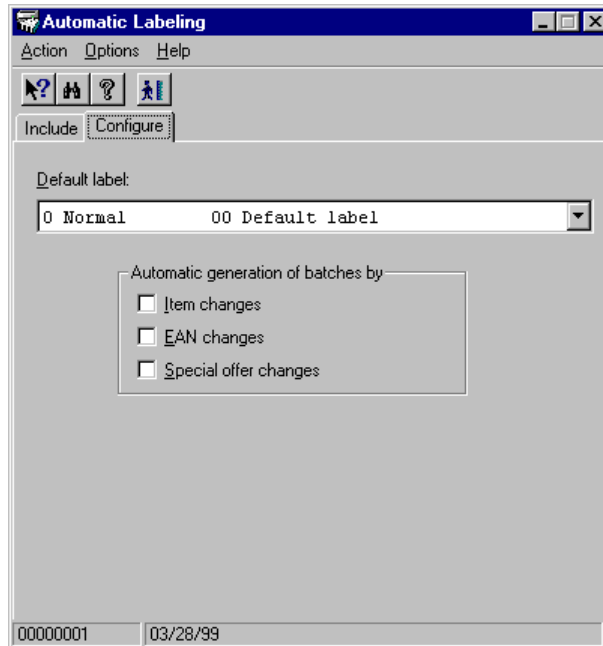
Fig. 12.29 Automatic labeling main window (Set-up)

Select the type of label that will be printed by default, and those cases when the batches will be printed automatically.

Print
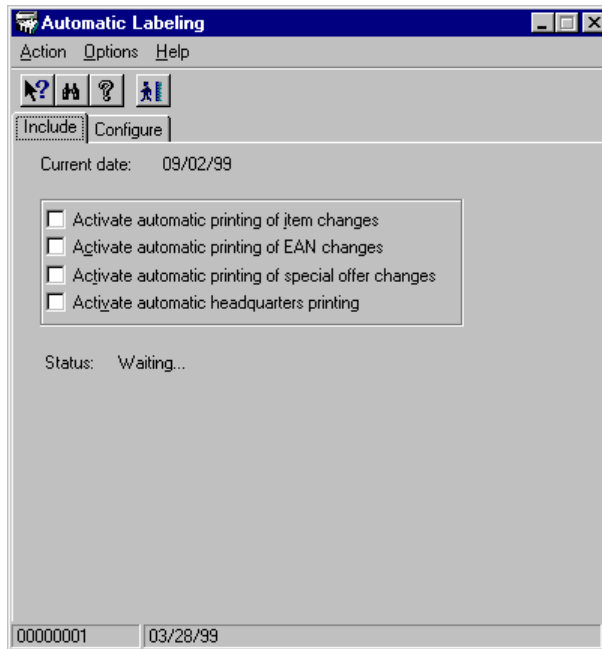
Fig. 12.30 Automatic labeling main window (Print)

From this program you can enable the automatic printing of batches of labels.

Depending on the check boxes that you select in this dialog box, batches of labels will be generated automatically and printed for different reasons:

- Changes undergone by the items (price changes or other variations that require new labeling)

- Changes in the EAN codes associated with the items

- Changes made to special offers

- Batches of labels generated from the central office

13

Implementation and Stock Management

- Sequence of Operations and Working Modes
- System Configuration Processes
- Daily Operation Processes

StoreFlow GV

From this module, StoreFlow allows you to manage the stock of merchandise and its implementation in the store's sales area.

This control covers item prices, labeling, the stock/assortment of merchandise and its location within the store.

To access this module, click on the corresponding icon on the icon bar of the Sales Management main screen. This icon will be enabled only if you have purchased this module, as it is an optional part of the group of modules that make up the application.

Fig. 13.1 I.S.M. module icon

The module includes a single folder (of the same name) which in turn contains five processes, as shown below.
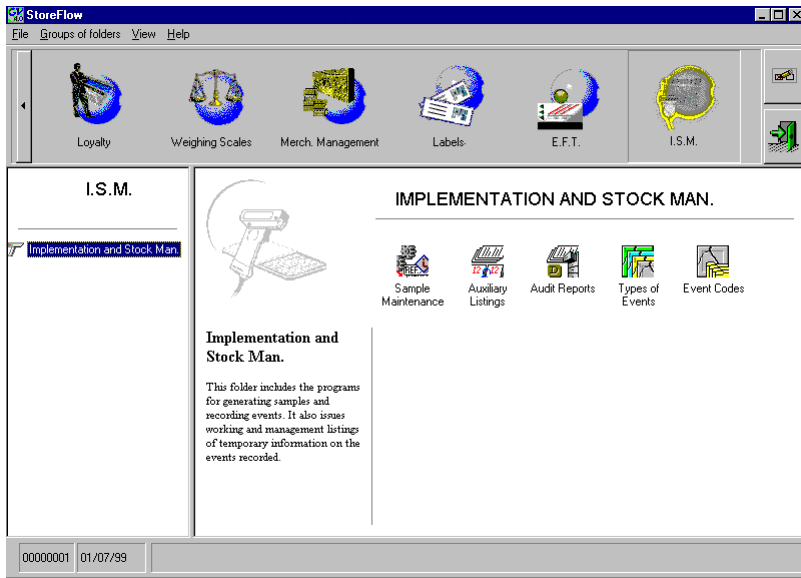
Fig. 13.2 I.S.M. module interface

Before explaining each of the processes in detail, we will first take a look at the normal operating procedure.

Sequence of Operations and Working Modes

As mentioned above, the I.S.M. module manages the control of merchandise in the shop; this means that it checks whether the stock is correctly located, whether there are problems with stock or labeling, and that the special offers are correct. In short, it examines the merchandise and the events that may arise in the store.

In order to use the application, you first have to decide which items you are going to inspect, i.e., you need to register those referred to as samples (1-Create).

Thereafter there are two ways of working, depending on whether or not an optical reader is available.

With an Optical Reader

If you have an optical reader, once the sample is created its data should be sent from the client station to the optical reader (2-Send). The operator thus obtains the lines of the sample and moves around the store to check them. By means of the various keys on the reader you will be able to note whether everything is correct or if an event has occurred, and if so of what type (3-Check).

It is then necessary to download the results of the sampling from the hand-held optical reader to the client station (4-Receive).

The next step is called "event handling", which in this case consists first of giving the opportunity to modify data in the event of an error by the optical-reader operator and subsequently of accepting the information downloaded from the optical reader (5-Process).

Finally, it is necessary to close the sample, after which time it is no longer possible to update it (6-Close), and then pass it on to the history file for subsequent look-up (7-Send to history).

As the various phases are executed the sample changes as follows:

Created ⇒ Sent ⇒ Received ⇒ Handled ⇒ Closed ⇒ In historical files

The figure below shows the phases in the life cycle of a sample when working with an optical reader:
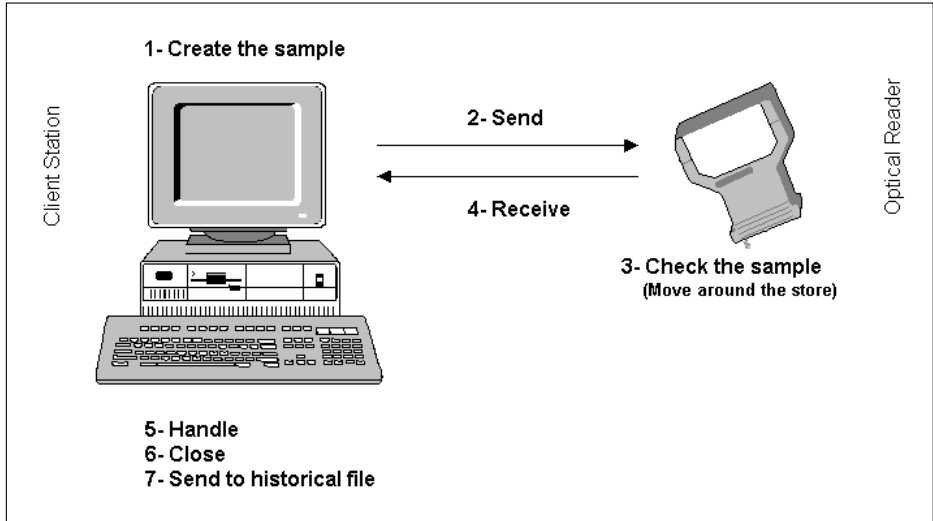
Fig. 13.3 Phases when checking a sample by using an optical reader

Manually

If the system does not have an optical reader, once the sample has been created it will be provided to the operator in the form of a paper document called the "listing of unread items" (which replaces step "2-Send" described in the section above).

The operator will then move around the store checking each of the lines on the sample and noting down manually whether everything is correct or if there have been any events and of what type.

The result of the sampling will be entered manually at the client station via the "event handling" option (which replaces step "4-Receive" in the previous section).

Therefore, in this case event handling also serves as a tool for recording item checking data.

From here on the procedure is similar to that described for working with an optical reader, i.e., when inspection has been completed it is necessary to close the sample and send it to the historical files.

Thus, in this case a sample goes through the following states:

Created ⇒ Handled ⇒ Closed ⇒ In historical files

The following figure illustrates the phases in the life cycle of a manually examined sample:
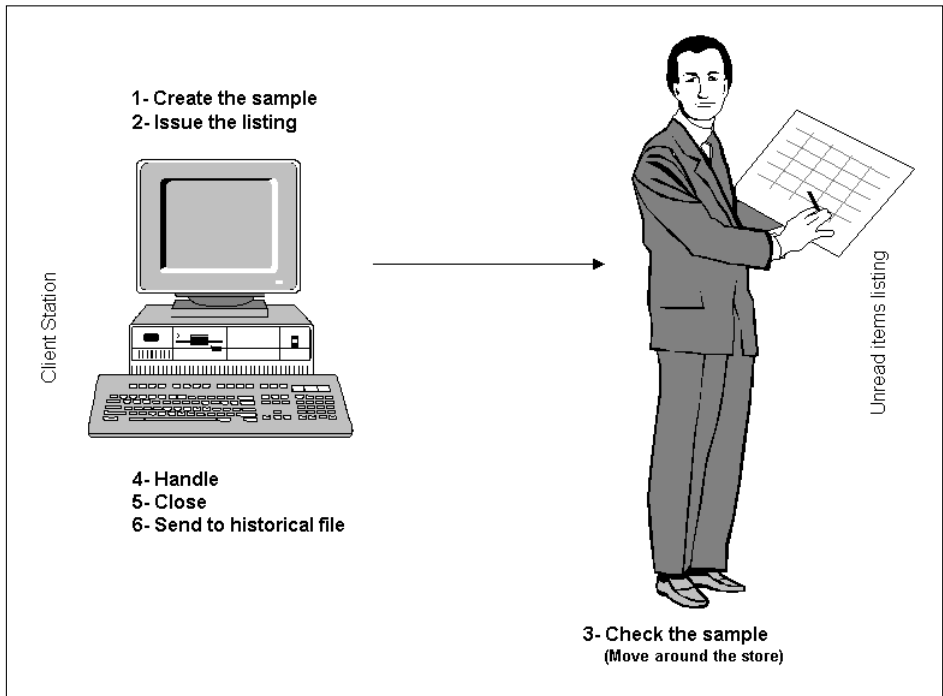
Fig. 13.4 Phases when checking a sample without an optical reader

In addition to sample management proper, the I.S.M. module provides two types of listings, which are available whenever they are required during the working day:

● Auxiliary listings, which are working tools intended for the store staff.

● Audit reports, intended to provide data needed to support decision-making.

Management or audit listings can only be obtained from the historical files, i.e., from consolidated information. Working listings, however, are obtained from the data of current samples. Therefore, depending on the state of the sample, its data will be included in one type of report or another.
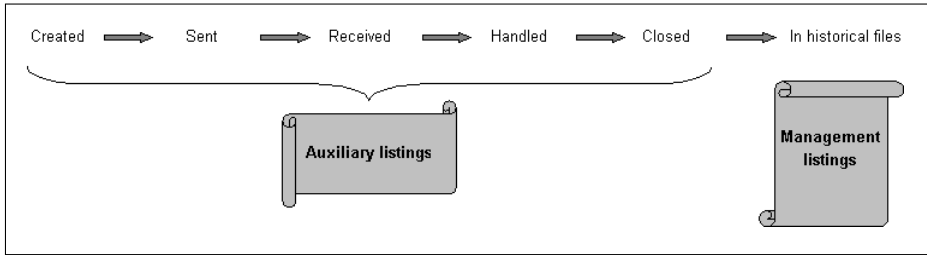
Fig. 13.5 Relationship between sample state and type of listing

Each of the processes included in this module is described in the logical order followed during their correct use.

- Types of events
- Event codes
- Samples
- Working listings
- Audit reports

System Configuration Processes

The basic configuration data for operating the I.S.M. module refers to the events that may arise at the time of sampling.

Normally both the types of events and the events themselves are predefined at the time of installation. In principle, no action is necessary on the part of the user. However, event type and code maintenance is provided if it should be necessary.

Types of Events

The events on the system have been defined on the basis of the errors that may arise during sampling. However, before creating an event it is first necessary to register the class or family of events.

To do so run the **Types of Events** process, by double-clicking on the relevant icon to bring up the main process window.
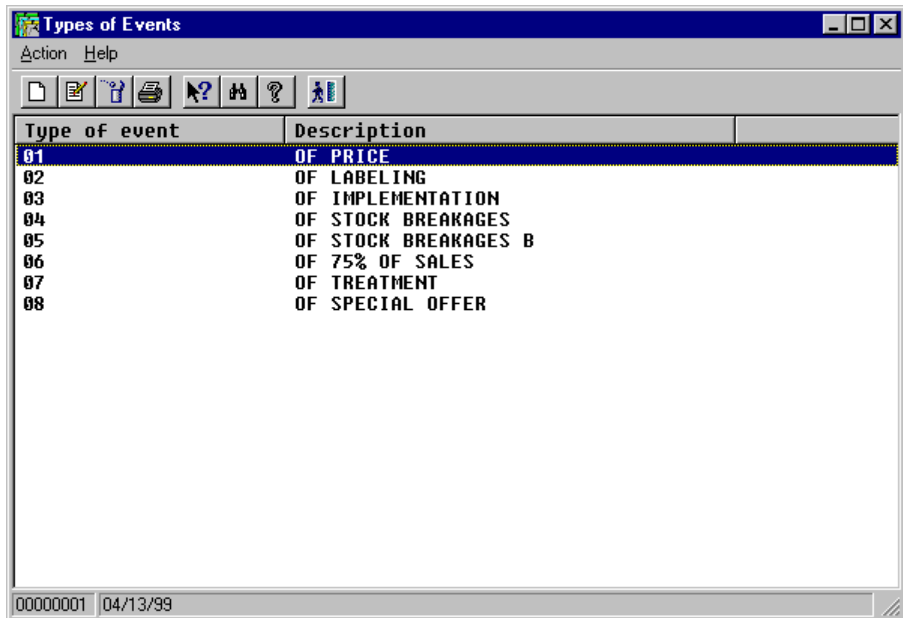
Fig. 13.6 Main window of the event type maintenance process

This process enables the types of events that the company is going to work with to be registered. This procedure is normally carried out only once.

The system provides a series of default event types with which it is possible to start working without making any modifications. Nevertheless, if you want to customize the type of event you are going to work with, carry out the following operations in the order described below.

To modify an existing type of event, double-click on the corresponding line or select the **Modify** option from the **Action** menu. The **Modify** dialog box will appear, where only the description can be changed. Confirm the change by clicking on "OK" and the selected event type will be modified.

In order to register an event type, open the **Action** menu and select **New**. In the dialog box which appears, enter a two-digit code to identify the type of event and a descriptive text of up to 30 alphanumeric characters. Confirm by clicking on the "OK" button and the new type of event will be created.
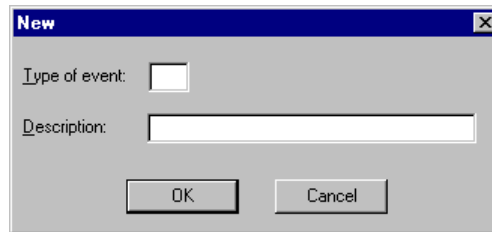
Fig. 13.7 Event type registration box

In order to eliminate a type of event, select it in the main window. From the **Action** menu, select the **Delete** option and confirm the deletion of the event type. Only event types which do not have an event code assigned to them may be deleted.

Events

In merchandise control and management, an event means any error arising in relation to item prices, labeling, or location within the shop.

Once the event types with which you want to work have been registered, the next step is to define the different events for each type created.

The procedure for registering and event is as follows:

1. Start the **Event Codes** process by double-clicking on the relevant icon.

    The main window of the process will appear.

Fig. 13.8 Main window of the event maintenance process

A line is displayed for each event created so far, showing the code and description of the type to which it belongs, together with the code and description of the event itself.

Double-clicking on any of the lines of the listing will bring up the **Modify** dialog box, allowing the event description (only) to be modified.

2. Select the **New** option from the **Action** menu. The following dialog box will be shown:

Fig. 13.9 New event registration dialog box

3. Fill in the dialog box as follows:

    Select a type from the "Type of event" pull-down menu which shows those created previously.

    Once the type of event has been selected, enter a two-digit identifying code and a descriptive text of up to 30 alphanumeric characters for the event that you are creating.

4. Click on "OK" to confirm the new event.

Remember that the events are already created at the time of installing the G.I.S. module. Thus, registering a new event requires new development work so that it is taken into account and handled in the working and management listings. Therefore, the fact of creating an event through using the event maintenance process only implies that the corresponding data has been included on the system in the event table for information purposes.
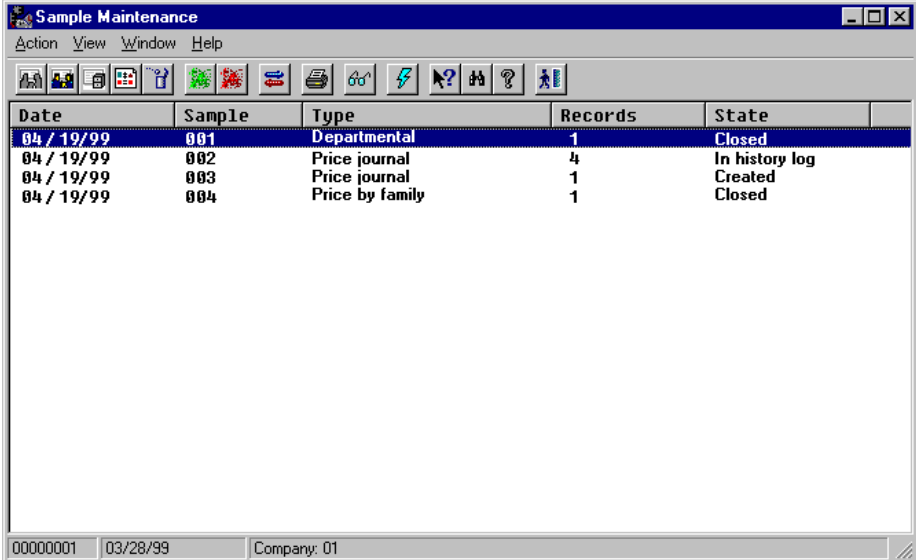
Daily Operation Processes

This section explains in detail the stock management and implementation module processes involved in the day-to-day running of the store.

Sample Maintenance

A sample is a selection of articles, grouped together by a specific criterion, for the purpose of controlling some of its aspects.

To set up a sample use the **Sample Maintenance** process. Double-click on the corresponding icon to bring up the main process window.

Fig. 13.10 Main window for sample maintenance

This window contains a table where each row shows the following information on each of the samples selected, arranged in columns: code for the company you are working with, date the sample was created, sample code (sequential number assigned by the system and reset every day), type to which it belongs, number of lines it contains and its current status.

A sample may be in any of the following states:

- Created
- Sent
- Received
- Processed
- Closed
- In history log

Double-clicking on any of the lines brings up the **Event handling** dialog box, provided the sample status allows it.

Registering Samples

In order to make up a sample, the items to be checked must be selected. There are three criteria for creating the sample: price journal, price by family or by department.

Each of these may be chosen using the **New** option in the **Action** menu: the dialog box which appears is very similar in all three cases, so only the one for the department is shown.
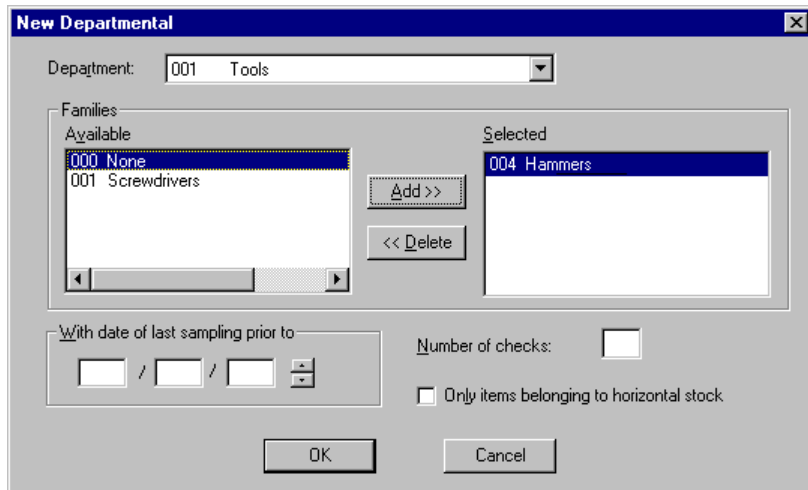
Fig. 13.11 Department type sample registration dialog box

- If you selected the option **Price journal** from the **New** menu, the articles belonging to the selected departments whose prices were changed on the date entered in the "Price change date" field will be added to the sample.

- If you selected **Price by family**, the lines of the sample will comprise the items in the families selected in the chosen department and whose prices were modified on the date shown in the "Price change date" field.

- In the case of **Departmental** samples, the items included are those belonging either to the families selected in the chosen department which were last checked on the date prior to that shown in the input date, or those items checked less often than indicated in the input data. If these data are not entered in the sample request ("With date of last sampling prior to" and "Number of checks"), all the items in the selected families will be selected.

In all three cases check the "Only items belonging to horizontal stock" box if you want the check to include only the items in this department or family that belong to the active list of items sold in the shop.

As stated in the introduction to this chapter, sampling can be done either manually or with an optical reader. Once the sample of items has been chosen based on any of the criteria described earlier, a number of operations will have to be carried out from the client station according to the mode used. How to proceed in each of these cases is explained below.

Sending and Receiving a Sample

If you have an optical reader, the information entered may be loaded onto the StoreFlow client station by selecting the option **Send sample** from the **Action** menu. The reader will then receive the data needed to properly control the selected articles.

Given that it may be necessary to re-send a sample, for example as a result of a transmission failure, its state prior to sending should be "Created" or "Sent". At the end of the send stage it will always be in the "Sent" state.

Subsequently the reader should return the data from the check to the client station once it has been performed. To do so, use the **Receive sample** option.

It will only be possible to receive the sample if its status is "Sent" or "Received" (the same sample may be received more than once, in which case the data from the latest check will replace the information from the earlier one).

When reception is completed it will always be in the "Received" state.

The system will display progress status messages during both sending and transmission of the sample.

> The **Send sample** and **Receive sample** options in the **Action** menu perform no functions when working manually.

Event Handling

Select the **Handle events** option from the **Action** menu in order to handle the events occurring during sample control. The following dialog box will appear:
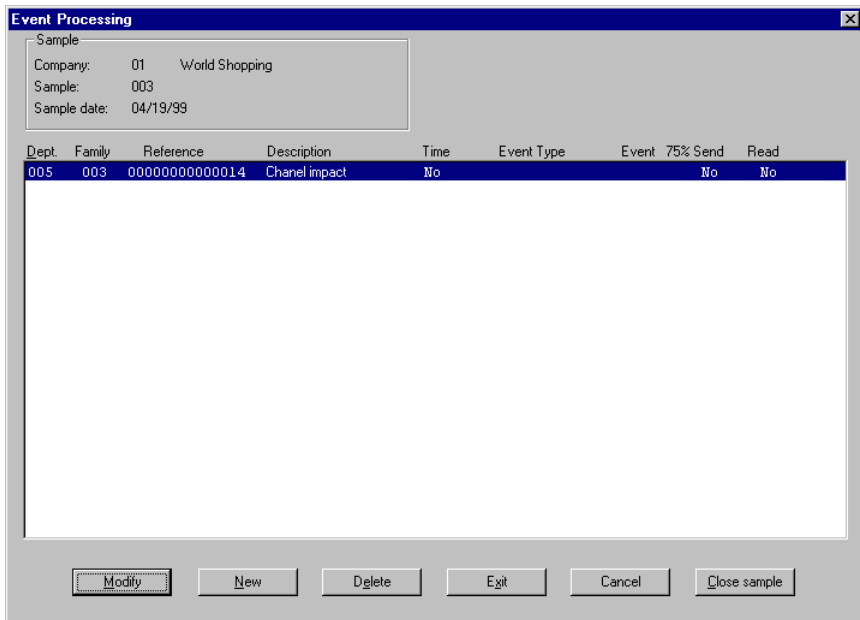
Fig. 13.12 Sample handling dialog box

The top part of the dialog box contains a box with the following header data: company code and description, and the sample code and date. Below it, the following information on each item is given in table format: department and family to which it belongs, reference, reference description, whether it belongs to horizontal stock or not, type of event, event code, whether it belongs to 75% of sales and whether it has been read or not.

Any type of event affecting any type of sample can be handled from this box, i.e., events concerning the items in the sample can be registered, modified and deleted.

At this point, the way of using the dialog box brought up by the "Modify" button will vary depending on which of the two operation modes you are working with. If you are not using an optical reader, sample control will be performed manually and the results will be entered at the client station later via the dialog box. If, on the other hand, you are using a reader, it only makes sense to modify an event if the operator made a mistake when entering the data via the reader. The use of the rest of the dialog boxes accessed from **Event handling** and the actions performed from it are similar in both cases ("New", "Delete", "Exit", "Cancel" and "Close sample").

This dialog box contains the following buttons:

- "Modify": Clicking on this button brings up the dialog box of the same name:

Fig. 13.13 Dialog box for modifying a sample line

When checking you can record each of the events found for an item, by selecting the type and code from the pull-down lists. A single item can have various events, but only one of each type.

If the event concerns the price, the "Retail price in linear" dialog box will be enabled, allowing you to enter the price shown on the label.

If the event concerns an offer, the "Linear offer" dialog box will be enabled, allowing you to enter the type of special offer advertised in the store.

The "Belongs to 75% of sales of family" checkbox should be checked when the item belongs to this percentage bracket, as it is important to know whether the event affects a fast- or slow-moving item, because solving the event is clearly more urgent in the former case.

Finally, once the check on the line is complete, check the "Mark as read" box.

- "New": This is used to add items to the sample. Clicking on it opens the **New** dialog box, whose fields are similar to those shown in the **Modify** dialog box.
- "Delete": Erases the sample line selected at the moment of clicking on the button.
- "Exit": Allows you to return to the main **Sample maintenance** window, saving all the sample handling changes made.
- "Cancel": Allows you to return to the main **Sample maintenance** window without saving any of the sample handling changes made.
- "Close sample": Changes the status of the sample from "Processed" to "Closed", accepting the information in the "Event handling" dialog box. Once closed, it is no longer possible to modify the sample or assign more events to it.

From this process, and from the **Action** menu of the main window, you can:

Delete Samples

Samples should only be deleted when their status is "Created" (i.e., no processing has begun on them) or "In history" (checking has been completed and the data has been transferred to the history log). However, the system allows you to delete a sample in any status. Bear in mind that if you delete a "Closed" sample all the information will be lost, thus preventing it from being transferred to the history files.

Transfer to History Log

This option launches a server process which transfers the information relating to the samples selected in the main process window to the historical data file.

The sample status must be "Closed" in order for it to be transferred, and once it has been transferred its status will be "In history log".

Auxiliary Listings

Three types of printer-ready reports can be obtained from a generated sample:

- Unread items: Includes all the items envisaged in the selected sample which have not yet been inspected.

- Stock breakage: Selects all the items in the sample which have been affected by an event of the "Stock breakage" type, i.e., the merchandise in stock is less than the sales forecast.

- Price, labeling and implementation events: Obtains the inventory of all the items in the sample for which an event is recorded concerning their price, labeling or implementation events.

In other words, the auxiliary listing provide information about work pending and the events which have occurred. They are therefore intended for the staff responsible for ensuring that the store is correctly stocked.

To obtain these reports, run the **Auxiliary Listings Maintenance** process by double-clicking on its icon.

Fig. 13.14 Auxiliary listings main window

In the main window of the process, a table is displayed with one sample on each row. The following information on each sample is given: code of the company you are working with, sample creation date, sample code and type, department to which the inspected items belong, number of items or lines in the sample, and finally the current status.

To access the report, select the option of the same name from the **Listings** menu, or click on its icon on the toolbar.

Audit Reports

This type of listing is obtained from the sample historical files. These listings provide totaled data and statistics intended to assist store executives in the decision-making process.

To obtain these reports, run the **Audit Reports** process by double-clicking on its icon.

When you choose to create a report via any of the options available in the **Reports** menu in the main window of this procedure, a dialog box appears where you can select the different report generation criteria.
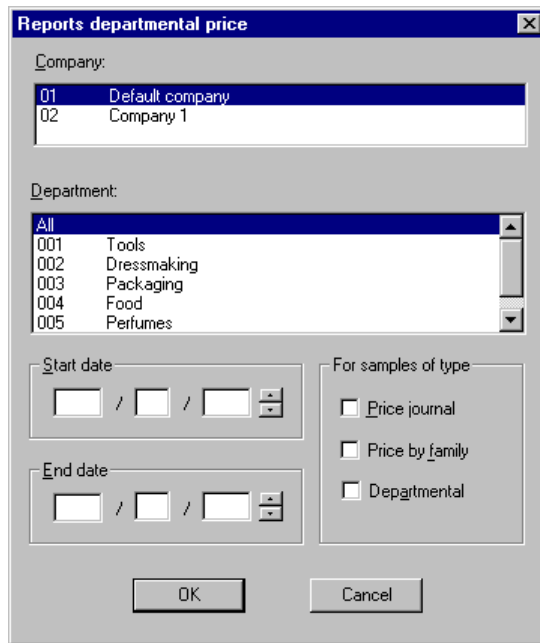
Fig. 13.15 Criteria selection dialog box for management reports

This dialog box offers basically the same options for all five types of reports available. The only difference is the title and the pull-down list shown in each case.

Listing Title	Variable List
Reports departmental price	Department
Reports price by sector	Sector
Reports departmental labeling	Department
Reports labeling by sector	Sector
Reports stock breakage	Department

The input parameters required to prepare these reports are: the company, the department or sector (according to the previous table), a range of sample dates and the type of sample.

The following information will be shown for each type of report:

- **Price reports**

  - Departmental sample

    For each family in the selection, you can see:

    - Total number of items analyzed in the family.

    - Overpricing events (actual price higher than the price shown on the shelf) expressed as an absolute number and a percentage of the total items analyzed in the family.

    - Overpricing events (actual price higher than the price shown on the shelf) expressed as an absolute number and a percentage of the total items analyzed in the family.

    A line showing the totals per department of the quantities given above is also shown, as is a line showing the totals as percentages of the total number of events.

  - Price sample

    The following information is shown by sectors, divided into the departments they comprise:

    - Total number of articles analyzed in the department.

    - Number of events in the department.

    - Events as a percentage of the references checked.

    A line will be shown with the totals per sector.

- **Labeling and implementation reports**

  - Departmental sample

    The following data will be shown for every family in the selection:

    - Total number of items analyzed in the family.

    - Total number of labeling events of the "No label" type, and this figure expressed as a percentage of the total analyzed in the family.

    - Total number of labeling events of the type "EAN not registered", and this figure expressed as a percentage of the total analyzed in the family.

- Total number of labeling events of the type "EAN does not match", and this figure expressed as a percentage of the total analyzed in the family.

- Total number of labeling events of the type "Price not reported", and this figure expressed as a percentage of the total analyzed in the family.

- Total number of labeling events of the type "Item misplaced", and this figure expressed as a percentage of the total analyzed in the family.

- Total number of labeling events of the type "Incorrect descriptor", and this figure expressed as a percentage of the total analyzed in the family.

A line showing the totals per department of the quantities given above is also shown, as is a line showing these totals as percentages of the total number of events.

- Price sample

The following information is shown by sectors, divided into the departments they comprise:

- Total number of articles analyzed for the department

- Number of events in the department.

- Events as a percentage of the references checked.

A line will also be shown with the totals for each sector.

- **Stock breakage reports**

- Departmental sample

The following data will be shown for each family in the selection:

- Total number of horizontal stock items for the family.

- One column for each of the event codes of the type "Stock breakage", with the total number of events and percentage with respect to the horizontal stock total.

- A column with the totals of the previous columns.

- A column with the total events for 75% of sales.

- A column with the total events for 75% of sales with stock breakage and the percentage this represents of the total events for 75% of sales.

A line will be shown with the total per department of the previous amounts and another line with totals expressed as a percentage of the total number of references with stock breakages, except in the case of stock breakage events affecting 75% of sales, for which the percentage will be 100%.

A

Sales Management Server

- System Operation
- Server Scope and Processes
- Reports

StoreFlow GV

This appendix provides a brief description of the Sales Management server, the functions performed by the system, the most important processes run on it and a list of the reports the user obtains by executing the chains.

System Operation

StoreFlow Sales Management has a client/server architecture. The server part - implemented on one of the available platforms, AIX or Windows ® NT - contains the critical system data and procedures, whilst the client programs and general maintenance routines allowing interaction with the database reside on the client stations - which are personal computers running Windows ® 95 of NT.

In addition the server is in constant communication with the point of sale terminals distributed throughout the sales area and also exchanges specific information with the head office.

Communication between the server and head office normally takes place via remote lines, whereas communication with the client stations and point of sale terminals takes place via a local area network using the TCP/IP protocol.

The figure below shows the typical configuration of the server and its relationship with the different environments.
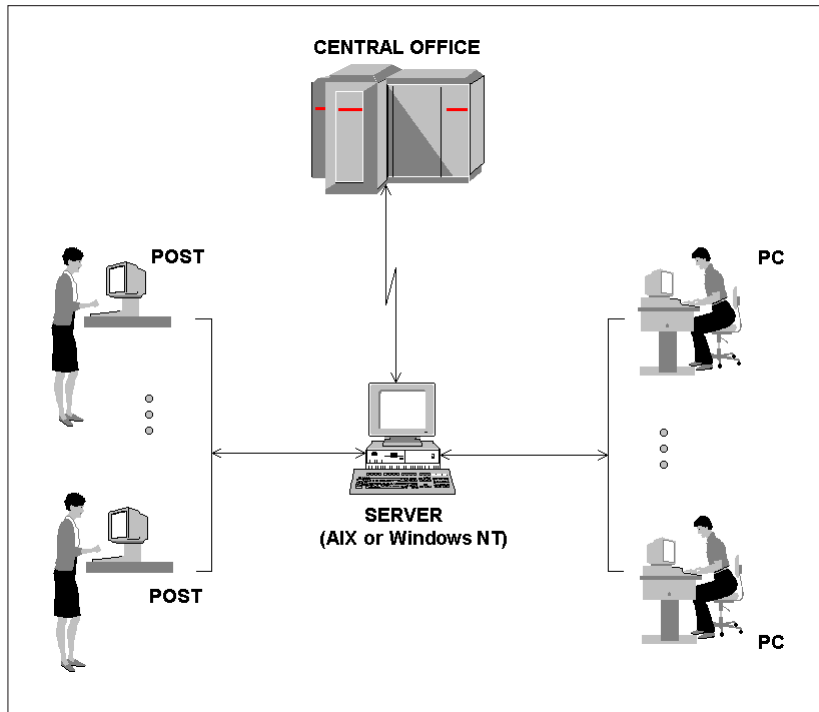
Fig. A.1 Relationship between the SF-GV server and the various environments

The elements shown in the figure above, and which together make up the working environment, are as follows:

● *Point of sales terminals (POSTs),* arranged in one or more companies, depending on the chosen configuration.

● *Client stations (CSs),* also located in one or more companies - these are used basically for processes relating to configuration, management and maintenance of the system.

● *Head Office,* administrative entity which receives and manages the data from all its sales outlets.

● *System server,* which may be located either at head office or in the store, depending also on the configuration of SF-GV. The server supports the first two entities and must also transfer and receive the information generated in Sales management destined for head office external applications.

The functions carried out by the server vary according to the part of the system in question. Thus:

● In the case of the *point of sales terminals* the server is responsible for tasks such as:

  ● Controlling and managing the data produced on the POSTs.

  ● Periodically checking terminal status and parameters.

  ● Recording each POST's hard-total information.

  ● Allow or refuse a transaction involving charge cards or electronic payment means, connecting with the authorizing center, or otherwise performing a credit action.

  ● Running queries on the check and customer negative lists.

  ● Generating and sending ".DAT" data files defining the configuration of daily operation, hot keys, price updates, etc. so the POSTs can work.

  ● Sending online movements to the POSTs.

  ● Processing sales carried out at the terminals.

  ● Obtaining accrued totals and historical data from the terminals.

- In the case of the *client stations* the server's basic task is to act as an intermediary between the database, where system information is kept, and the processes running on the stations, which request or modify information in the databases. Among other things, these tasks include the following:

  - Perform store openings, closures and changes of state.

  - Perform maintenance on companies, items, customers, etc.

  - Manage special offers and promotions.

  - Register loyalty campaigns on the system.

  - Adapt and prepare the files generated or modified from the client stations so they can subsequently be sent to the POSTs.

  - Manage stock and merchandise movements.

  - Launch overnight chains for the calculation of accrued totals and generation of reports.

  - Record, compress and decompress the transaction log data.

  - Obtain versions of processes installed at each company or store when carrying out version checks.

- The server communicates with the *head office* either to supply information to other external applications (whether members of the StoreFlow family or not) or to periodically update the client station data with information received from head office.

  This communication takes place via the GV-Headquarters interface subsystem, and includes functions such as:

  - Generation of sequential files of sales and invoices which are sent to the head office.

  - Automatically or manually updating the data associated with the files received from the head office.

  The files received from head office cover the following general areas:

  - Sector, department, family and item movements.

  - Barcode registrations and discontinuations.

  - Updates to prices of items, whether by barcode or internal.

  - Special offers, at both item and department level.

- Employee registration and discontinuation.

- Card negative list.

- Taxes per item, but only in the case of an item's having more than one, as occurs in some countries. Where items have only one tax this will be indicated in the **Items** process described in the chapter on ➤"Item management".

- Loading budgets or sales forecasts by department.

For its part, SF-GV periodically sends the head office the following sequential text-format files with sales information:

- Sales per hour (VENTHORA)

- Sales by item (VENTARTI)

- Sales by department (VENTDPTO)

- Sales by operator (VENTOPER)

- Etc.

In addition to the functions mentioned above, there are a series of tasks which may be described as internal. These are tasks the server performs in a way that is transparent to the user of SF-GV, such as initializing the tables each day when required, starting processes up by means of scripts, converting file formats, loading and unloading database tables, etc.

Server Scope and Processes

There are a large number of server processes, and these may be grouped into different scopes or subsystems, namely:

1. Loading information onto the POSTs

The information with which the point of sale terminals operate can come from the client stations, via the server, or directly from the server.

- Server ⟹ POST

   There are two modes in which the information can be updated from the server: initial load and selective load.

   During initial loading all the database table information is transferred to the ".DAT" files on the server. Thus, when a POST is switched on, if its corresponding ".DAT" files vary from those on the server in either date or size, the latest version of the files is sent to the terminal.

   Contrariwise, during selective load the ".DAT" file which is to be generated is selected.

   Once the updated information has been loaded onto the point of sales terminals, they are ready to start sales operation.

- Client ⟹ POST

   Loading information from client stations to the point of sale terminals basically involves online data updating (prices, items, etc.). The server processes which update both the database tables and the "actmen.dat" file (update in memory) and the corresponding POST ".DAT" file take part in this process.

   Online movements can arrive at any time, provided the POST is operational.

2. Sale

Point of sale terminals store the information from all the transactions they perform in a single log for the whole system. This information is stored online and the log file is located on the server. There are a number of server processes

whose task it is to constantly read the log information in order to translate it and store it in database tables, from where the client stations can consult it.

Among others, the server processes involved in this are:

● Sales Manager

● Control Roll Manager

● Cashbox Settlement Manager

● Etc.

3. **Using the sales information**

When the store is closed after a day's trading the chains are launched. These process, list, accumulate and store sales information based on the data entered in the daily tables by the Manager process.

There are eight chains:

● **Daily reports:** The purpose of this chain is to list daily sales information. As these documents are everyday working tool for the user, they are described individually in the next section.

● **Accrued totals:** The purpose of this chain is to store and accrue the day's sales information as previously consolidated by the Manager program.

    Thus, using the data obtained each day, this chain stores the information in accordance with the frequencies and periods defined for each entity (normally day, month and business year). The programs responsible for obtaining accrued totals and historical data are also found here. The accrued total processes store the information until the end of the period, when it is transferred to the corresponding historical data table.

● **Accrued totals reports:** These list the daily and accrued sales data, i.e. produce reports on the accrued sales data from the previous chain.

● **TLOG load:** The purpose of this chain is to run the program "obttlog.exe", which passes the data stored in the temporary tables to the definitive tables. These temporary tables are stored by the control roll monitor when the store is opened and the original log is activated as the log is generated.

    Subsequently one or more files are exported from the tables (log: explognn.aaaammdd), so that it will be possible to display the control roll using a Windows program.

- **Item updating:** This updates the special offers and promotions on items and departments and the stock of merchandise.

- **Scales:** Updates and accrues information relating to the scales processes.

- **Merchandise management:** this chain carries out the following functions:

  - Updates the units existing in the delivery note input process.
  - Calculates the order point necessary in order to perform an automatic order.
  - Deletes obsolete information from the Inventory, Delivery Notes and Orders master tables.

- **Interface with Headquarters:** generates the data files to be sent to the head office. These contain the following information:

  - Sales by hour
  - Sales by item
  - Sales by department
  - Sales by operator
  - Inventories and counts closed for sending to head office
  - Orders and delivery notes produced during the day
  - Stock movement send
  - Current stock of items
  - Sales and settlement broken down by terminal, cashier and cashbox settlement group
  - Cash difference regularization
  - Sales grouped by item and department special offers
  - Sales grouped by item, department and environment promotions
  - Points delivered to each loyalty card, with the details of each ticket
  - Points exchanged for gifts
  - External authorizations generated at point of sale terminals.

4. **Other processes**

    Additionally there are other processes on the server which are not included under sales as such, (i.e. they do not belong to any of the subsystems mentioned above) which complete the range of tasks performed by the server:

    - **Spy:** responsible for monitoring the important system processes, such the sales manager, POST services, credit, cashbox settlement manager, scales director, etc.

    - **Credit:** contains all those programs whose purpose is to provide a security mechanism in the management of authorizations when payment is made by credit card while there is no communication between the server at the branch and the server at head office, thereby managing the flow of credit messages to and from the POSTs.

    - **Queries:** memory-resident server programs enabling the following queries to be made from the POSTs:

        - Sales by Departments

        - Sales by shopping center or branch

        - Sales by operator

        - Sales by Shift

        - Sales by POST

        - Sales by floor or sales zone

        - Check negative list

    - **Version control:** enables the versions of the programs used in each shopping center and master information (i.e. information about the latest existing version) to be obtained.

    - **Controller:** contains the programs enabling maintenance of the printing formats for tickets, headers, footers and all data files.

    - **Scales ticket server:** memory-resident server program responsible for handling scales ticket requests.

Reports

StoreFlow Sales Management provides numerous reports as a support tool for the user's everyday work.

The various sections of this manual have explained the listings that can be obtained in online mode from the client station. However, in addition the Sales Management server can provide a variety of documents in batch mode by running the chains.

Thus, the daily sales reports are produced by the first of the chains and comprise the following:

● **Terminal activity report** (LS001002):

Daily report which gives detailed information concerning the shopping center's activity regarding complete and partial sales, different modes of payment, payments and refunds, and the total number of operations by each terminal per day. This report is also intended to make it possible to check that the data processed by the system is correct and so enable its subsequent processing in the server at the store.

At the end of the report on each company the totals per floor and building are also shown. At the end of the full report totals are shown for the organization or group of companies as a whole.

● **Closure by terminal/cashier** (LS001004):

Daily report on the cash totals (remainder, payments, deposits, withdrawals, cashbox settlements and differences), broken down by currency, and general totals by terminal, floor, building, company and organization.

At the end of the report there is a line showing the totals for the organization as a whole.

● **Cancellation by terminal** (LS001005):

Daily report containing detailed information on the cancellations carried out in the terminals and cashiers area.

● **Cancellations by cashier** (LS001006):

Daily report which contains the data identifying the cancellations performed each day by each sales person: Shows totals by floor, company and organization.

At the end of the report the totals for the group of companies are included.

- **Point of sale authorizations** (LS001009):

  Daily report on authorizations given by operators at the point of sale terminals.

- **Card sales listing** (LS001014):

  Daily report giving details of all the transactions involving a card, whether sale or refund, showing the totals per card type, company and organization.

- **Offline transactions on ISP** (LS001020):

  Daily report on the transactions on each terminal which could not be processed because the data was not captured due to a loss of communications.

- **Rejected transactions** (LS001021):

  Report on the transactions the management system has rejected because one or more of the fields does not comply with the schema set by the application. At the end of the transaction list by terminal and company the totals for each are shown.

- **Sales listing by item** (LS001027):

  Daily report giving the sales and refunds for each item. The total for each company and the organization are also given. When the end of a company is reached the totals (price) for the item sold are given.

- **Invoices report by terminal** (LS001040):

  Daily report on the invoices per customer produced at each terminal. To produce this report the invoice/customer and invoice/taxes relationship information is collected from each point of sale. Totaled by type of invoice, terminal and branch.

- **Closure report by terminal** (LS001040):

  Daily report containing the details of the center's sales activity describing the operations carried out at each terminal.

- **VAT settlement** (LS001044):

  Daily report giving the description of each type of tax, calculating the corresponding taxable base and tax payable in each case, and calculating the totals per sale, floor, building, company and overall.

● **Closure by operator/street** (LS001045):

Daily report containing the operations by each sales person on the terminal, together with the cash produced during the day. This report informs you how much excess or loss there was per salesperson. This report complements "Closure by terminal/cashier" (LS001004), bringing together the information on terminal totals with that on cashiers produced in the previous report.

Totals are given broken down by means of payment, operators, floors, buildings, companies, and a total is given for the organization as a whole (without breakdown by means of payment).

● **Installments report** (LS001046):

Daily report which contains those sales transactions which are to be paid for in installments. The transaction performed by the terminal, the amount of the sale, the number of the card with which the transaction was carried out, the interest payable for payment in installments, the number of installments and the value of each.

● **Listing of sales with overall reduced VAT** (LS001047):

Daily report containing all the transactions in which a VAT rate was involved which had another, reduced, rate associated with it. The report gives a total for the transactions performed with each of the tax rates, the percentage (both normal and reduced) and the net amounts of tax applied. This report gives totals by company and by levels 1, 2 and 3.

● **Listing of sales with detailed reduced VAT** (LS001048):

Daily report containing details of the transactions carried out on each of the terminals with a tax rate associated with another reduced rate. This report gives totals for companies and levels 1, 2 and 3, i.e. it is similar to the previous report except that here a breakdown is given of each transaction indicating the number of the terminal at which it took place.

● **Check sales listing** (LS001049):

Daily report which gives details of all transactions at each terminal which were paid in full or in part by check. This report gives totals for each company and for levels 1, 2 and 3.

- **Listing of sales with supplier voucher** (LS001050):

  Daily report which gives details of all transactions at each terminal which were paid in full or in part using a supplier voucher. This report gives totals for each supplier, terminal, company and for levels 1, 2 and 3.

- **Manual price changes** (LS001055):

  Daily report listing all the manual price changes performed by cashiers from the POSTs.

Chain 3 generates accrued sales reports from data obtained in Chain 2 "Accrued totals".

- **Terminal loading by time** (LS001003):

  Daily report which describes the hourly number of operations and transaction lines of each terminal. Totaled by floor, building and company. For each frequency (set times) the number of operations performed within the time band is specified and the amount per thousand of the overall total that this represents.

  The totals for the organization are given at the end of the report.

- **Sales by department** (LS001007):

  Daily report giving the daily sales, refunds and fulfillments. Provides the accrued net sales on the month and business year, with the amount and units sold broken down in each case. The report gives totals per floor, building and company and includes totals for the organization as a whole at the end.

- **Cashier activity** (LS001011):

  Daily report which gives the number of operations and their amount, within each time band, together with the fractions they represent of the total operations performed by each salesperson. Totaled by floor, building, company and organization.

- **Salesperson errors** (LS001012):

  Daily report listing the errors made by each salesperson and at each terminal using the event log data.

- **Container movements listing** (LS001031):

  Daily report containing the movements (sales and refunds) of containers by each company accrued on a daily and monthly basis, with totals per company and for the organization as a whole.

- **Payments/receipts by terminal** (LS001032):

  Daily report giving the payment/receipt movements for each company, building, floor and sales zone, subdivided by terminal, with accrued totals by day, month and business year.

- **Report on sales by department** (LS001043):

  Daily report containing the daily sales, refunds and fulfillments performed by each floor, subdivided into departments. The amount and quantity involved in each operation is also given.

The following item update report is also obtained from chain 5:

- **Incoming/outgoing merchandise listing (LS008508):**

  Report on item movements other than sales/refunds. This report is generated by moving through the I/O Merchandise table using the processing date (control record) and taking those movements show "Updated" field is TRUE. The report is subdivided by companies ❏

Sales Management Glossary

The following glossary includes some terms used frequently in StoreFlow Sales Management.

AC

Card authorizing center. ACs appear in the context of electronic payment systems such as SF-EFT and verify certain data of the customers who pay for their purchases by means of an electronic payment document (whether the maximum authorized credit has been exceeded, etc.), informing SF-EFT of the decision taken, i.e. authorization or denial.

Access Code

Password that the operator must enter when running any StoreFlow-GV program.

Adjustment Groups

Groups that contain the various movements that take place in a company and are used for detecting how these movements will affect the stock.

Alias

Name given in SF-GV to the different bar codes for the same item, e.g., items that the company purchases from suppliers in different countries.

Back-Office

Systems with built-in business analysis and high-level decision-making functions.

Bar Code

A set consisting of lines of varying thickness and a series of numbers associated with those lines which is placed on the items to enable their identification by means of an optical reader.

Bar Code Reader

This device captures the bar codes printed on certain items. It enables EAN codes (manufacturer codes) and IAN codes (internal codes), among others, to be read.

Batch Process

Batch processes are launched when the store closing command is issued from the sales manager monitor. They are controlled from the **Process Strings** process in the Basic module and their main function is to update the status of the processes generated automatically by the application.

BIN

A credit card's ID number. It contains a specific number of digits and other data integrated on the magnetic stripe.

Bookkeeping Period

The year is divided into time intervals which are used as the terminals' bookkeeping periods.

Bookkeeping Session

Process initiated daily by the administrator from SF-EFT in order to establish a connection to the various payment document authorizing centers, through which a card's parameters are verified.

The session is closed at the end of the day, usually after balancing the books, in order to make sure that the total amount for the transactions performed in the store match those recorded by the centers.

Branch

The management area associated with the physical space where the companies in the group are located (in StoreFlow, this is a synonym for center or store).

Card Reader

This device reads the magnetic stripe attached to the cards.

Cards

In StoreFlow, a card is any identification or payment document.

- **Chip Card**

  Next-generation card with a built-in chip that provides greater security and more data.

  This document is read by means a special reader.

- **Customer Card**

  Internal store card that is issued as an ID to enable the customer to benefit from the campaigns and promotions offered by the company according to its commercial strategy. It is not used as a means of payment.

- **Employee Card**

  ID card issued by the store to enable the employee to log on to the point of sale terminal.

- **Loyalty-Building Card**

  Card issued to the customers so that they can benefit from the bonuses, points, promotions, discount coupons, etc., offered by loyalty-building campaigns.

- **Payment Card**

  These are credit and debit cards.

  - **Credit:** The transaction is charged regardless of the status of the customer's account; the customer's bank account is debited for the amount of the transaction after a period of time agreed between the customer and the bank, and a percentage (usually null or positive) is charged for the operation.

  - **Debit:** Cards with which the customer's account is usually debited in real time and the transaction only takes place if the account has sufficient funds to settle the transaction.

Cash Difference

Discrepancy between the amount of money that theoretically should have been deposited in a POS terminal for the total items sold and the actual amount invoiced.

Cash Withdrawals

Process that takes place when the amount of money existing in the point of sale terminal exceeds the maximum amount determined by the system. The terminal informs the operator by means of a message and a maximum time limit can be established for the actual physical transfer of the withdrawal from the POST to the central cashier's department.

Cashbox Group

The different groups of means of payment used for performing the cashbox closing procedure and the corresponding settlement at a point of sale terminal (cash, electronic payment documents or store coupons).

Cashbox Settlement

This operation counts the total amount of money available in a POST, by checking the difference between the theoretical amount sold and the total amount actually deposited in the cashbox. In this operation, the total amount is distributed by cash, store tokens or coupons, payment documents, etc.

Cashbox Settlement Event Log

This file contains data regarding the events that occur in the cashbox settlement operations, defined by bookkeeping periods.

Cashbox Settlement in Office

Cashbox settlement in the office of the money existing in the drawer as a result of the cash movements made from a POST, as well as the carrying out from a client station of certain operations typical of a point of sale application.

Cashbox Settlement Monitor

This program processes the POST's transaction log file by extracting from it the information required for carrying out the cashbox settlement operation by salesperson or by terminal.

Center Monitor

This is one of the key processes in Sales Management and is responsible for launching and controlling the status of the sales manager and the daily opening and closing of the store.

Central Office

In a company, the administrative entity that receives and manages the data from all the branches.

Client Station

In StoreFlow, a client station is defined as one from which the Sales Management application can be accessed, regardless of the physical point where it is located. Client stations can be a long way apart from each other and are grouped together for organizational purposes according to the tasks they perform or the operators who will be using them.

Client/Server

This is the architecture model used by StoreFlow, which enables all the system components to access the data and resources residing on the server without the need for knowing their physical location.

Company

Each of the independent points of sale that make up a store or shopping center. In StoreFlow, this is the first level established within the business structure.

Company Levels

(see **Descriptors**)

Concentrator

A gateway that allows data packets to be transported between the scales and the server.

Consignment

Sales mode where the company or string of stores itself controls the products and stock of a specific supplier.

Container Groups

Groups that specify the type of container used for presenting the product to be marketed by the company.

Control Roll Monitor

This process is used for manually enabling and disabling the server process in charge of reading the transactions contained in the current log, should it stop for any reason.

Credit

Any transaction where the amount of the purchase is not paid immediately, but rather in one or more installments agreed beforehand with the banking institution (partial payments).

- **Credit Plan**

  Process whereby the necessary parameters are applied so that a customer can opt for certain deferred payment formulas.

- **Credit Status**

  Process whereby different categories are established based on the credit status of those customers who have been registered in the store, in order to assign them a specific credit plan, enable deferred payments, etc.

- **Credit Transaction**

  Decision and resulting action by the POST operator after receiving confirmation from the AC (card authorizing center) as regards the credit status of a customer.

Credit Account

Specific account used in the SF-EFT application for temporarily depositing the total amount of the transactions performed between the company and the bank or financial institution that manages the cards or any other electronic means of payment.

Credit Plan

(see **Credit**)

Credit Status

(see **Credit**)

Credit Transaction

(see **Credit**)

Daily Strings

A string is a series of processes designed for listing and storing the daily sales data obtained from the daily tables generated by the **Sales manager monitor**.Strings are usually launched automatically at night when the store is closed, although they can also be run manually, even during business hours.

Debit

Any transaction where the amount of the purchase is paid immediately and in one single payment.

Delivery Note

A document issued by the supplier for delivering the merchandise. StoreFlow supports three types of delivery notes, "entry", "return" or "combined", both printed or in electronic format.

Descriptors

Hierarchical organization levels in a store's business structure. Three levels are commonly used (building, area and floor), although two can be used in smaller companies.

Difference Regularization

Process whereby the differences between the value of the goods sold and the amount actually held in the cashbox are corrected and balanced.

EAN

(see **EAN Code**)

EAN Code

European Article Number, or manufacturer code assigned to a company's items according to international standards. This is the technical denomination given to the 13-digit European bar code, although in practice this term is applied to any existing bar code, even non-European codes.

EFT

Electronic Fund Transfer, an electronic payment system. This application manages any electronic operation involving the transfer of money; in StoreFlow it is usually associated with payments of commercial transactions from a POS terminal (SF-EFT, StoreFlow electronic payment system).

Employee

In the StoreFlow environment, any individual that has been registered in the system and works at a point of sale terminal or a client station.

Environment

Logical grouping of point of sale terminals that enables the available attributes and functions to be assigned by terminal (terminal operating mode, sales mode, rounding-off in change and discounts, etc.).

Terminals are assigned to the various environments during the system configuration stage; this process is mandatory and must locate each POS terminal in a single environment within the same company.

Event

In the SF-GV environment, an event means any error that occurs during the execution of the processes, i.e., those caused by the program itself, which are recorded in the event table.

As regards merchandise management and control, an event means any error concerning the price of the items, their labeling or their location within the store.

Event Log

Computer record used by the SF-EFT (StoreFlow electronic payment system) application where a list is kept with the significant occurrences that take place in the system. The events are not necessarily errors. Typical events are, for instance:

- Startup of a system server

- Attempt to perform a transaction with an invalid card

- Communications line drop

Event Recording System

A program used for looking up the specific data for an event (message, time when the event took place, terminal that generated the event, salesperson, etc.). It is usually launched at the beginning of the day and remains open while the system is in operation. SF-GV enables this process to remain active in as many client stations as have been installed on the system.

Family of Items

This subdivision groups together items with common and specific characteristics which distinguish them from the rest of the items in the same department. In StoreFlow, this concept corresponds to a section in a retail outlet or department store. For instance, Perfumery, Cleaning Products and Gardening can be defined as families in the Household department.

Floating Cashier

This is an operating mode supported by the Point of Sale application whereby the operations performed from a POS terminal are recorded directly by the server and charged to the operator who performed them.

Folder

In StoreFlow-GV, a set of interrelated processes which are in turn included within the same application module.

Free PLUs

This process enables the tables of the PLUs that have not yet been assigned to any item to be generated again. It is used very seldom, and this process should only be accessed if an error message is given when creating new PLUs.

Front-Office

Systems located at a first management level and used for performing operations within the retail outlet itself (sales transactions, data queries, etc.). In StoreFlow, the SF-PV, SF-WPV, SF-Price Checker and SF-EFT applications are considered front-office systems.

G.I.S.

Implementation and Stock Management, an optional StoreFlow module designed for controlling the merchandise and its movements within the store, as well as any possible events.

Grouping of Items

In SF-GV the items are organized in groups according to their nature, normally when they share a common characteristic such as the department or section they belong to, the supplying company, or even the expiration date for food products. Therefore, and unlike the families of items, groupings can contain items from different departments.

Hard Total

Record that contains all the configuration parameters for the point of sale terminals. This record is accessed from the **"Terminal lookup"** process in the Basic module.

History File

A file where all the operations of a specific type are stored in sequential order. History files exist for all the essential data in the application, such as sales by item, cash differences by terminal, cash withdrawals, etc. These logs are essential for detecting errors or failures in the system operation, or simply for looking up specific results.

Horizontal Stock

Function that provides control over the full catalog of the stock that exists in each of the centers and branches of a group. It is very useful because it offers the possibility of having a product that exists in the general catalog. It is available only if the optional G.I.S. StoreFlow module has been purchased.

IAN

(see **IAN Code**)

IAN Code

Internal Article Number used by the company to identify each item; it depends on the criteria established by the company.

In SF-EFT, this is used for identifying a certain type of document and performing some electronic transactions.

ILOG File

This file resides on the server and is used for recording on-line the information collected during the counts performed at the POS terminals.

Intervention

In the context of the Administrative-Financial Management module, this is the operation performed for controlling the money existing in the drawers of the terminals.

Inventory

An inventory is a control extended to all the items in a retail outlet. In StoreFlow, inventories can be made from three different data sources: POS terminals, client stations and inventory data files processed via external capture.

Inventory Manager

This process is run from the server and controls the automatic updating of an inventory created from the data collected internally at the company's POS terminals.

Inventory Monitor

This process is run from the client station to identify the inventory status and to enable and disable it.

Item

Any merchandise or object which is traded.

- **Multiple Item**

  This item can be sold in more than one department.

- **Scales Item**

  Any item in the store that may be processed by the scales system. Scales items can be weighable or non-weighable (capable of being processed by units and not by weight) and during their configuration are given a unique PLU code.

Item catalog

A set of items offered to a store by a supplier. Within a catalog, specific product lines can be defined in order to group together items with similar characteristics.

Keyboard

This input device enables the operator to enter most of the data requested by the terminal, by means of certain combinations of keys.

Label Form

Template used for defining the format of those labels (even of different types) that will be printed most frequently in the store.

Label Generator

Process whereby batches of labels are created for subsequent printing, according to a "manual" or "by changes" selection criterion. This process is associated with the Label Matrix design and editing program.

Label Matrix

Optional StoreFlow-GV module used for designing and printing labels. When this programs is installed, the label formats located on the server are unloaded so that they can be edited at the client station.

Labels

StoreFlow-GV provides different tools for generating labels and offers the possibility of creating a standard format for obtaining labels on-line with actual data updated according to various selective criteria chosen by the operator (by

family, department, groupings of items, prices, EAN codes, special offers, etc.), as well as printing informational or shelf labels intended to be displayed on the store's racks, or incorporating magnetic labels to all the items existing in the same department for security reasons.

Log of Files Received from Central Office

This log contains information about all the files received from the central office, including the name of the file received, the date and time when it was received, the number of records accepted, the number of records rejected, the status, and an explanatory message in case of error.

Logical Names

Alphanumeric strings which can be assigned so that they refer to commonly used files, IP network addresses, etc.

Loyalty-Building

Marketing technique developed for gaining a customer's loyalty to a store, a brand or a string of retail outlets, based on rewarding repeated sales or the use of a specific means of payment with discounts or prizes.

Loyalty-Building Campaign

A means of winning and retaining customers by giving a bonus (either points or prizes) to those customers who show their loyalty to the company.

Means of Payment

Any means used for paying the amount of a transaction. Four different means of payment are defined in StoreFlow: cash, non-cash, currency and card.

Merchandise Restocking

In StoreFlow-GV, this concept is basically linked to the issue of orders, according to which three different restocking modes can be established:

- **Automatic Restocking**

  The number of units that must be ordered from the supplier is calculated based on the normal stock, the maximum stock, and the order point for each item; an order is then placed that will always include the quantity needed for reaching the maximum stock, without exceeding it.

- **External Restocking**

  The POSTs record the number of units that need to be ordered on a file that is read from a StoreFlow-GV client station which sets the company and type of rounding-off that will be applied to the quantities entered on the file; the order is then placed.

- **Manual Restocking**

  Based on his/her own criterion and by manually entering the data into the system, the individual in charge of managing orders in the company decides the quantity or the number of units that must ordered from the supplier.

Methods of Payment

Group of processes used for managing all the payment and collection operations within the company (currency configuration, credit plans, terminal cashbox settlement, etc.).

Middle-Office

Middle-office applications usually combine operational functions typical of front-office systems and top management functions characteristic of back-office systems. In StoreFlow, Sales Management can be considered a middle-office application.

Module

The Sales Management application is divided into main items called modules, which consist of folders. The folders, in turn, contain a number of similar processes that perform the application's essential tasks. Most of the modules are exclusive to SF-GV, although some of them are optional and can be purchased and installed separately. The available modules include: Basic, Administrative-Financial Management, Utilities, Loyalty-Building, Scales, Merchandise Management, Labels, EFT, G.I.S. and Price-Checker.

National Language Support (NLS)

A feature of computer programs that enables the text strings contained in the programs to be modified without changing their functions. This simplifies the translation and adaptation of the programs to the needs and language of each customer.

Negative list of Checks

This works similarly to the negative list of customers. Check lookup operates with the check numbers, whose validity is verified against a bank check authorization center similar to the card AC. At present, this process is available only in the Portuguese version of StoreFlow-GV.

Negative list of Customers

This file is provided by a banking institution or by the card authorizing centers (AC) and lists those customers whose payment cards show some irregularity owing to their record with the store, their credit status or other factors.

Numerators

Specific numbering range assigned to different types of documents, such as invoices and credit notes. The limits of the numbering series are assigned to each POS terminal individually.

Optical Reader

Also called "gun", this device reads the bar codes of the items and controls the merchandise within the store, makes sure that it is located correctly, and examines any possible events that may affect the goods. In StoreFlow GV, optical readers are used in the G.I.S. environment, which is an optional module.

Order Point

Parameter that indicates the minimum quantity or the minimum number of units for placing an order.

Password

Access code that the operator must enter when running any StoreFlow-GV program.

PLU

Price Look Up: access to the item database for checking out on-line the updated price of an item sold.

PLU Points

Points obtained when buying an item that is included in a loyalty-building campaign. The number of points is determined in the Sales Management application from the **Item Maintenance** process.

POST

Point of sale terminal.

(see **Terminals**)

POST Messages

Point of Sale Terminals Generate Messages at Different Levels:

- Messages that are printed on the header and the footer of the ticket given to the customer after the transaction
- Messages that appear on the POST Display
- Messages generated when events occur

Prizes

Process linked to the Loyalty-Building module which defines the prizes awarded for accruing a certain number of points assigned to a campaign, as well as the number of points required.

Process

The common name used for referring to the programs that belong to the server and client station environments in Sales Management. In SF-GV, each client process is represented by an icon and most of them are grouped together by folders.

Process Log

This file contains information about all the processes that have been run during the day in Sales Management. This file contains data such as the process name, the date when it was launched, the execution date, the terminal and employee who launched it, the start and end time, the event message issued when the process was completed, the actions corresponding to the event message, etc.

This log can be used for looking up different types of information for processes being executed and already completed.

Process Monitor

This program is responsible for displaying at the client station the events that originate in the system and for giving warnings in case of error during the execution of the processes.

Product Lines

Items contained in a supplier's catalog that are grouped together based on certain criteria or common characteristics.

Promotion

A promotion is a discount or a gift given to the customer at the time of the sale for exceeding a minimum amount established previously by the store. Promotions are assigned by department, item or environment.

Provision

Operation that consists in depositing cash in a terminal's drawer.

Qualifying Product Units and Free Gift Units

In the context of special offers and promotions, qualifying product units are those that must be purchased in order to be eligible for the corresponding free gift units.

Recount

A report showing the number of items in the store, usually those of a department or family.

Most often revolving counts are effected, which show at all times the stock of most of the items existing in the retail outlet.

Reference

The unique code (14 alphanumeric characters) given in StoreFlow to each item to enable its identification within the store. The EAN is used only for commercial or external purposes, since it is not necessarily unique, whereas the reference is used for internal and inventory purposes.

Regional Configuration

Option included in the Windows Control Panel that can be used for automatically modifying the interface and processes included in StoreFlow in order to adapt them to different languages and countries.

Remainder

Funds left at the point of sale terminal until the next time it is opened.

Report Generator

Process that enables the StoreFlow database to be queried directly in order to obtain those reports that the application does not generate automatically.
The user can sort and group the data together according to any criterion.

Restricted Sale

A sale restricted for a reason other than the price. For instance, the sale of alcohol is restricted by age and, in some countries, to certain hours. StoreFlow enables an item to be registered as a restricted sale item, by defining the restrictive criteria.

Retail Outlet

Synonym for store. A group of companies located in the same sales location and structured into areas.

Rounding-Off Unit

The minimum amount of money accepted by the point of sale terminal. Its function is to prevent irrelevant monetary units from being posted.

Sales File

A file that contains information on total sales and sales by item, which is sent by each store to the central office.

Sales Manager

This server program constantly reads the information contained in the transaction log in order to translate it and store it in tables residing also on the server, thus facilitating its lookup from the client stations.

Sample

Selection of items grouped together by a specific criterion in order to control some of their aspects (price, department they belong to, etc.).

Sampling

Estimate of the percentages of the various components that will be obtained from cutting or breaking up an item into its constituent parts (for instance, in the case of beef, loin, steak, waste, etc.).

Sampling is necessary for all raw material-type products from which end items are obtained, in order to determine what quantities of marketable and non-marketable merchandise will be obtained and how they affect aspects such as the orders to be placed or the store's total stock.

Scales

Each of the scales from which the store operator or the customer obtains a ticket that will be invoiced at the point of sale terminal, with specific data for the weighable or unit items purchased in that specific section. Each scales must be assigned to a counter.

Scales Counter

A counter is a set of one or more scales where items with similar characteristics are sold. In StoreFlow, each scales is assigned to a counter and each counter is assigned to a department.

Scales Keys

Sales hot keys that are associated with a specific item and counter.

- **Hot Keys**

  Keys associated with an item code, department, means of payment, delivery method, quantity, and amount that are used for expediting the transactions at the POS terminals. By pressing one single key, the system will automatically enter the value(s) associated with that key.

- **Motor Keys**

  Keys that represent the main functions of a POST. These functions must have been assigned a code within a specific range.

- **Printable Keys**

  Keys associated with one of two special functions: "double zero" or "clear".

Scales Monitor

Process reserved for the scales system administrator that is used for: enabling and disabling the scales system at the beginning and the end of the day; enabling or stopping the server-scales and scales-server communications programs; sending

specific commands for loading new tables; or reprocessing the operations log file in case of problem.

Scales Ticket

A descriptive ticket given to the customer after performing an operation in the scales section, which will be invoiced at the point of sale terminal. The scales ticket should not be mistaken for the sales ticket that is given when the total amount of the transaction is paid by the customer. Its configuration can be applied to both full counters and specific pieces of equipment.

Sector

Physical part of the sales environment that is identified by a code in order to locate more easily the departments in a company. Therefore, sectors must be defined before defining the departments.

Server

Component of the client-server architecture model that owns and manages all the resources made available to the client stations.

Short Code

Abbreviated item reference used by the point of sale terminal's operator instead of the full reference to perform sales transactions, refunds, queries, etc.

Special Offers

Special offers consist in a reduction of the unit price of an item sold or a gift of the same item that the customer obtains when buying under certain conditions. In StoreFlow, special offers are classified by item or by department.

Stock

Quantity or number of units of an item that are available. In StoreFlow, stock-related operations are performed based on the department or family the stock belongs to. Various types of stock exist:

- **Physical Stock**

  Actual existing quantity or number of units of an item.

- **Maximum stock**

  Maximum quantity or number of units of an item that must be available.

- **Normal or minimum stock**

  Minimum quantity or number of units of an item that must be available.

- **Theoretical Stock**

  Quantity or number of units of an item that appear as stock in the database (it does not necessarily match the physical stock).

Store

Synonym for retail outlet. In StoreFlow, a grouping of companies located in the same sales location and structured into areas.

Supermanager

Employee who has access to the data of all the companies in the group and to all the functions of all the processes in the Sales Management application. The employees can be configured as supermanagers by means of the user authorization process.

Superuser

A level below the supermanager where the employee has the rights and authorizations necessary for using all the processes and options of Sales Management. The employees can be configured as superusers by means of the user authorization process.

Supplier

Suppliers provide merchandise to the companies managed by StoreFlow-GV, either to the warehouses of the central office or to the store's own warehouse.

Supplier Promotions

Supplier promotions are designed to encourage the sale of the items they supply. For this purpose they establish campaigns that offer discounts or bonuses to the customers; such incentives are applied to the total amount of the purchase or to the purchase of certain items.

System Event

Error caused in a critical server process managed by another process called "spy" which retrieves the message and communicates it to the client station so that it can be corrected.

Taxes

Taxes act directly on the sale of items and are added to the price as an absolute surcharge or a percentage. Tax configuration is essential for obtaining the retail price that will be printed on the ticket.

Terminal Updating

Degree of coincidence that exists between the information available in a point of sale terminal's storage device -usually a hard disk- and the information contained in the system's database, for instance, as regards items, prices, etc. That is to say, the terminal's database must contain the same information as the system's database.

Terminals

Also called POST, a terminal is the item in the store whose operation requires the greatest number of preliminary procedures, since the main operations and transactions of a retail outlet are performed from terminals.

- **Dummy Terminal**

  Point of sale terminal that exists in the system for bookkeeping and organizational purposes, but does not exist physically in the store, i.e., it is not connected to the network.

- **Logical Terminal**

  A terminal number that makes sense to the company that terminal belongs to. It is usually identified with the number of the exit aisle in the line of cash registers.

- **Physical Terminal**

  Any POST connected to the network that has a real and not fictitious existence, as opposed to dummy terminals which are registered on the server but do not actually exist.

TLOG

(see **Transaction Log**)

Transaction

In the context of StoreFlow, a transaction is any commercial operation performed from a POST (a sale or any other type of operation).

Transaction Log

Also called TLOG, this file contains sequential information on all the daily commercial operations (sales, refunds, etc.) performed at the point of sale terminals. The data contained in this file includes the company code, terminal code, transaction number, salesperson code, transaction status, type of transaction, function performed by the terminal, card number (if any), etc.

Type of Adjustment

Types of adjustments are defined in order to modify the theoretical quantity of merchandise (stock) that the system calculates automatically, and thus reflect the actual quantity that is detected when performing a count, an inventory or an unusual merchandise movement.

Type of Delivery Note

Three types of delivery notes exist:

- **Entry:** corresponding to incoming merchandise received at the store, i.e., it only contains incoming items.

- **Return:** delivery note corresponding to merchandise returned for some reason (defective goods, delivery error, etc.), i.e., it only contains items leaving the store.

- **Combined:** This contains accepted entries and returns.

Types of Cards

Models of cards that can be used with specific characteristics. StoreFlow-GV supports four types: payment, customer, loyalty-building and employee.

User Authorization

User authorizations are used for controlling access by a user or employee to a given process and to its specific options and functions. Within the context of Sales Management client stations, a user authorization is equivalent to a profile in the context of POS terminals.

User Profile

A user profile is defined by a set of characteristics granted by the SF-GV system administrator to a specific salesperson or operator. The profile determines how the POS terminal will be used -cashier, salesperson, operator or non-salesperson mode- and the functions that can be performed (apply discounts, give refunds, etc.).

Volume Discount

Allowance agreed beforehand by the supplier and the company that is applied for a given period of time: monthly, quarterly or annually. This type of discount is usually associated with a single supplier and extends to a period of one calendar year.

Weighing Equipment

(see **Scales**)

Zee

Colloquial designation for the cashbox closing operation.