

Gentran:Server[®] for Windows[®]

CII User's Guide

Version 5.1

Sterling Commerce
An IBM Company

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Gentran:Server for Windows

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About This Guide

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Overview

Introduction

Gentran:Server® for Windows® enables you to map to and from Japanese Center for Informatization of Industry (CII) data documents, along with other electronic commerce messages in the same manner. This allows you to maintain a homogenous processing and data management environment, regardless of how the incoming and outgoing data is formatted (CII, XML, EDI, proprietary message formats, etc.).

This manual is intended to explain how to use CII with Gentran:Server for Windows and assist you in performing various tasks in Gentran:Server. This manual uses a task-oriented approach, which is intended to answer any questions you may have about Gentran:Server with step-by-step instructions.

Note

This manual is *not* intended to explain or define CII.

Before you Begin

Assumptions

This list contains the items with which this manual assumes you are familiar.

- Gentran:Server for Windows
- Windows
- CII

Prerequisite

This list describes the software prerequisites to use CII with Gentran:Server.

- You must have Gentran:Server for Windows version 5.0 currently installed.
 - You must have installed the CII standards from the ESD Portal or from the CII Standards Database CD.
-

What's in This Manual

Description of contents

The *CII User's Guide* is organized into chapters. A brief description of the chapter contents follows.

- *About This Guide* explains the content, organization, and conventions in this guide. This chapter also describes how to get technical support,
 - *Chapter 1, Gentran:Server CII Overview* provides you with an introduction of how Gentran:Server uses CII, including the new features and functions of Gentran:Server.
 - *Chapter 2, Mapping CII Documents* describes tasks you need to create a CII map.
 - *Chapter 3, Setting up Gentran:Server for CII* describes tasks you need to complete your CII implementation.
-

Getting Support

Introduction Sterling Commerce's Gentran:Server software is supported by trained product support personnel who are available to help you with product questions or concerns.

Note

Gentran:Server Customer Support does not support non-Sterling Commerce products (e.g., SQL Server, Oracle, etc.), but can assist you in configuring non-Sterling Commerce products to work with Gentran:Server.

Phone number For assistance, please refer to your *Getting Started Guide* to determine which support phone number you should use.

Before calling support

To help us provide prompt service, we ask that you do the following:

- Attempt to recreate any problem that you encounter and record the exact sequence of events.
- When you call product support, you should be prepared to provide us with the information below.

Information	Description
Identification	Your company name, your name, telephone number and extension, and the case number (if the question refers to a previously reported issue).
System Configuration	The Gentran:Server version (and any service packs installed) and information about the primary Gentran system controller and all machines experiencing problems, including: the Windows operating system version, amount of memory, available disk space, database version, Microsoft Data Access (MDAC) version, and Internet Explorer version. Also, please describe any recent changes in your hardware, software, or the configuration of your system.
System Data Store	Which machines contain folders in the system data store?
Error Messages	Record the exact wording of any error messages you receive and the point in the software where the error occurred, as well as any log files.
Attempted Solutions	Record any steps that you took attempting to resolve the problem and note all the outcomes, and provide an estimate on how many times the problem occurred and whether it can be reproduced.

Accessing the Sterling Commerce Support Web Site

The Sterling Commerce Customer Support Web Site contains valuable information about getting support for Gentran:Server for Windows, including the:

- scope of support services
- customer support policies
- call prioritizing
- customer support phone directory
- how to create new Support on Demand cases
- how to check the status of Support on Demand cases
- how to add information to Support on Demand cases

The Customer Support Web Site is constantly updated and all Sterling Commerce customers have access to it. This web site also contains the most recent product updates and is a valuable source of product information.

Reference

Refer to the *Getting Started Guide* for information on how to access the Customer Support World Wide Web Site.

Documentation

The Customer Support Web Site contains a documentation library, which has the entire Gentran:Server for Windows documentation set. You can download the product manuals in PDF format from this library at any time.

Gentran:Server CII Overview

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- ▶ Overview 1 - 2
 - ▶ CII Map Objects 1 - 3
 - ▶ Using Text and Hex View in Gentran:Server Browsers 1 - 4
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Overview

Introduction

This chapter provides you with an introduction of how Gentran:Server uses CII, including the new features and functions of Gentran:Server.

Understanding CII basics

CII provides the Japanese syntax definition for electronic data interchange messages. The CII Syntax Rule specifies the details, such as looping structures and data types, of CII messages. The CII implementation of Gentran:Server is based on the CII Syntax Rule, which is available in both Japanese and English.

Distinguishing syntax rule and standard messages

CII does not include standard message types; these are provided by industry groups (for example, EIAJ for the electronics industry). Sterling Commerce includes a number of these standard messages in the CII standards database.

Reference

See the *Getting Started Guide* for more information on installing the Gentran:Server standards.




CII Map Objects

Introduction

Gentran:Server uses a set of icons to represent CII map objects.

CII Format Components

The following table lists the components that make up the CII format, the icons that represent the components, and descriptions of the components. For information about adding a map component to a layout and information about the properties of these map components, see *CII File Properties Dialog Box* on page 2 - 13, *Group Properties Dialog Box* on page 2 - 15, and *CII TFD Properties Dialog Box* on page 2 - 17.

Component	Icon	Description
CII root element		The <i>CII File root element</i> represents the CII document that Gentran:Server is mapping.
Group		A <i>group</i> contains related groups and transfer form data (TFDs).
TFD		<i>Transfer form data (TFD)</i> is a block of data that consists of a tag, a length indicator, and data. The length of the element is always indicated, so delimiters are unnecessary. When a TFD has a mapping operation performed against it, a red check mark appears over the TFD icon.

Using Text and Hex View in Gentrans:Server Browsers

Overview While EDIFACT and ANSI messages can easily be viewed in text mode, it is usually more appropriate to view CII messages in hex format. Therefore, this option is available to the user viewing CII data in the Gentrans:Server Electronic Commerce (EC) Manager (desktop) browsers. Hex view is the default view for Raw EDI when you view CII messages, but for the following views, text mode is the default:

- Translator Report
- Tracking Information
- Audit Log

To change the view on a browser, select Text or Hex from the EC Manager **View** menu.

Mapping CII Documents

Contents	<ul style="list-style-type: none"> ▶ About the CII Data Format. 2 - 2 ▶ Creating a CII Layout from a Standard 2 - 6 ▶ CII File Properties Dialog Box. 2 - 13 ▶ Group Properties Dialog Box 2 - 15 ▶ CII TFD Properties Dialog Box 2 - 17 ▶ Configuring a Loop 2 - 20 ▶ About Character Encoding 2 - 21 ▶ Relating CII Data Attributes to Application Integration Data Types. 2 - 22 ▶ Setting Up Syntax Tokens for CII 2 - 23 ▶ Preserving Leading Spaces When Mapping to a Positional Data Format . . 2 - 25 ▶ Changing to Non-Transparent Mode 2 - 26 ▶ Finalizing your CII Map. 2 - 27
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About the CII Data Format

Overview

The *CII data format* provides the Japanese syntax definition for EDI messages. The CII implementation in Gentran:Server is based on the CII Syntax Rule, available in both Japanese and English. The CII Syntax Rule specifies details such as looping structures and data types, but it does not include standard message types. Message types are provided by industry groups. Gentran:Server provides a number of these standard message types in the EDI Standards, which you can download.

CII standard versions

The following are versions of the Japanese Center for Informatization of Industry (CII) standard that are included in the Gentran:Server standards database. Descriptions are available in the standards database, in Japanese.

Reference

See the appropriate Gentran:Server Standards card for information about installing the Gentran Standards.

- ▶ CINT0110
- ▶ CINT0111
- ▶ CINT0112
- ▶ EIAJ011A
- ▶ EIAJ011B
- ▶ EIAJ011C
- ▶ EIAJ011D
- ▶ EIAJ012E
- ▶ EIAJ012F
- ▶ EIAJ012G
- ▶ EIAJ012H
- ▶ EIAJ022D
- ▶ EIAJ022T
- ▶ FEPCE12A
- ▶ FEPCO12A
- ▶ FEPCS11A
- ▶ FEPCS12B
- ▶ FEPCU12A
- ▶ HIIS0110
- ▶ HWSW001A
- ▶ HWSW001B

(Continued on next page)

CII standard versions (contd.)

- ▶ JGAS0001
- ▶ JISI0105
- ▶ JISI0110
- ▶ JPCA0101
- ▶ JPCA0102
- ▶ JTRNEI00
- ▶ JTRNEI2E
- ▶ JTRNFF00
- ▶ JTRNFF1A
- ▶ JTRNFF2A
- ▶ JTRNFF2C
- ▶ JTRNFF2D
- ▶ JTRNJI00
- ▶ JTRNTR00
- ▶ NEWS0011
- ▶ TIRAAS03
- ▶ TIRARA01
- ▶ TIRARA02
- ▶ TIRARA03
- ▶ TIRATA01
- ▶ TIRATA02
- ▶ TIRATA03
- ▶ TRPT011A

Using CII with Gentran:Server

In Gentran:Server, a CII map that contains an FA, FD, or F9 data tag in extended mode on the output side of the map must have a Use Constant standard rule defined, so that a detail number is generated. A detail number is mandatory for these tags in extended mode.

For CII inbound and outbound processes, the user has to specify either 8-bit or 16-bit character set in the map. For 8-bit character set, the user can choose JIS0201, SJIS, or Default, where Default is JIS0201. For 16-bit character set, the user can choose JIS0208, JIS0212, SJIS, or Default, where Default is SJIS. If a user does not set these two values, the default value will be used in translation.

CII message CII headers and trailers are in text, but messages are binary. To read a raw CII message outside of Gentran:Server, you need a hex editor. Using a hex editor, you can see the basic structure of a CII message, which consists of:

- Control tags
- Transfer form data (TFDs)
- Length indicators
- Data bytes

A typical TFD consists of a tag, a length indicator, and data. The length of the element is always indicated, so delimiters are unnecessary.

The Gentran:Server Translation service handles hexadecimal data in the range of 0x01 through 0xFF. Because the translator does not handle 0x00, it cannot translate pure binary data such as bitmaps.

Example

In the following sample is from a dividing-mode CII message, **bold** indicates the tag and *italics* indicates the length. The data is displayed in hex and spaces are added here for readability.

... **01** *04* 34 32 39 30 **02** *04* 30 35 30 34 **03** *06* 39 38 30 35 32 39 ...

Dividing mode Most CII files are sent in dividing mode (also translated as division mode). This mode requires the messages to be sent in chunks of 251 bytes to facilitate communications. To set dividing mode, use the Partner Editor.

Reference

See *CII File Properties Dialog Box* on page 2 - 13 for more information about how to configure dividing mode.

Dividing mode does not affect message group headers or trailers because they are always 251 bytes.

Non-transparent mode According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems. Transparent mode is the default setting in Gentran:Server.

Using extended-mode tags

According to the CII specification, tags are in either compressed or extended mode. The following table illustrates the differences.

Mode	Size	Range (decimal)
Compressed	1 byte	1 - 239
Extended	2 bytes	1-61439

A TFD is in compressed mode unless an extended-mode indicator (0xF0) was previously encountered in the TFD stream.

CII control tags

The following hexadecimal control tags are used in CII:

Control Tag	Function
0xF0	Starts extended mode
0xF2	Length extender
0xF7	Length indicator
0xF8	Escape indicator
0xF9	Internal segment separator
0xFA/0xFD	Multi-detail header (loop start)
0xFB	Multi-detail return
0xFC	Multi-detail trailer (loop end)
0xFE	Message Trailer

Creating a CII Layout from a Standard

Introduction Use this procedure to create a CII layout from a standard:

Step	Action																						
1	From the Application Integration File menu, select New . System response The system displays the New Map Wizard.																						
2	Answer the following questions and then click Next . <ul style="list-style-type: none"> What kind of map are you creating? The following table defines the selections: <table border="1"> <thead> <tr> <th>Part</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>Import</td> <td>Used for outbound maps.</td> </tr> <tr> <td>Export</td> <td>Used for inbound maps.</td> </tr> <tr> <td>Interchange break</td> <td>Used in advanced mapping to separate interchanges.</td> </tr> <tr> <td>Functional Acknowledgement Inbound</td> <td>Used in advanced mapping to reconcile functional acknowledgements.</td> </tr> <tr> <td>Functional Acknowledgement Outbound</td> <td>Used in advanced mapping to generate functional acknowledgements.</td> </tr> <tr> <td>System Import Header</td> <td>Used to determine which trading relationship (established in Partner Editor) corresponds to each document in the application file, so the system knows which import translation object to use to process the document.</td> </tr> <tr> <td>Turnaround</td> <td>Used for EDI to EDI maps.</td> </tr> <tr> <td>Transaction build</td> <td>Used in advanced mapping to build transaction envelopes.</td> </tr> <tr> <td>Transaction break</td> <td>Used in advanced mapping to separate documents.</td> </tr> <tr> <td>Functional group build</td> <td>Used in advanced mapping to build functional group envelopes.</td> </tr> </tbody> </table>	Part	Function	Import	Used for outbound maps.	Export	Used for inbound maps.	Interchange break	Used in advanced mapping to separate interchanges.	Functional Acknowledgement Inbound	Used in advanced mapping to reconcile functional acknowledgements.	Functional Acknowledgement Outbound	Used in advanced mapping to generate functional acknowledgements.	System Import Header	Used to determine which trading relationship (established in Partner Editor) corresponds to each document in the application file, so the system knows which import translation object to use to process the document.	Turnaround	Used for EDI to EDI maps.	Transaction build	Used in advanced mapping to build transaction envelopes.	Transaction break	Used in advanced mapping to separate documents.	Functional group build	Used in advanced mapping to build functional group envelopes.
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Transaction break	Used in advanced mapping to separate documents.																						
Functional group build	Used in advanced mapping to build functional group envelopes.																						

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(Contd) Step	Action	
2 (contd)	Functional group break	Used in advanced mapping to separate functional groups.
	Interchange build	Used in advanced mapping to build interchange envelopes.
	<ul style="list-style-type: none"> ▶ <i>What is the name of the map?</i> Type the unique name of the map. The system adds the .MAP extension. ▶ <i>What is your name?</i> Type your name if it differs from the user name prompted by the system. <p>System response The system displays the New Map Wizard - Input Format dialog box.</p> <p>Note You need to complete the format of the Input side of the map. This is the format of the data that is translated by the Gentran:Server system.</p>	
3	<p>For the input side of the map: do you want to create a new data format using a syntax that you define?</p> <ul style="list-style-type: none"> ▶ If <i>yes</i>, select one of the following input format options and continue with step 4: Delimited EDI (Electronic Data Interchange file) Positional (VDA, GENCOD, application files, etc.) CII (Japanese standard) CII Positional (for CII Build/Break maps) <p>Note For Inbound maps (Export), the Input Format Type is “CII” or “EDI”. For Outbound maps (System Import or Import), the Input Format Type is “Positional.” For Turnaround maps, the Input Format Type is “EDI” or “CII.”</p> <ul style="list-style-type: none"> ▶ If <i>no</i> (you want to load the data format from a saved definition), select the Load the data format from a saved definition option, and type the path and file name of the saved definition (or click Browse to display the Open File Definition dialog box). Continue with step 6. <p style="text-align: right; color: green;">(Continued on next page)</p>	

(Contd) Step	Action	
4	<p>Did you select “CII” and want to customize the format?</p> <ul style="list-style-type: none"> ▶ If <i>yes</i>, click Customize and continue with the next step. <p>System response The system displays the New CII Wizard dialog box.</p> <p>Note The CII wizard enables you to create your format from the standards database.</p> <ul style="list-style-type: none"> ▶ If <i>no</i>, click Next and continue with step 7. <p>System response The system displays the New Map Wizard - Input Format dialog box.</p>	
5	Follow the steps for the appropriate dialog box and then continue with step 7.	
	IF the dialog box displayed is...	THEN follow this procedure...
	New Delimited EDI Wizard	<ul style="list-style-type: none"> a. Click Next. b. Select the ODBC data source that contains the standards database. c. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click Next. d. Click Finish. <p style="text-align: right; color: green;">(Continued on next page)</p>

(Contd) Step	Action	
5 (contd)	New CII Wizard	<p>a. Click Next.</p> <p>b. Select the ODBC data source that contains the standards database.</p> <p>c. If you want to use Japanese descriptions, select the check box (the default is English descriptions).</p> <p>d. Click Next.</p> <p>e. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click Next.</p> <p>f. Select the appropriate Multi-detail header and click Next.</p> <p>Reference See <i>Using extended-mode tags</i> on page 2 - 5 for more information on multi-detail header extended-mode tags.</p> <p>g. Click Finish.</p>
<p>System response The system displays the New Map Wizard - Output Format dialog box.</p>		
6	<p>Did you choose to load the data format from a saved definition and click Browse to display the Open File Definition dialog box?</p> <ul style="list-style-type: none"> • If <i>yes</i>, type the file name and click Open to load the selected file format definition, and then continue with step 7. <p>Note You can now select either a .DDF or .IFD file.</p> <ul style="list-style-type: none"> • If <i>no</i>, continue with step 7. <p>Note If the DDF is invalid, the system displays a message box explaining the problem and terminates the import.</p> <p style="text-align: right; color: green;">(Continued on next page)</p>	

(Contd) Step	Action
7	<p>For the output side of the map: do you want to create a new data format using a syntax that you define?</p> <ul style="list-style-type: none"> ▶ If <i>yes</i>, select one of the following output format options and continue with step 8: <ul style="list-style-type: none"> Delimited EDI (Electronic Data Interchange file) Positional (VDA, GENCOD, application files, etc.) CII (Japanese standard) CII Positional (for CII Build/Break maps) <p>Note For Inbound maps (Export), the Output Format Type is “Positional.” For Outbound maps (System Import or Import), the Output Format Type is “CII” or “EDI.” For Turnaround maps, the Output Format Type is “EDI” or “CII.”</p> <ul style="list-style-type: none"> ▶ If <i>no</i> (you want to load the data format from a saved definition), select the Load the data format from a saved definition option and type the path and file name of the saved definition (or click Browse to display the Open File Definition dialog box). Continue with step 9.
8	<p>Did you select “CII” and want to customize the format?</p> <ul style="list-style-type: none"> ▶ If <i>yes</i>, click Customize and continue with the next step. <p>System response The system displays the New CII Wizard dialog box.</p> <p>Note The CII wizard enables you to create your format from the standards database.</p> <ul style="list-style-type: none"> ▶ If <i>no</i>, click Finish to load the standards information you selected and create the new map (this may take a few seconds). <p>System response The system displays the new map in the Application Integration Window.</p> <p style="text-align: right;">(Continued on next page)</p>

(Contd) Step	Action	
9	Follow the steps for the appropriate dialog box and then continue with step 11.	
	IF the dialog box displayed is...	THEN follow this procedure...
	New Delimited EDI Wizard	<ul style="list-style-type: none"> a. Click Next. b. Select the ODBC data source that contains the standards database. c. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click Next. d. Click Finish.
	New CII Wizard	<ul style="list-style-type: none"> a. Click Next. b. Select the ODBC data source that contains the standards database. c. If you want to use Japanese descriptions, select the check box (the default is English descriptions). d. Click Next. e. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click Next. f. Select the appropriate Multi-detail header and click Next. <p>Reference See <i>Using extended-mode tags</i> on page 2 - 5 for more information on multi-detail header extended-mode tags.</p> <ul style="list-style-type: none"> g. Click Finish.
<p>System response The system displays the New Map Wizard dialog box.</p> <p style="text-align: right; color: green;">(Continued on next page)</p>		

(Contd) Step	Action
10	<p>Did you choose to load the data format from a saved definition and click Browse to display the Open File Definition dialog box?</p> <ul style="list-style-type: none"> ▶ If <i>yes</i>, type the file name and click Open to load the selected file format definition, and then continue with step 11. <p>Note You can now select either a .DDF or .IFD file.</p> <ul style="list-style-type: none"> ▶ If <i>no</i>, continue with step 11.
11	<p>Click Finish to load the standards information you selected and create the new map (this may take a few seconds).</p> <p>System response The system displays the new map in the Application Integration Window.</p> <p>Note After you finish creating and saving a new map, you need to define the Input and Output sides of the map. The steps you take are different, depending on whether the map is an Import, System Import, Export, or Turnaround map.</p>

CII File Properties Dialog Box

Parts and functions

This table contains the parts and functions for the CII File Properties dialog box:

Part	Function
Name tab	
Name	Map component name. Note Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non-XML map components, contains any user-defined comments.
Mode tab	
Dividing Mode	Most CII files are sent in dividing mode (also translated as division mode). This mode requires the messages to be sent in chunks of 251 bytes to facilitate communications. To set dividing mode, use the Partner Editor.
Non-Transparent Mode	According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems. Transparent mode is the default setting in Gentran:Server.
Character Sets tab	
Select 8 Bit Character Set	Valid values are Default, JIS-X0201, and Other. Default instructs the translator to use the default character setting of the computer on which the translator is running. Use Other if you must specify any other type of character encoding.
Select 16 Bit Character Set	Valid values are Default, JIS-X0208, and Other. Default instructs the translator to use the default character setting of the computer on which the translator is running. Use Other if you must specify any other type of character encoding.

(Continued on next page)

(Contd) Part	Function
Loop Extended Rules tab	
On Begin	Extended rule to be run before the translator processes the map object.
On End	Extended rule to be run after the translator concludes processing the map object. Application Integration processes On End rules at the end of each loop occurrence, not at the end of all loops.
Full Screen	Maximizes the dialog box.
Compile	<p>Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error.</p> <p>The rule is also compiled when you compile the map.</p>
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked the Compile button to compile the extended rule. Double-click an error to make the cursor go to the line containing the error.

Group Properties Dialog Box

Parts and functions

This table contains the parts and functions for the Group Properties dialog box:

Part	Function
Name tab	
Name	Map component name. Note Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non-XML map components, contains any user-defined comments.
Looping tab	
Minimum usage	Minimum number of times the loop must be repeated. For a conditional loop, the minimum usage is zero.
Maximum usage	Maximum number of times the loop must be repeated.
Promote records to parent	Select this check box to specify that when the group is compiled, the subordinate records and groups are extracted from the loop and located in the parent group. This function is valid for single iteration subgroups only. Note Select this check box if you are mapping the fields in this group to data that is not grouped in the output.
Loop Extended Rules tab	
On Begin	Extended rule to be run before the translator processes the map object.
On End	Extended rule to be run after the translator concludes processing the map object. Application Integration processes On End rules at the end of each loop occurrence, not at the end of all loops.
Full Screen	Maximizes the dialog box.

(Continued on next page)

(Contd) Part	Function
Compile	<p>Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error.</p> <p>The rule is also compiled when you compile the map.</p>
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked the Compile button to compile the extended rule. Double-click an error to make the cursor go to the line containing the error.

CII TFD Properties Dialog Box

Parts and functions

This table contains the parts and functions for the CII TFD Properties dialog box:

Part	Function
Name tab	
Name	Map component name. Note Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non-XML map components, contains any user-defined comments.
Tag tab	
Tag	The element ID, which is defined by a CII standard.
Hex Decimal	Whether you view the tag in hexadecimal or decimal and applies only to what you see in Application Integration. This setting does not affect translation.
Looping tab	
Normal Loop Start Loop End Loop Repeat	Type of loop. Values are: <ul style="list-style-type: none"> ▶ Normal – In the loop, but is not the beginning or ending ▶ Loop Start – Marks the beginning of the loop ▶ Loop End – Marks the end of the loop ▶ Loop Repeat – Marks the end of one loop iteration and the beginning of the next iteration
Validation tab	
Mandatory field	Select this check box to indicate that the map component is required.
Minimum length	Minimum number of characters in the map component.
Maximum length	Maximum number of characters of the map component.

(Continued on next page)

(Contd) Part	Function
Data-type	<p>Type of data for this map component. Valid values are:</p> <ul style="list-style-type: none"> ▶ String - Alphanumeric ▶ Number - Numeric, real, overpunched, or packed (for Positional only) ▶ Date/time - Date or time ▶ Bin Data - binary data (only available if you select “Binary” on the Special tab of the EDI Segment Properties dialog box) ▶ Bin Length - length of binary data (only available if you select “Binary” on the Special tab of the EDI Segment Properties dialog box) <p>Note If you select “Binary,” you must define an element of data-type “Bin Length” and another element of data-type “Bin Data.” The “Bin Length” element must precede the “Bin Data” element.</p>
Data format	<p>How the data in the map component will be formatted. Depending on the data type you selected, you can either:</p> <ul style="list-style-type: none"> ▶ For the String data-type, select a syntax token to denote that this map component must be formatted as the syntax token dictates. ▶ Free Format indicates that any characters are acceptable in the field. The translator does not check the characters for compliance. ▶ For Number or Date/Time data-type, select the data format from a list.
Data is Read/written as Raw Bytes	<p>Type of byte ordering:</p> <ul style="list-style-type: none"> ▶ Little-endian byte ordering specifies that the least significant character is first. Intel and Windows use this order. ▶ Big-endian byte ordering specifies that the most significant character is first. UNIX and Java use this order. <p style="text-align: right; color: green;">(Continued on next page)</p>

(Contd) Part	Function
Standard Rule tab	
Please select the standard rule to use	<ul style="list-style-type: none"> ▶ Select ▶ Update ▶ Use System Variable ▶ Use Constant ▶ Use Accumulator ▶ Loop Count ▶ Use Code <p>Reference For more information on using standard rules, see the <i>Application Integration User's Guide</i>.</p>
Extended Rule tab	
Extended Rule	<p>Area where you type the extended rule.</p> <p>Reference For more information on using extended rules, see the <i>Application Integration User's Guide</i>.</p>
Full Screen	<p>Enlarges the extended rule area to the size of your entire display to give you more room to see what you type.</p>
Compile	<p>Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error.</p> <p>The rule is also compiled when you compile the map.</p>
Errors	<p>If you compiled this extended rule, any warnings or errors are displayed in the Errors list. Double-click an error to make the cursor go to the line containing the error.</p>
Character Set tab	
Character Set	<p>Select 8 Bit if the TFD is single-byte, and 16 Bit if the TFD is double-byte.</p>

Configuring a Loop

Introduction

In CII terminology, a loop is expressed as a multi-detail. Multi-details are indicated through the use of specific TFDs. Before the start of a loop is a multi-detail header (MDH). At the end of each iteration is the multi-detail return (MDR). The multi-detail trailer (MDT) is at the end of the loop. The following table shows how a multi-detail is typically configured:

TFD Type	Tag	Properties
Multi-detail header (MDH)	0xFA	One-byte string
MDH	0xFD	Two-byte binary numeric type N0
Multi-detail return (MDR)	0xFB	No data
Multi-detail trailer (MDT)	0xFC	No data

Configuring Key Fields for Multi-Detail Headers

In extended mode, multi-detail headers must be identified with key fields. You must also specify key fields if there is any possibility of ambiguity in the data (for example, if a multi-detail in the CII file layout has no corresponding data).

To configure a key field for a multi-detail header:

Step	Action
1	In Application Integration, double-click or right-click the multi-detail header and select Properties .
2	Click the Key Field tab. Reference For more information about properties, press F1 for Help.
3	Select Use constant and click Edit .
4	In the Map Constants dialog box, type the constant you need.

Tag	Data Type	Range of Values
0xFA	String	A to Z, 1 to 9
0xFD	String	0000 to 65535

About Character Encoding

Introduction

An encoding system determines the hexadecimal values that represent display characters. Application Integration uses the default character set of the computer you are working on. The default encoding for Japanese Windows is Shift-JIS although there are several other encoding systems for Japanese characters.

Gentran:Server for Windows CII implementation supports the following character conversions:

- Shift-JIS to JIS x0201 (no conversion required)
- Shift-JIS to JIS x0208
- JIS x0201 to Shift-JIS (no conversion required)
- JIS x0208 to Shift-JIS

When you are specifying character sets for the CII side of a map, you must indicate one character set each for 8-bit and 16-bit characters in the **CII File Properties** dialog box. Then in the **CII TFD Properties** dialog box, you indicate whether the TFD uses an 8-bit or 16-bit character set.

Procedure

Use this procedure to set up character set conversion:

Step	Action
1	In the CII File Properties dialog box, select the Character Sets tab.
2	From the lists, select an 8-bit character set and a 16-bit character set. The choices for 8-bit are Default and JIS-X0201. The choices for 16-bit are Default, JIS-X0208, and Other.
3	Double-click the first string-type TFD and select the Character Set tab. You must open the dialog box to select 8-bit or 16-bit. This selection refers to the choices made in the CII File Properties dialog. The default will be 8-bit. If a user changes a 16-bit TFD to numeric, and changes again to string, the default will be 8-bit.
4	Select either the 8 bit (Default) or 16 bit option. Notes <ul style="list-style-type: none"> • This selection refers to the choice you made in step 2 on the CII File Properties dialog box. • If you change a 16-bit TFD to numeric, and change it again to string, the default will be 8-bit. • The settings in Partner Editor override the settings in the map. See <i>Setting up a CII Partner</i> on page 3 - 5 for more information.

Relating CII Data Attributes to Application Integration Data Types

CII Attributes and Data Types

The following table shows how CII data attributes correspond to the data types in Application Integration:

Description of Data	CII Attribute	Application Integration Data Type
Numeric, implied decimal	9	N0 to N9
Numeric, explicit decimal	N	R0 to R9
8-bit characters	X	X, J, or other single-byte syntax token
16-bit characters	K	K, double-byte syntax token
8-digit date	Y	Date: YYYYMMDD

About Syntax Tokens

To process Japanese characters, you must use a syntax token that enables non-Latin characters in the data that the map will process. Application Integration provides the syntax token K, which enables all double-byte Japanese characters.

You can create a syntax token to meet your specific needs. For more information about syntax tokens and creating them, see the *Application Integration User's Guide*. If you create a double-byte character set (DBCS) syntax token, you must configure the syntax tokens on a computer with a DBCS operating system (Japanese, Korean, Traditional Chinese, or Simplified Chinese) or a Windows 2000 system to which you have added font support for one of those languages. If you do not, the DBCS button is inactive; you cannot use it. Note that syntax tokens cannot be imported.

Setting Up Syntax Tokens for CII

Introduction

Some syntax tokens are provided in Application Integration. If you need a different syntax token, you can create a syntax token to meet your needs.

Note

When you create a syntax token, it applies only to the current map. You must create a syntax token for each map you create.

Creating a Syntax Token for Asian Languages

Double-byte character set (DBCS) syntax tokens enable you to create a map that accepts double-byte characters. The DBCS button is active on the Syntax Tokens dialog box if:

- You are running Application Integration on a Chinese, Japanese, or Korean version of the supported Windows operating systems (see the *Getting Started Guide* for information on which operating systems are supported).
- You have added font support for one of these languages to a Windows 2000 system.

DBCS tokens are displayed only in the DBCS Syntax Tokens dialog box, not in the list on the Syntax Tokens dialog box.

To create a DBCS token:

Step	Action
1	From the Application Integration Edit menu, select Syntax Tokens .
2	Click DBCS . System response The system displays the DBCS Syntax Tokens dialog box.
3	From the Codepage list, select the 932 codepage because you are mapping Japanese characters.
4	Click New .
5	In the Edit DBCS Syntax Token dialog box, in the Token field, type the unique one-character alphanumeric value that Application Integration recognizes as containing the allowed range of characters you designate.
6	Select the lead byte from the Lead-Byte box. Double-byte characters are composed of a lead byte and a trail byte. For example, the character □ is code point 93F9 (lead byte 93, trail byte F9). (Continued on next page)

(Contd) Step	Action
7	To exclude individual characters or groups of characters from the token (you do this if there are certain characters that you will not accept in your data), make characters unavailable by either: <ul style="list-style-type: none"> ▶ Clicking a character to make it appear shaded. ▶ Dragging the cursor across a group of characters to make them appear shaded
8	Click Close to save the syntax token.

Deleting a Syntax Token

To delete a syntax token:

Step	Action
1	From the Application Integration Edit menu, select Syntax Tokens .
2	If you are deleting a DBCS syntax token, click DBCS .
3	Select the token that you want to delete and, if you are certain, click Delete . The selected syntax token is deleted without a warning message.

Deleting a Character Range

To delete a character range from a syntax token:

Step	Action
1	From the Application Integration Edit menu, select Syntax Tokens .
2	If you are deleting a character range for a DBCS syntax token, click DBCS .
3	Select a syntax token and click Change .
4	Select the character range that you want to delete and, if you are certain, click Delete . The selected syntax token is deleted without a warning message.

Preserving Leading Spaces When Mapping to a Positional Data Format

Introduction In the EDIFACT and ANSI standards, leading spaces in fields are eliminated. However, in the CII format, according to the CII Syntax Rule, leading spaces are typically preserved (although they can be eliminated).

Procedure To preserve leading spaces in a map for translating CII to the positional format:

Step	Action
1	From the Application Integration Edit menu, select Details .
2	In the Map Details dialog box, select Use Configurable Trimming and click OK to close the dialog box.
3	In each field on the positional side of the map, open the Field Properties dialog box, and click the Position tab.
4	If the spaces are single-byte: <ul style="list-style-type: none">▶ In the characters used in empty portions of the map box, type SP.▶ From the data alignment options, select beginning of the field.
5	If the spaces in the field are double-byte and the data is encoded in Shift-JIS (windows codepage 932), for Enter the character used in empty portions of the field , type 0x8140 or the appropriate key code combination.
6	Click OK .

Changing to Non-Transparent Mode

Introduction According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems. Transparent mode is the default setting in Gentran:Server.

Procedure Use this procedure to change to non-transparent mode:

Step	Action
1	Open a map in Application Integration.
2	Right-click the top icon on the CII side of the map, and select Properties from the shortcut menu.
3	Select the Mode tab, and check the Non-Transparent Mode box. Note Note that the settings in Partner Editor override the settings in the above dialogs. See <i>Setting up a CII Partner</i> on page 3 - 5 for more information.

Finalizing your CII Map

Reference See the *Application Integration User's Guide* for information on how to finalize your CII map (all maps, regardless of format, follow the same steps).

Setting Up Gentran:Server for CII

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-

Registering your CII Maps

Introduction The Register Translation Object function enables you to register your CII translation object file with Gentran:Server so the system can identify the translation object.

Procedure Use this procedure to register a translation object.

Step	Action
1	From the Gentran:Server EC Manager View menu, select Translation Objects . System response The system displays the EDI Translation Object browser.
2	Click New . System response The system displays the Register Translation Object dialog box.
3	Select the CII translation object file that you want to register with the system from the list or type it in the File name box. Note To highlight a group of CII translation objects, click on the first translation object and then press the SHIFT key and then click on the last translation object in the group. To highlight several translation objects that are not adjacent to each other, press the CTRL key and click on the translation objects.
4	Click Open . System response The system registers the translation object files exits the Register Translation Object dialog box. Note If the selected file is invalid, you receive a warning message. Only valid Gentran:Server translation object files can be installed. If the translation object is a duplicate, you are prompted with a message asking whether or not you want to overwrite the existing translation object.

How to Define a New Import Specification

Introduction You need to define an import specification for each type of file (e.g., file location, file name, file extension, etc.) that you are importing. If you want to import files from a location, from a specific file name, or from files with a specific extension that is not currently defined in an import specification, you need to create a new import specification.

Procedure Use this procedure to define a new import specification.

Step	Action
1	<p>From the Start menu, select Programs\Gentran Server\Gentran Server Configuration.</p> <p>System response The system displays the System Configuration dialog box (Controllers tab).</p>
2	Select the Imports tab.
3	<p>Click New.</p> <p>System response The system allows you to define a new import specification.</p>
4	<p>In the File Path box,</p> <ul style="list-style-type: none"> ▶ type the file type or ▶ click Browse to select the folder. <p>System response The system displays the Choose Directory dialog box (select the file path and click OK).</p> <p>Recommendation We recommend that you enter a file type in this box, rather than specifying a path and folder. This ensures that users can import files of the specified type from their local drives without using UNC file names.</p> <p>Note For a Mailbox Import, you must specify the UNC path and file name. This must exactly match the path you set for the TRANSIN directory on the Directories tab.</p> <p>Reference See the <i>Administration Guide</i> for more information on setting up directories.</p> <p style="text-align: right;">(Continued on next page)</p>

(Contd) Step	Action
5	<p>From the Translation Object list, select the CII import or system import translation object that you want the system to use to begin translation when a file of the specified type is imported.</p> <p>Note Some Japanese import files use a six-character field for the version number, while others use an eight-character field.</p>
6	<ul style="list-style-type: none">▶ Click OK to exit the System Configuration program or▶ click Apply to save the import specification without exiting System Configuration.

Setting up a CII Partner

Introduction

Setting up a CII partner is similar to setting up other partners, with the following exceptions:

- There are several values that can be configured on the Generic Interchange Envelope dialog box.
- The structure of CII messages dictates that you must select **<none>** for Groups for both Inbound and Outbound relationships.

Reference

See the Gentran:Server User's Guide for comprehensive information on how to create partner relationships.

Configuring the Generic Interchange Envelope dialog box

To access the Generic Interchange Envelope dialog box, from the EC Manager, select **Partners > Outbound > Interchanges > Edit > Envelope**.

The following table describes the non-generic fields on this dialog box, and the CII column indicates how they are used for CII partners.

Dialog Box Component	How it is used in CII	Valid Values
Decimal notation	Not used.	Not used.
Segment code separator	Non-transparent mode	S or space = transparent M = non-transparent
Release indicator	Not used.	Not used.
Component element separator	16-bit character set	S or space = JISX0208 D = Shift-JIS
Element separator	8-bit character set	S or space = JISX0201 M = Shift-JIS
Segment terminator	Dividing mode	S = non-dividing M or space = dividing

Note

These settings override anything you configured in the map.

Using the CII Total-Items-Number Feature

Introduction

According to the CII Syntax Rule, there are two areas in the message group header reserved for total-items number, a checksum function. Each area consists of two fields, which hold the TFDs to be totalled. One area is for compressed-mode TFDs, and the other is for extended-mode TFDs; they are mutually exclusive.

In Gentran:Server, you identify these fields in Partner Editor.

Procedure

Use this procedure to configure the CII total-items-number feature:

Step	Action
1	From the Outbound Relationship dialog box, click Interchanges to access the Outbound Interchange Select dialog.
2	Select the appropriate interchange, and click Edit . System response The system displays the Outbound Interchange Entry dialog box.
3	From the Outbound Interchange Entry dialog box, click Envelope . System response The system displays the Generic Interchange Envelope dialog box.
4	Type the tags (in decimal) of the two TFDs that you want to sum. If your map uses compressed-mode tags, type the tags in Field 21 and Field 22 . If the map uses extended-mode tags, type the tags Field 23 and Field 24 .

Compressed mode example

To sum TFDs 00003 and 00011, type the following on the Generic Interchange Envelope dialog box:

Field	Value you type
Field 21	003
Field 22	011

Notes

- The TFDs must be numeric or string type.
- The TFDs must contain only single-byte numeric characters, not alphabetic characters.
- Gentran:Server sums all TFDs with the identified TFD tag.
- In the output file, the totals are placed in 15-byte fields in the message group trailer, as specified in the CII Syntax Rule.