



IBM Software Group

# ***IBM WebSphere® Data Interchange V3.3***

## ***Data Manipulation***



@.business on demand.

© 2007 IBM Corporation

This presentation will review WebSphere Data Interchange (WDI) Commands and Functions to manipulate data in a Data Transformation map.

## Agenda

- Where do you start?
- Review Data Transformation mapping commands.
- Review Data Transformation mapping functions.
- Illustrate commands and functions.
- Summary and references



The presentation will discuss where you should start for help, review commands and functions, and illustrate the use of mapping commands and function..

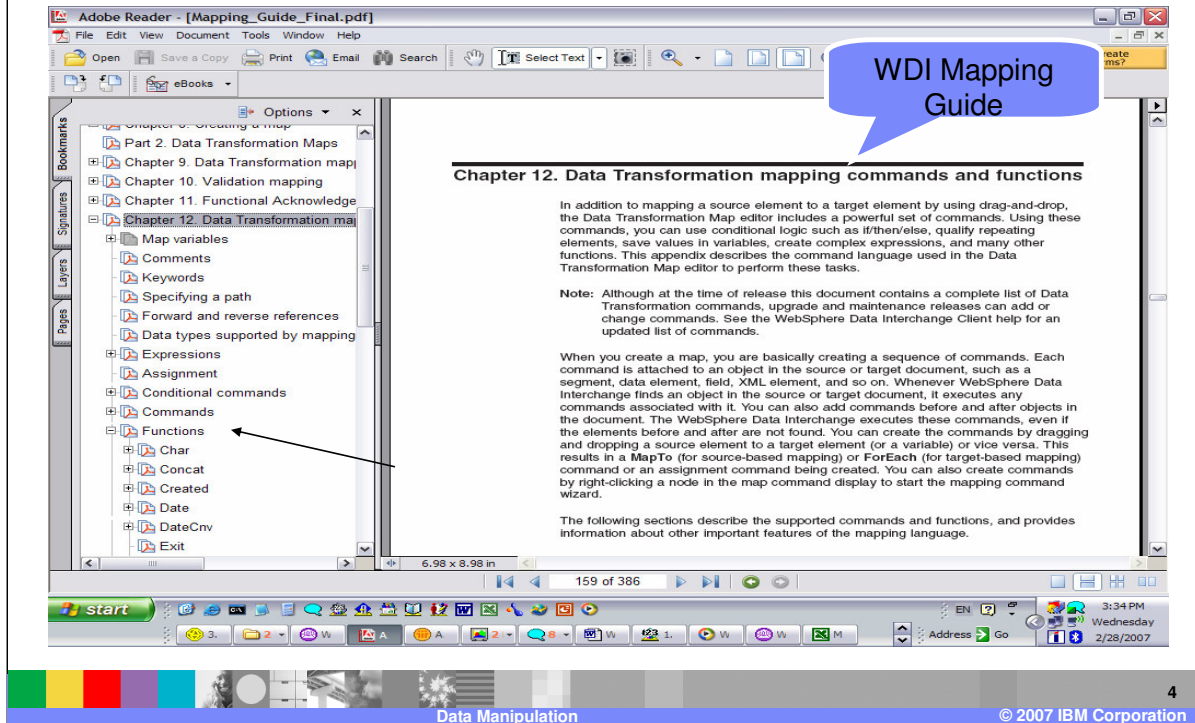
## Data Manipulation

- Where do you start?
  - ▶ WDI V3.3 Mapping Guide. Chapter 12
  - ▶ WDI Client Help contains the most up to date list of commands and functions.
    - Help->Contents->Mapping->Data Transformation Map->Mapping commands and functions
  - ▶ WDI Client Mapping Wizard.



The WDI Version 3.3 Mapping Guide, chapter 12, contains a list of commands and functions. The Client Help contains the most up to date list and the Client mapping wizard displays commands and functions in selection windows.

# Data Manipulation



The WDI Version 3.3 Mapping Guide.

# Data Manipulation

**WDI Client Help**

[constants](#), and [expressions](#).

A command name is not case sensitive. For example, the `Error()` command keyword could also be specified as `ERROR()`.

An expression as a parameter in a command can resolve to any [data type](#) as long as the data type can be converted to the data type expected by the parameter. Parameters for a command are never modified by the command.

In general, [Data Transformation Maps](#), [Validation Maps](#), and [Functional Acknowledgement Maps](#) support most commands. Exceptions will be documented with the command. [Send Maps](#) and [Receive Maps](#) do not use these commands.

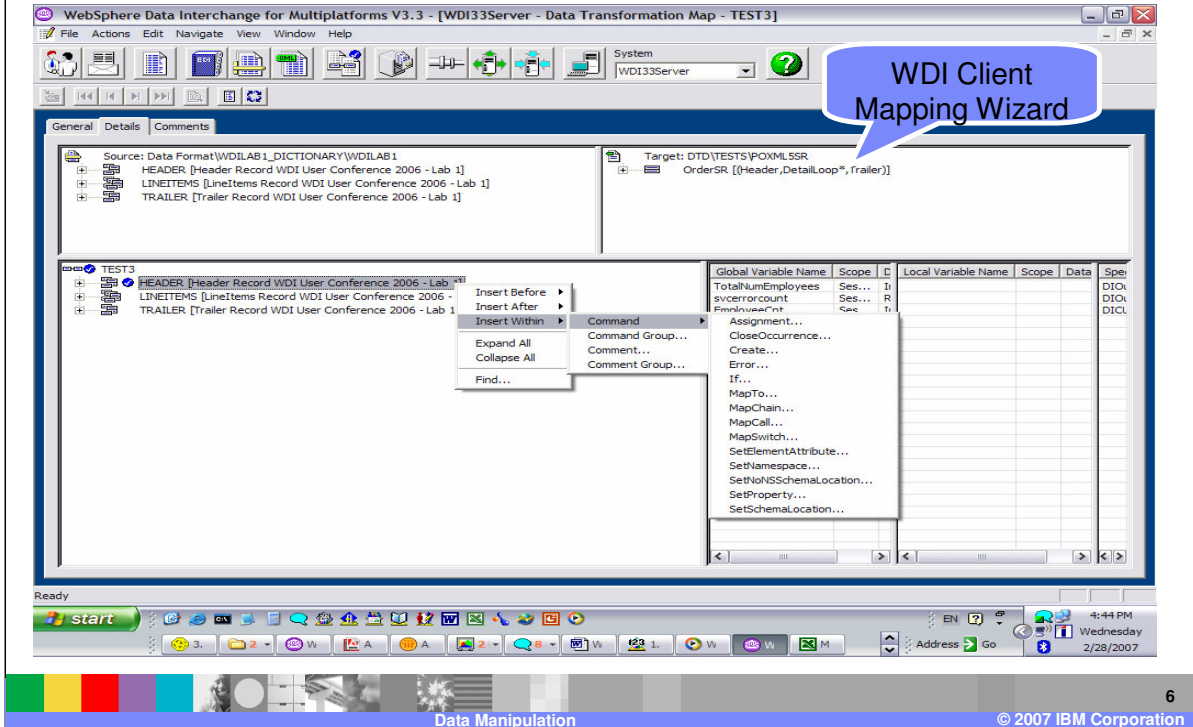
<a href="#">Assignment Statement</a>	<a href="#">CloseOccurrence()</a>	<a href="#">Create()</a>
<a href="#">Default</a>	<a href="#">Else</a>	<a href="#">Elseif()</a>
<a href="#">EndIf</a>	<a href="#">Error()</a>	<a href="#">FAError()</a>
<a href="#">ForEach()</a>	<a href="#">HLAutoMapped</a>	<a href="#">HLDefault</a>
<a href="#">HLLevel()</a>	<a href="#">If()</a>	<a href="#">MapCall()</a>
<a href="#">MapChain()</a>	<a href="#">MapFrom()</a>	<a href="#">MapSwitch()</a>
<a href="#">MapTo()</a>	<a href="#">Qualify()</a>	<a href="#">SetElementAttribute()</a>
<a href="#">SetNoNSSchemaLocation()</a>	<a href="#">SetNamespace()</a>	<a href="#">SetProperty()</a>
<a href="#">SetSchemaLocation()</a>		

5

Data Manipulation © 2007 IBM Corporation

WDI Client Help for Commands.

# Data Manipulation



Commands using the WDI Client Mapping Wizard.

## Section

# ***WDI Mapping Commands***

## Data Manipulation

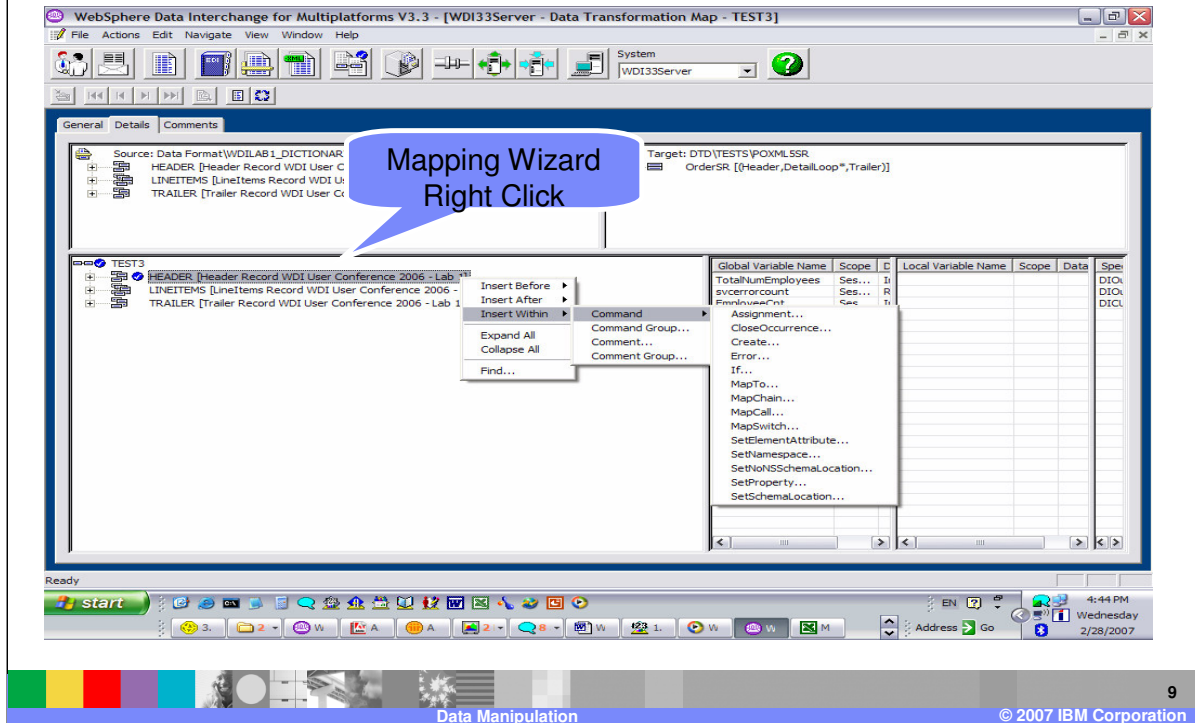
- Data Transformation Mapping Commands
  - ▶ Perform a specific action on the data.
  - ▶ Most commands can take any expression for their arguments, as long as the expression evaluates to the appropriate type.
  - ▶ Some commands take the source or target path only.
  - ▶ Some commands available only in Validation Maps.
  - ▶ Some commands available for Source based Maps.
  - ▶ Some commands available for Target based Maps.
  - ▶ Some commands available for special mapping.



Mapping commands perform a specific action on the data. Most commands can take any expression. An expression can be as simple as a source document element, literal value, or a variable, but can contain any number of functions, operators, and delimiters. Some commands take the source or target path only. Some commands are only available for Validation Maps, Source based maps, target based maps, or special mapping for example Hierarchical Level (HL) Loop mapping.



# Data Manipulation



Mapping commands are located in the mapping window which is the lower left window. To add a command, right click where you want the command, choose Insert Within, and select Command.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - TEST3]

Source: Data Format\WDLAB1\_DICTIONARY\WDLAB1  
 HEADER [Header Record WDI User Conference 2006 - Lab 1]  
 LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]  
 TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Target: DTD\TESTS\POXMLSSR  
 OrderSR [[Header,DetailLoop\*,Trailer]]

Global Variable Name	Scope	Local Variable Name	Scope	Data	Spe
TotalNumEmployees	Ses...		I		DIOA
svrerrorcount	Ses...		R		DIOA
EmployeeCnt	Ses...		I		DIOA
tranerror	Ses...		R		DIOA
SNIPType5	Group		C		
dimerrorcount	Ses...		R		

Mapping Command Editor

Enter a command:

path = expression

OK Insert Cancel

Ready

start

Address Go

4:46 PM Wednesday 2/28/2007

10

Data Manipulation © 2007 IBM Corporation

The Assignment Command format is path equal expression. It is used to assign a value to a target path. Path can be a target path or a variable. An expression can be as simple as a source document element, literal value, or a variable, but can contain any number of functions, operators, and delimiters.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - TEST3]

Source: Data Format\WDLAB1\_DICTIONARY\WDLAB1  
 HEADER [Header Record WDI User Conference 2006 - Lab 1]  
 LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]  
 TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Target: DTD\TESTS\POXMLSSR  
 OrderSR [(Header\_DetailLoop",Trailer)]

Global Variable Name	Scope	Local Variable Name	Scope	Data	Spe
TotalNumEmployees	Ses... I				DIO
svccorrcount	Ses... R				DIO
EmployeeCnt	Ses... I				DIO
tranerror	Ses... R				
SNIPTyp5	Group C				
cmerrorcount	Ses... R				

Mapping Command Editor

Enter the parameters of the command:

If (expression)

OK Insert Cancel

Ready

start

Address Go

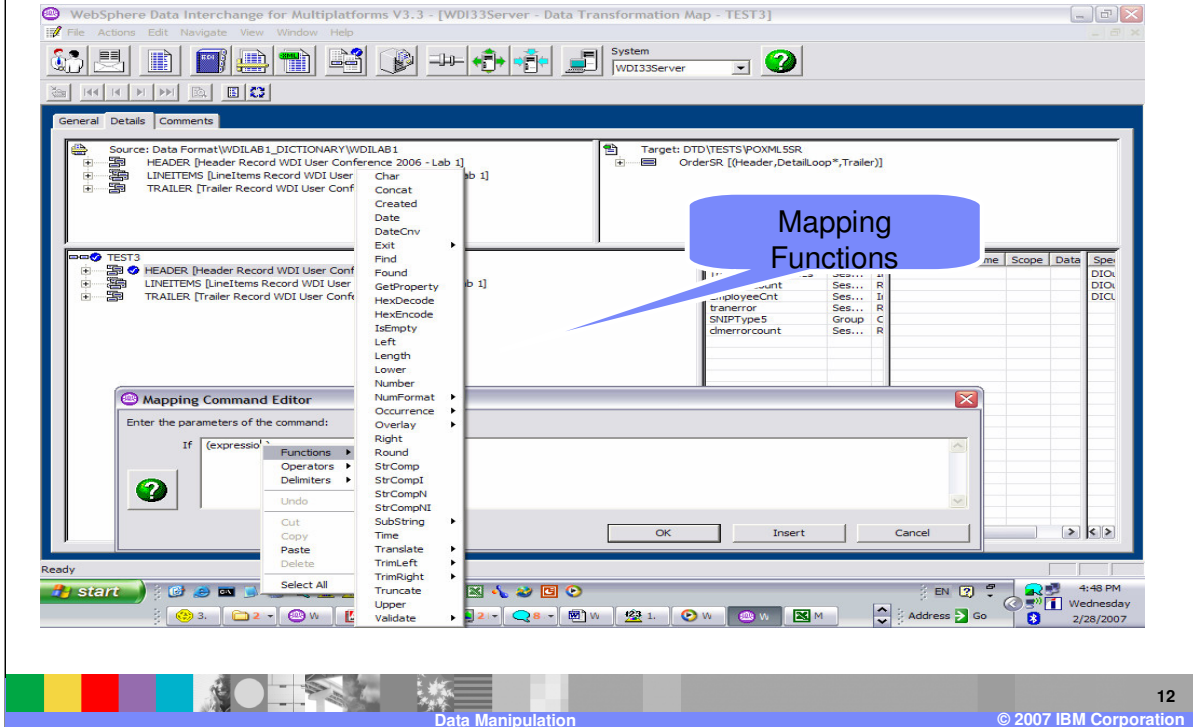
4:47 PM  
Wednesday  
2/28/2007

11

Data Manipulation © 2007 IBM Corporation

The If command format contains an expression. It is used to provide conditional mapping commands.

# Data Manipulation



You can right click on an expression to select from a list of available functions.

# Data Manipulation

The screenshot shows the WebSphere Data Interchange for Multiplatforms V3.3 interface. The main window displays a mapping configuration with the following details:

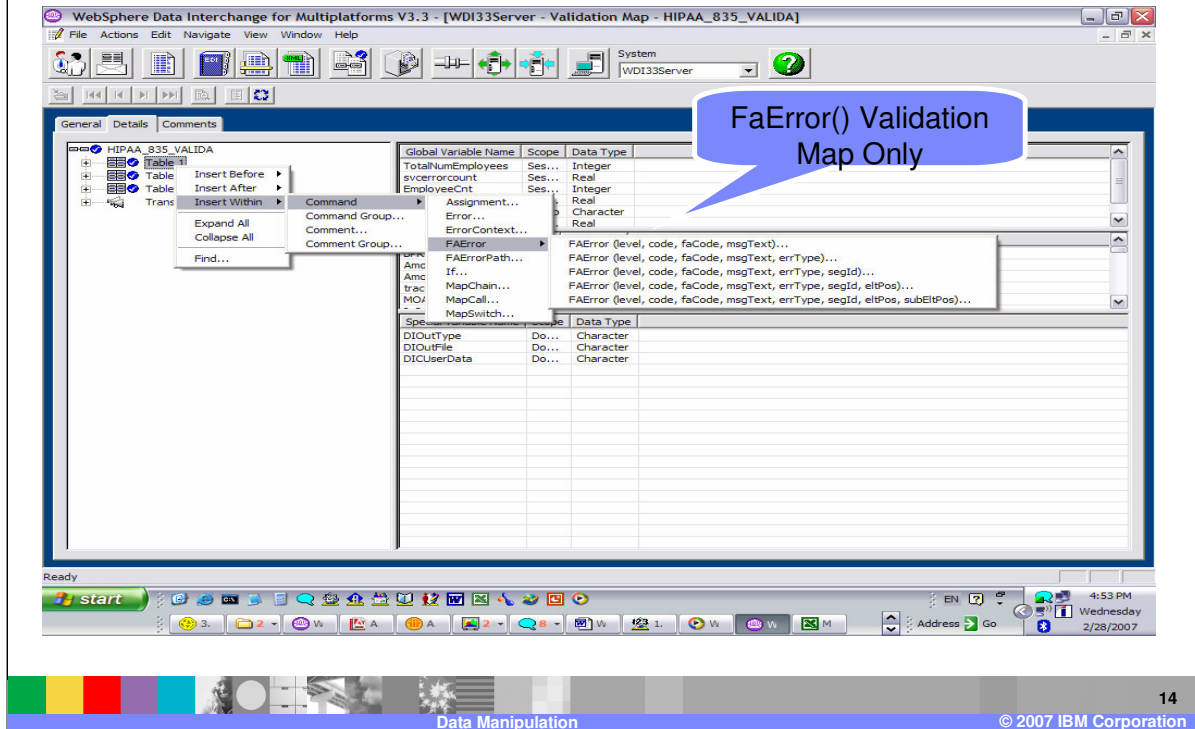
- Source:** Data Format\WDILAB1\_DICTIONARY\WDILAB1
  - HEADER [Header Record WDI User Conference 2006 - Lab 1]
  - LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]
  - TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]
- Target:** DTD\TESTS\POXMLSSR
  - OrderSR [(Header,DetailLoop\*,Trailer)]

The 'Mapping Command Editor' dialog is open, showing the command: `SetElementAttribute (targetPath, attributeName, attributeValue)`. A black arrow points to the command text. The dialog also includes 'OK', 'Insert', and 'Cancel' buttons.

At the bottom of the screenshot, the text 'Data Manipulation' and '© 2007 IBM Corporation' are visible.

The `SetElementAttribute` command has the format `targetPath, attributeName, and attributeValue`. It is used to provide some control of the automatic formatting of elements that occurs when the element is output. Automatic formatting of values occurs when elements are written to a target document. For example, leading and trailing zeros will be removed from Electronic Data Interchange (EDI) standard numeric Data Elements when they are output. If the value is zero and the Data Element is optional, the value is suppressed in the EDI output. The `targetPath` defines the scope of the command. The scope can be for the entire document, specific compound elements (including loops, segments and records, and composite elements and structures), and specific simple elements. A set of Attributes are supplied for the `attributeName` argument. The `attributeValue` can be a combination of functions as long as the resulting value is valid for the attribute.

# Data Manipulation



Some commands for example ErrorContext, FaError, and FaErrorPath are only available in Validation maps. These are used to generate function acknowledgement errors. With FaErrorPath, the Data Transformation Component (DTC) will create the FAError at the source abstract message position using the Source Path identified. If the Source Path is not found, the DTC will default to the current position. The ErrorContext command is used for reporting Implementation Guide Syntax errors. With the ErrorContext command information will be associated with the previous FAError as a child of FAError which is a child of the abstract message node. This indicates the user wants an ErrorContext associated with an FAError reported at the segment or element level, the ErrorContext must follow the FAError reported at the segment level. Up to 10 ErrorContext may be attached to the FAError.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - TEST3]

Source: Data Format\WDILAB1\DICTIONARY\WDILAB1

- HEADER [Header Record WDI User Conference 2006 - Lab 1]
- LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]
- TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Target: DTD\TESTS\POXMLSSR

- OrderSR [(Header,DetailLoop\*,Trailer)]

Global Variable Name	Scope	D	Local Variable Name	Scope	Data	Spe
TotalNumEmployees	Ses...	In				DICL
sverrorcount	Ses...	R				DICL
EmployeeCnt	Ses...	In				DICL
tranerror	Ses...	R				
*PTtype5	Group	C				
errorcount	Ses...	R				

Mapping Command Editor

Enter a command:

MapTo (targetPath, expression)

MapTo() Source Based Only

Ready

15

Data Manipulation © 2007 IBM Corporation

The MapTo command is only available in Source Based maps. The expression is optional and indicates the resulting value from the expression should be mapped to the target path. Commonly, the MapTo() command maps a simple element in the source document definition to a corresponding simple element in the target document definition.

The MapTo() command can be placed on a repeating simple or compound element in the source document definition. If the *targetPath* is also a repeating element, then each occurrence of the source element will result in the creation of a corresponding target element. This is referred to as loop qualification.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - TEST4]

Source: Data Format\WDILAB1\_DICTIONARY\WDILAB1  
 HEADER [Header Record WDI User Conference 2006 - Lab 1]  
 LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]  
 TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Target: DTD\TESTS\POXML5SR  
 OrderSR [Header,DetailLoop,Trailer]

TEST4  
 OrderSR [Header,DetailLoop,Trailer]  
 Header [Header,DetailLoop,Trailer]  
 DetailLoop [Header,DetailLoop,Trailer]  
 Trailer [Header,DetailLoop,Trailer]

Global Variable Name Scope Local Variable Name Scope Data Spe

Global Variable Name	Scope	Local Variable Name	Scope	Data	Spe
TotalNumEmployees	Ses...				DIO.
svccerrorcount	Ses...				DIO.
EmployeeCnt	Ses...				DIO.
tranerror	Ses...				DIO.
NIPTType5	Group				C
errorcount	Ses...				R

Mapping Command Editor  
 Enter the parameters of the command:  
 ForEach (sourcePath)

ForEach() Target Based Only

Ready

16

Data Manipulation © 2007 IBM Corporation

The ForEach command is only available in Target Based maps and is used for loop qualification. It indicates that for each occurrence of the source path the mapping commands following should be executed.



# Data Manipulation

The screenshot displays the IBM WebSphere Data Interchange for Multiplatforms V3.3.3 interface. The main window shows a Data Transformation Map for 'DFATEST\_XEDI\_IN'. The map structure includes a '10 M HL Loop [Hierarchical Level]' containing an 'HLLLevel ("20")' command. A blue callout bubble points to this command with the text 'HLLLevel() HL Loops Only'. The interface also shows a table of global and local variable names, including 'DateTest', 'Loop', and 'Char'.

Global Variable Name	Scope	Local Variable Name	Scope	Data	Spec
SUB_PER_QUAL	Ses...	DateTest	Loop	Char	DICL
sub_entitycode	Ses...				DICL
sub_desc	Ses...				DICL
StopSeq	Ses...				
SB_REF_ID	Ses...				
SB_MIDDLE	Ses...				
RPN_1	Ses...				
resp_count	Ses...				
REF_Identification3	Ses...				
PTP_REF_QUAL	Ses...				
PTP_ADD1	Ses...				
prv_refidqual	Ses...				
pro_add2	Ses...				
pd1seq	Int...				
PA_COUY	Ses...				
pathinfo_unitbasism...	Ses...				
OverseasDepartur...	Ses...				
NM1_SUB_EntityId...	Ses...				
NM1_REC_EntityId...	Ses...				
MsgSplitCnt	Group				
MapNameWithProje...	Int...				
HL22_PAT_Student...	Ses...				
HL22_PAT_Student...	Car...				

The HLLLevel command is a special command and is only available for HL Loops. The HLLLevel() command is used to specify mapping commands for a specific occurrence of a hierarchical loop based on level code and parent. A hierarchical loop level code is specified in the HLLLevel() command. The level code identifies the code used for this level of the hierarchical loop. Adding peer and child HLLLevel commands allow you to visually create the hierarchical loop structure in the map.

If the hierarchical loop is in the source document definition, then the map must be a source based map. When an HL segment is encountered during translation, the HLLLevel() commands at the corresponding level and within the corresponding parent loop of the hierarchical loop structure are examined to locate the mapping commands to be executed.

The map must be a target based map if the hierarchical loop is in the target document definition. When the HLLLevel() command is encountered during translation, the corresponding hierarchical loop will be generated in the target document if the mapping commands within the HLLLevel() command will result in the generation of data.

## Data Manipulation

- Commands are the smallest unit of work in a map and a map is really just a sequence of mapping commands
- Commands are the only way to affect the target message therefore almost all commands require a target element
- Commands can be placed **before, after or within** an element
  - ▶ Commands before or after an element are executed if the parent exists
  - ▶ Commands within an element are executed only if the element exists
- Functions perform a computation and return a result. The result **must be used within a command**, Therefore a function cannot appear in a map **except within a command**.
- All functions take 0 or more parameters.



Commands are the smallest unit of work in a map and a map is really just a sequence of mapping commands. Commands are the only way to affect the target message therefore almost all commands require a target element. Commands can be placed **before, after or within** an element.

Functions perform a computation and return a result. The result **must be used within a command**, Therefore a function cannot appear in a map **except within a command**. All functions take 0 or more parameters or arguments.

## Section

# ***WDI Mapping Functions***

## Data Manipulation

- Data Transformation Mapping Functions
  - ▶ Used to manipulate the data or assign values.
  - ▶ All functions take zero or more arguments as input and return a value.
  - ▶ Some functions have optional parameters.
  - ▶ Most functions can take an expression as an argument.
  - ▶ Some functions not available for Validation Maps.



Mapping functions are used to manipulate data or assign values. Some functions have no arguments. All functions return a value. Most functions take an expression as an argument. Some functions have optional parameters and are not available for Validation Maps.

# Data Manipulation

Is equivalent to:

```
Var1 = Char ( 3 )
```

Function names are not case sensitive. The function Char() is the same as CHAR().

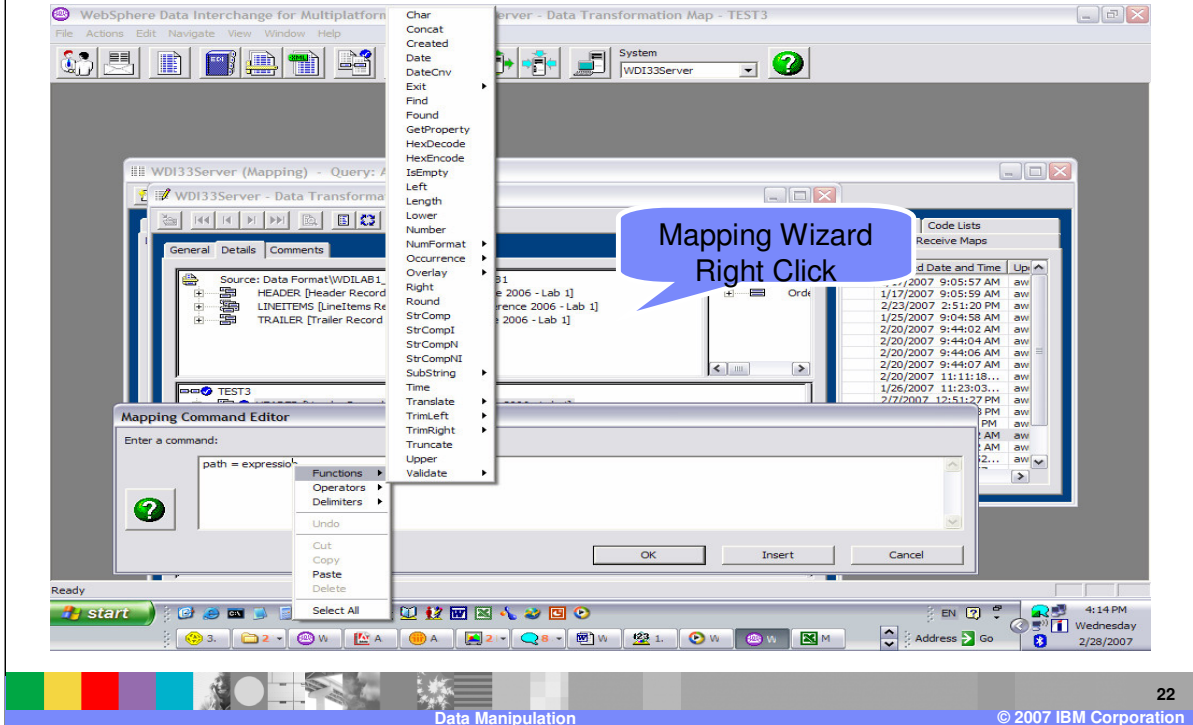
In general, Data Transformation Maps, Validation Maps, and Functional Acknowledgement Maps support most functions. Exceptions will be documented with the function. Send Maps and Receive Maps do not use these functions.

<a href="#">Char()</a>	<a href="#">Concat()</a>	<a href="#">Created()</a>
<a href="#">Date()</a>	<a href="#">DateCnv()</a>	<a href="#">Exit()</a>
<a href="#">Find()</a>	<a href="#">Found()</a>	<a href="#">GetProperty()</a>
<a href="#">HexEncode()</a>	<a href="#">HexDecode()</a>	<a href="#">IsEmpty()</a>
<a href="#">Left()</a>	<a href="#">Length()</a>	<a href="#">Lower()</a>
<a href="#">Number()</a>	<a href="#">NumFormat()</a>	<a href="#">Occurrence()</a>
<a href="#">Overlay()</a>	<a href="#">Right()</a>	<a href="#">Round()</a>
<a href="#">StrComp()</a>	<a href="#">StrComp()</a>	<a href="#">StrCompNO()</a>
<a href="#">StrCompNIQ()</a>	<a href="#">SubString()</a>	<a href="#">Time()</a>
<a href="#">Translate()</a>	<a href="#">TrimLeft()</a>	<a href="#">TrimRight()</a>
<a href="#">Truncate()</a>	<a href="#">Upper()</a>	<a href="#">Validate()</a>



WDI Client Help for Functions.

# Data Manipulation



Functions using the WDI Client Mapping Wizard. Expressions are literals, elements and variables that are combined using operators.

## Data Manipulation

- Expressions are literals, elements and variables that are combined using operators
- Expression yield a single value
- Expressions can use
  - ▶ Arithmetic operators: +, -, \*, /
  - ▶ Logical operators: AND OR NOT
  - ▶ Relational operators: EQ, NE, LT, GT, LE, GE
- Expressions can be arbitrarily complex
- Example: NumFormat(Quantity \* Price, 2)



An expression yields a single value and can be as simple as a source document element, literal value, or a variable, but can contain any number of functions, operators, and delimiters. Expressions can use Arithmetic operators, Logical operators, and Relational operators and can be arbitrarily complex.

## Data Manipulation

- Data Transformation Mapping Functions: Field Manipulation
  - ▶ ATTENTION: Send/Receive Mappers
    - String manipulation must use string functions for Data Transformation (DT) maps.
    - If (NameVar = 'ABC') ← INCORRECT for DT Maps
    - If (StrCompN(NameVar, "ABC", 3) = 0)



Mapping functions dealing with character type data must use string manipulation functions. If you are experienced with Send and Receive mapping, you could just check a variable for the string value in quotes or double quotes. This will not work correctly in Data Transformation (DT) maps.



## Data Manipulation

- Data Transformation Mapping Functions: Field Manipulation
  - ▶ Scenario Outbound:
    - New purchasing system (outbound order) using legacy system for inbound invoice processing. Invoice is matched to order using PO number.
    - Legacy system PO number always begins with '4' and cannot exceed 7 positions. The new purchasing system PO number is 10 positions and does not begin with '4'.
    - Orders are mirrored to legacy system using the legacy notation for PO number.



In this example, you have a new purchasing system which must match the purchase order number with the invoice system. The new purchasing system has purchase order number with length 10. The invoice system is expecting purchase order numbers with length 7 and beginning with the number 4.

## Data Manipulation

- Data Transformation Mapping Functions: Field Manipulation
  - ▶ Solution:
    - Change the PO Number on the outbound order.
    - PO Number = 4 + last 6 digits of PO number.
  
  - Data Example:
    - PO number before = 5200000799
    - PO number after = 4000799



One solution is to change the purchase order number on the outbound order so the purchase order number in the returning invoice will match what is in the order.

## Data Manipulation

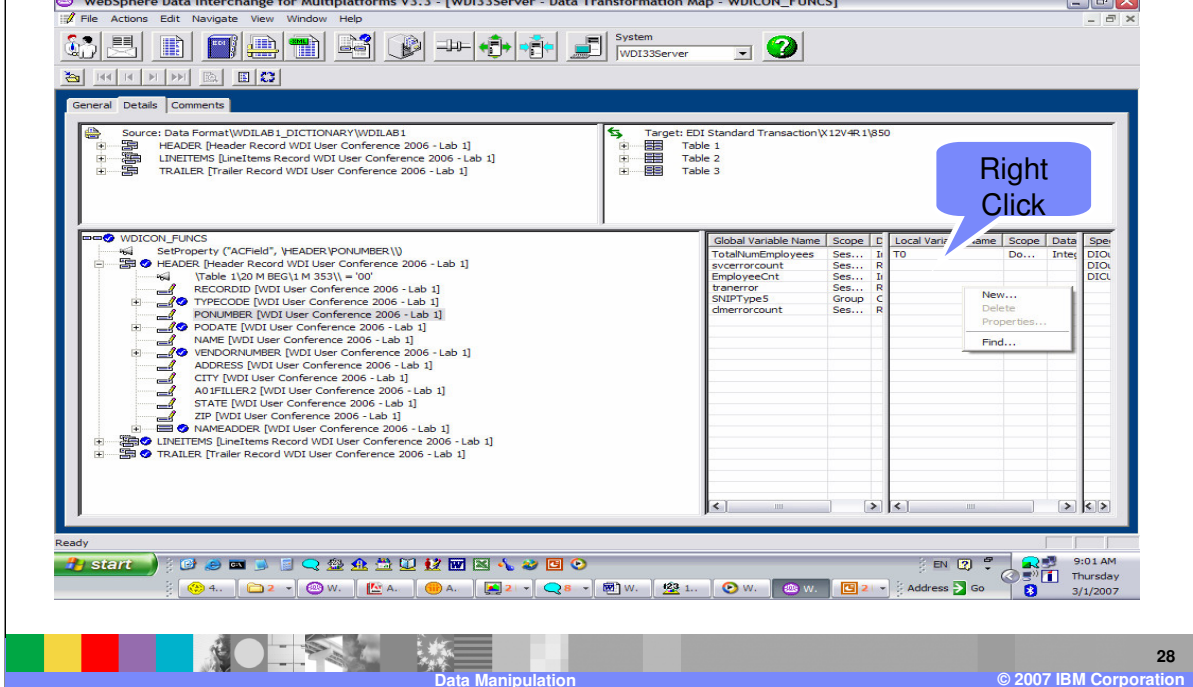
- Data Transformation Mapping Functions: Field Manipulation
  - ▶ Steps Data Transformation Map:
    - ✓ Create a Local Character Variable to save PO number.
    - ✓ Save the last 6 characters of the PO number.
      - ✓ SubString (\HEADER\PONUMBER\, 5)
    - ✓ Concatenate '4' with the last 6 characters of the PO number.
      - ✓ Concat ('4', PONUMBER)
    - ✓ Map the result
      - ✓ \Table 1\20 M BEG\3 M 324\ = Concat ('4', PONUMBER)



The steps to manipulate the purchase order number are:

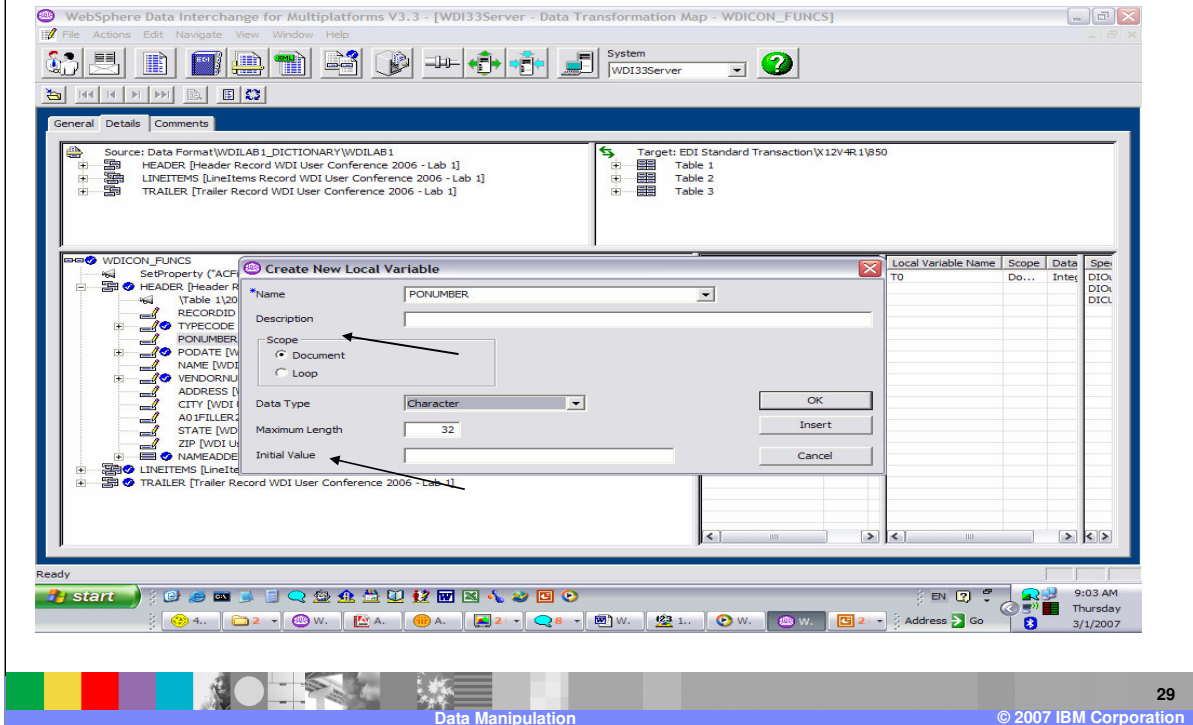
1. Create a local variable to save the purchase order number.
2. Save the last six characters of the purchase order number using the SubString function
3. Use the Concat function to concatenate the number four with the last six characters of the purchase order number
4. Map the result

# Data Manipulation



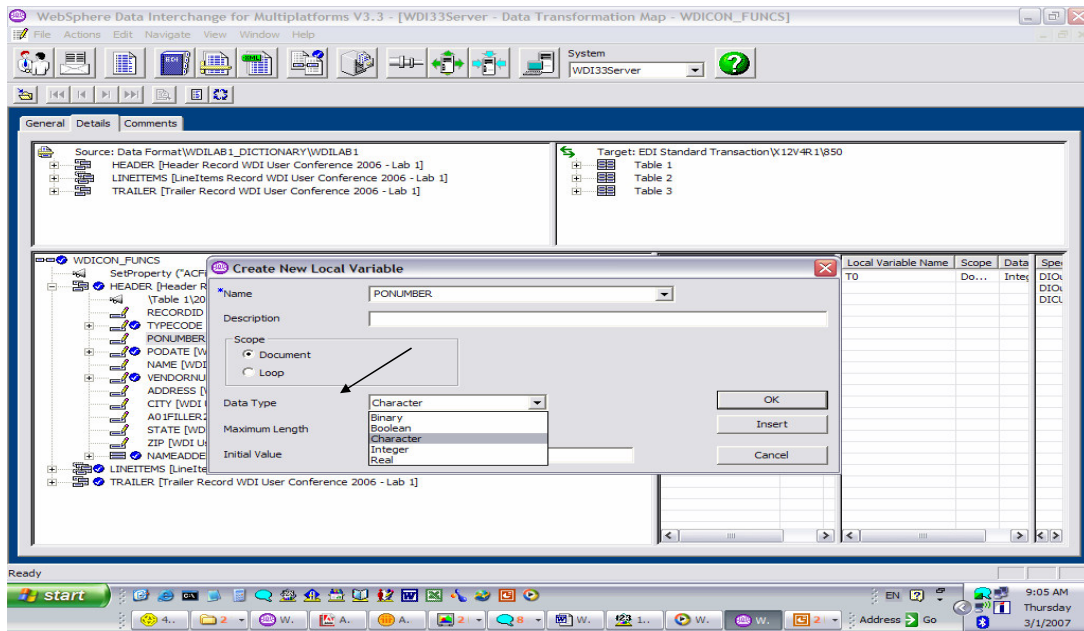
First you need to save the PONUMBER in a variable. To create a local variable right click in the Local Variable window and select New.

# Data Manipulation



The scope of the variable determines when the value of the variable will be reset and can be document or loop. You can also specify the initial value for the variable.

# Data Manipulation



The data type can be binary, Boolean, character, integer, or real.

# Data Manipulation

The screenshot shows the WebSphere Data Interchange for Multiplatforms V3.3 interface. The main window displays a mapping tree on the left and a variable table on the right. A right-click context menu is open over the 'PONUMBER' element in the tree. The menu options are:

- Insert Before
- Insert After
- Insert Within
- Command
- Command Group...
- Comment...
- Comment Group...

The 'Command' option is selected, and a sub-menu is visible with the following options:

- Assignment...
- CloseOccurrence...
- Create...
- Error...
- If...
- MapTo...
- MapChain...
- MapCall...
- MapSwitch...
- SetElementAttribute...
- SetProperty...

The variable table on the right contains the following data:

Global Variable Name	Scope	Local Variab...	Scope	Data	Spe
TotalNumEmployees	Ses...	TO	Document	Intec	DIO
sverrorcount	Ses...	R	Document	Intec	DIO
EmployeeCnt	Ses...	I	Document	Intec	DIO
tranerror	Ses...	R	Document	Intec	DIO
SNPIType5	Group	C	Document	Intec	DIO
ednerrorcount	Ses...	R	Document	Intec	DIO

The status bar at the bottom of the window shows 'Ready' and the system clock indicates '9:09 AM Thursday 3/1/2007'. The page number '31' is visible in the bottom right corner of the screenshot area.

Now you are ready to assign the purchase order number to the variable. Right click on the element in the mapping window and select Insert Within, choose Command, then select the Assignment command.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - WDI33\_FUNCS]

Source: Data Format\WDLAB1\_DICTIONARY\WDLAB1  
 HEADER [Header Record WDI User Conference 2006 - Lab 1]  
 LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]  
 TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Target: EDI Standard Transaction\12V4R1\850  
 Table 1  
 Table 2  
 Table 3

Global Variable Name	Scope	Local Variab...	Scope	Data	Spe
TotalNumEmployees	Ses...	I	T0	Document	Integ
svccerrorcount	Ses...	R	PONUMBER	Document	Char
EmployeeCnt	Ses...	I			DICL
tranerror	Ses...	R			DICL
SNIPType5	Group	C			
clmerorcount	Ses...	R			

Mapping Command Editor

Enter a command:  
 path = expression

OK Insert Cancel

Ready

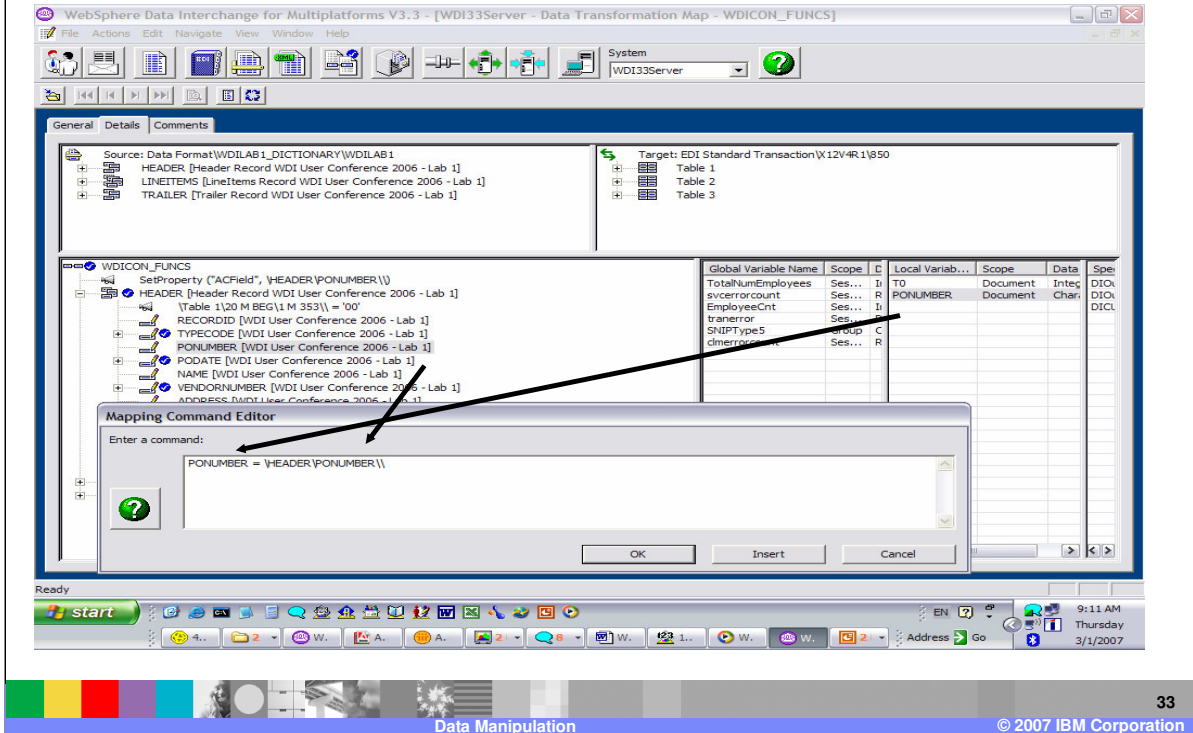
start 9:15 AM Thursday 3/1/2007

Data Manipulation © 2007 IBM Corporation 32

To assign the purchase order number to the PONUMBER variable drag and drop the variable to the path argument. Drag and drop the source element to the expression argument.



# Data Manipulation



But you only want the last 6 digits of the purchase order number.

# Data Manipulation

Source: Data Format\WDILAB1\_DICTIONARY\WDILAB1  
 HEADER [Header Record WDI User Conference 2006 - Lab 1]  
 LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]  
 TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Target: EDI Standard Transaction\12Y\R\1850  
 Table 1  
 Table 2  
 Table 3

Global Variable Name	Scope	Local Variab...	Scope	Data	Spe
TotalNumEmployees	Ses...	I	T0	Document	Integ
sverrorcount	Ses...	R	PONUMBER	Document	Char
EmployeeCnt	Ses...	I			
trerror	Ses...	R			
SNBType5	Group	C			
clmerrorcount	Ses...	R			

Mapping Command Editor  
 Enter a command:  
 PONUMBER = HEADPR\PCNA\MPFR\  
 Functions  
 Operators  
 Delimiters  
 Undo  
 Cut  
 Copy  
 Paste  
 Delete  
 Select All

SubString(charValue, position)  
 SubString(charValue, position, len)

34  
 Data Manipulation © 2007 IBM Corporation

You can use the Substring function to get the last 6 digits.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - WDI33\_FUNCS]

Source: Data Format\WDILAB1\_DICTIONARY\WDILAB1  
 HEADER [Header Record WDI User Conference 2006 - Lab 1]  
 LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]  
 TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Target: EDI Standard Transaction\X12V4R1\850  
 Table 1  
 Table 2  
 Table 3

Global Variable Name Scope C Local Variab... Scope Data Spei

Global Variable Name	Scope	C	Local Variab...	Scope	Data	Spei
TotalNumEmployees	Ses...	I	TO	Document	Integ	DIO,
svccerrorcount	Ses...	R	PONUMBER	Document	Char	DIO,
EmployeeCnt	Ses...	I				DIO,
tranerror	Ses...					DIO,
SNIPType5	Ses...	C				
cmerrorcount	Ses...	R				

Mapping Command Editor

Enter a command:

```
PONUMBER = SubString (HEADER\PONUMBER\, 5)
```

OK Insert Cancel

Ready

9:23 AM Thursday 3/1/2007

Data Manipulation © 2007 IBM Corporation 35

Since you know the new purchase order number is length 10 you can use position 5 in the substring with no length. If the length is unknown you can use the Right function instead of the Substring function to get the right most characters.

# Data Manipulation

The screenshot shows the IBM Data Manipulation interface. The main window displays a data transformation map for 'WDICON\_FUNCS'. The source is 'Data Format(WDILAB1\_DICTIONARY(WDILAB1))' and the target is 'EDI Standard Transaction(X12V4R11850)'. A table with columns 'Global Variable Name', 'Scope', 'D', 'Local Variab...', 'Scope', 'Data', and 'Spe' is visible. A context menu is open over the assignment command 'PONUMBER = Substring(HEADER.PONUMBER\, 5)'. The menu path is 'Insert After' > 'Command' > 'Assignment...'. A blue speech bubble points to the 'Concat '4'' action.

Global Variable Name	Scope	D	Local Variab...	Scope	Data	Spe
TotalNumEmployees	Ses...	I	T0	Document	Integ	DIO
svccorrcount	Ses...	R	PONUMBER	Document	Char	DIO
EmployeeCnt	Ses...	I				DIO
tranerror	Ses...	R				
SNIPTYPE5	Group	C				
dmerrorcount	Ses...	R				

Now you can concatenate the number four to the purchase order number. Right click on the assignment command select Insert After, choose Command, then select the Assignment command.

# Data Manipulation

WebSphere Data Interchange V3.3.3 - [WDI33Server - Data Transformation Map - WDICON\_FUNCS]

Source: Data Format\WDLAB1\_DICTIONARY\WDLAB1

- HEADER [Header Record WDI User Conference 2006 - Lab 1]
- LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]
- TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

WDICON\_FUNCS

- SetProperty ("ACField", yHEADER.PONUMBER\)
- HEADER [Header Record WDI User Conference 2006 - Lab 1]
  - \Table 1\20 M BEG\1 M 353\ = '00'
  - RECORDID [WDI User Conference 2006 - Lab 1]
  - TYPECODE [WDI User Conference 2006 - Lab 1]
  - PONUMBER [WDI User Conference 2006 - Lab 1]
    - PONUMBER = SubString (yHEADER.PONUMBER\, 5)
  - PODATE [WDI User Conference 2006 - Lab 1]
  - NAME [ ]
  - VENDOR [ ]
  - ADDRESS [ ]
  - CITY [V ]
  - STATE [V ]
  - ZIP [W ]
  - NAMEA [ ]
  - LINEITEMS [Lip ]
  - TRAILER [Trail ]

Mapping Command Editor

Enter a command:

```
\Table 1\20 M BEG\3 M 324\ = expression
```

Functions

- Operators
- Delimiters
- Undo
- Cut
- Copy
- Paste
- Delete
- Select All

Variable Name	Scope	D	Local Variab...	Scope	Data	Spe
NumEmployees	Ses...	Ii	TO	Document	Integ	DIO
rorcount	Ses...	R	PONUMBER	Document	Char	DIO
typeCnt	Ses...	Ii				
rror	Ses...	R				
type5	Group	C				
rorcount	Ses...	R				

Ready

start

9:29 AM Thursday 3/1/2007

Data Manipulation © 2007 IBM Corporation 37

You can also use the Assignment command to map the results to the target element.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3.3 - [WDI33Server - Data Transformation Map - WDICON\_FUNCS]

Source: Data Format(WDILAB1\_DICTIONARY(WDILAB1))

- HEADER [Header Record WDI User Conference 2006 - Lab 1]
- LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]
- TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

20 M BEG (Beginning Segment for Purchase Order)

- 1 M 353 [Transaction Set Purpose Code]
- 2 M 92 [Purchase Order Type Code]
- 3 M 324 [Purchase Order Number]
- 4 O 328 [Release Number]
- 5 M 373 [Date]
- 6 O 367 [Contract Number]
- 7 O 587 [Acknowledgment Type]

WDICON\_FUNCS

- SetProperty ("ACField", {HEADER/PONUMBER\})
- HEADER [Header Record WDI User Conference 2006 - Lab 1]
  - (Table 1(20 M BEG\1 M 353)\} = '00')
  - RECORDID [WDI User Conference 2006 - Lab 1]
  - TYPECODE [WDI User Conference 2006 - Lab 1]
  - PONUMBER [WDI User Conference 2006 - Lab 1]
    - PONUMBER = SubString ({HEADER/PONUMBER\}, 5)
  - PODATE [WDI User Conference 2006 - Lab 1]
  - NAME [ ]
  - VENDOR [ ]
  - ADDRESS [ ]
  - CITY [ ]
  - ADIFILE [ ]
  - STATE [ ]
  - ZIP [ ]
  - NAMEA [ ]
  - LINEITEMS [ ]
  - TRAILER [ ]

Mapping Command Editor

Enter a command:

```
{Table 1(20 M BEG\3 M 324)\} = Concat({value1, value2})
```

Global Variable Name | Scope | Local Variab... | Scope | Data | Spe

Global Variable Name	Scope	Local Variab...	Scope	Data	Spe
TotalumEmployees	Ses...	I	T0	Document	Intec
sverrorcount	Ses...	R	PONUMBER	Document	Char
EmployeeCnt	Ses...	I			
tranerror	Ses...	R			
SNIPType5	Group	C			
dmerrorcount	Ses...	R			

Ready

start

9:31 AM Thursday 3/1/2007

Data Manipulation © 2007 IBM Corporation 38

The Concat function concatenates one character string to another. The Concat function has two arguments.

# Data Manipulation

The screenshot shows the WebSphere Data Interchange for Multiplatforms V3.3.3 interface. The main window displays a mapping tree for 'WDICON\_FUNCS'. A 'Mapping Command Editor' dialog box is open, showing the command: `Table 1\20 M BEG\3 M 324\ = Concat ('4', PONUMBER)`. A black arrow points to the '4' in the command. The dialog box has 'OK', 'Insert', and 'Cancel' buttons. The background shows a source tree with 'HEADER [Header Record WDI User Conference 2006 - Lab 1]' and a target tree with '20 M BEG [Beginning Segment for Purchase Order]'.

Enter the value '4' for the first argument. Drag and drop the variable PONUMBER to the second argument.

# Data Manipulation

**SEND/RECEIVE Mapping Commands:**

- 1 Literal of: &SAVE SAPPONUMBER
- 2 Literal of: &SET SAPPONUM &E(CHAR(SAPPONUM) SC 5.6)
- 3 Literal of: &SET SAPPONUM &E('4' + CHAR(SAPPONUM))
- 4 Literal of: &USE SAPPONUM

The screenshot shows the following mapping configuration:

- WDICON\_FUNCS
  - SetProperty ("ACField", ^HEADER^PONUMBER\)
  - HEADER [Header Record WDI User Conference 2006
    - Table 1120 M BEG1 M 353\ = '00'
  - RECORDID [WDI User Conference 2006 - Lab 1]
  - TYPECODE [WDI User Conference 2006 - Lab 1]
  - PONUMBER [WDI User Conference 2006 - Lab 1]
    - PONUMBER = SubString (^HEADER^PONUMBER\, 5)
    - Table 1120 M BEG3 M 324\ = Concat ("4", PONUMBER)
  - PODATE [WDI User Conference 2006 - Lab 1]
  - NAME [WDI User Conference 2006 - Lab 1]
  - VENDORNUMBER [WDI User Conference 2006 - Lab 1]
  - ADDRESS [WDI User Conference 2006 - Lab 1]
  - CITY [WDI User Conference 2006 - Lab 1]
  - ADIFILLER2 [WDI User Conference 2006 - Lab 1]
  - STATE [WDI User Conference 2006 - Lab 1]
  - ZIP [WDI User Conference 2006 - Lab 1]
  - NAMEADDER [WDI User Conference 2006 - Lab 1]
  - LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]
  - TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

The Global Variable table is as follows:

Global Variable Name	Scope	Local Variab...	Scope	Data	Spe
TotalNumEmployees	Ses...	I	T0	Integ	DIO,
svccerrorcount	Ses...	R	PONUMBER	Document	Char;
EmployeeCnt	Ses...	I			DIO,
trancerror	Ses...	R			DIO,
SNIPType5	Group	C			
clmerrorcount	Ses...	R			

This results in 2 mapping commands. In a Send or Receive map this would have taken 4 mapping commands.



# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - WDICON\_FUNCNS]

Source: Data Format\WDILAB1\_DICTIONARY\WDILAB1

- HEAD [Header Record WDI User Conference 2006 - Lab 1]
- LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]
- TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

20 M BEG [Beginning Segment for Purchase Order]

- 1 M 353 [Transaction Set Purpose Code]
- 2 M 92 [Purchase Order Type Code]
- 3 M 324 [Purchase Order Number]
- 4 O 328 [Release Number]
- 5 M 373 [Date]
- 6 O 367 [Contract Number]
- 7 O 587 [Acknowledgment Type]

WDICON\_FUNCNS

- SetProperty ("ACField", \HEADER\PONUMBER\)
- HEADER [Header Record WDI User Conference 2006 - Lab 1]
  - Table 1\20 M BEG\1 M 353\ = '00'
  - RECORDID [WDI User Conference 2006 - Lab 1]
  - TYPECODE [WDI User Conference 2006 - Lab 1]
  - PONUMBER [WDI User Conference 2006 - Lab 1]**
    - Table 1\20 M BEG\3 M 324\ = Concat ("4", SubString (\HEADER\PONUMBER\,5))
  - PODATE [WDI User Conference 2006 - Lab 1]
  - NAME [WDI User Conference 2006 - Lab 1]
  - VENDORNUMBER [WDI User Conference 2006 - Lab 1]
  - ADDRESS [WDI User Conference 2006 - Lab 1]
  - CITY [WDI User Conference 2006 - Lab 1]
  - ADIPFILLER2 [WDI User Conference 2006 - Lab 1]
  - STATE [WDI User Conference 2006 - Lab 1]
  - ZIP [WDI User Conference 2006 - Lab 1]
  - NAMEADDER [WDI User Conference 2006 - Lab 1]
- LINEITEMS [LineItems Record WDI User Conference 2006 - Lab 1]
- TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

Global Variable Name	Scope	Local Variab...	Scope	Data	Spe
TotalNumEmployees	Ses...	IT0	Document	Integ	DIO
svccerrorcount	Ses...	R	PONUMBER	Document	Char
EmployeeCnt	Ses...	IT			DIO
tranerror	Ses...	R			DIO
SNIPType5	Group	C			DIO
dmerrorcount	Ses...	R			DIO

Ready

start

9:41 AM Thursday 3/1/2007

Data Manipulation © 2007 IBM Corporation

But you can also combine functions in an expression so you can accomplish all the mapping using one mapping command.

## Data Manipulation

- Data Transformation Mapping Functions: Field Manipulation
  - ▶ Scenario Outbound:
    - My trading partner needs machine number and model number in the PO line item segment for all 7 digit buyer's part numbers. Buyer's part numbers can be up to 35 characters.
    - If the buyer's part number is 7 digits the first 4 digits of the part number is machine number and the last 3 digits of the part number is model number



In this example, your trading partner needs the machine number and model number in the purchase order line item segment for all 7 digit buyer's part numbers. The Buyer's part numbers can be up to 35 characters. If the part number is 7 digits, the first 4 digits is machine number and the last 3 digits are the model number.

## Data Manipulation

- Data Transformation Mapping Functions: Field Manipulation

- ▶ Solution:

- If the buyer's part number is 7 digits
    - Machine Number = first 4 digits
    - Model Number = last 3 digits

- Data Example:

- Buyer's part number = 6400XYZ
    - STD before = PO1\*00010\*1\*EA\*0.01\*1 \*BP\*6400XYZ!
    - STD after = PO1\*00010\*1\*EA\*0.01\*1  
\*BP\*6400XYZ\*\*\*\*\*MA\*6400\*MN\*XYZ!



The solution is to check the length of the part number. If the length is 7, you need to split the part number to create the machine number and model number.

## Data Manipulation

- Data Transformation Mapping Functions: Field Manipulation

- ▶ Steps Data Transformation:

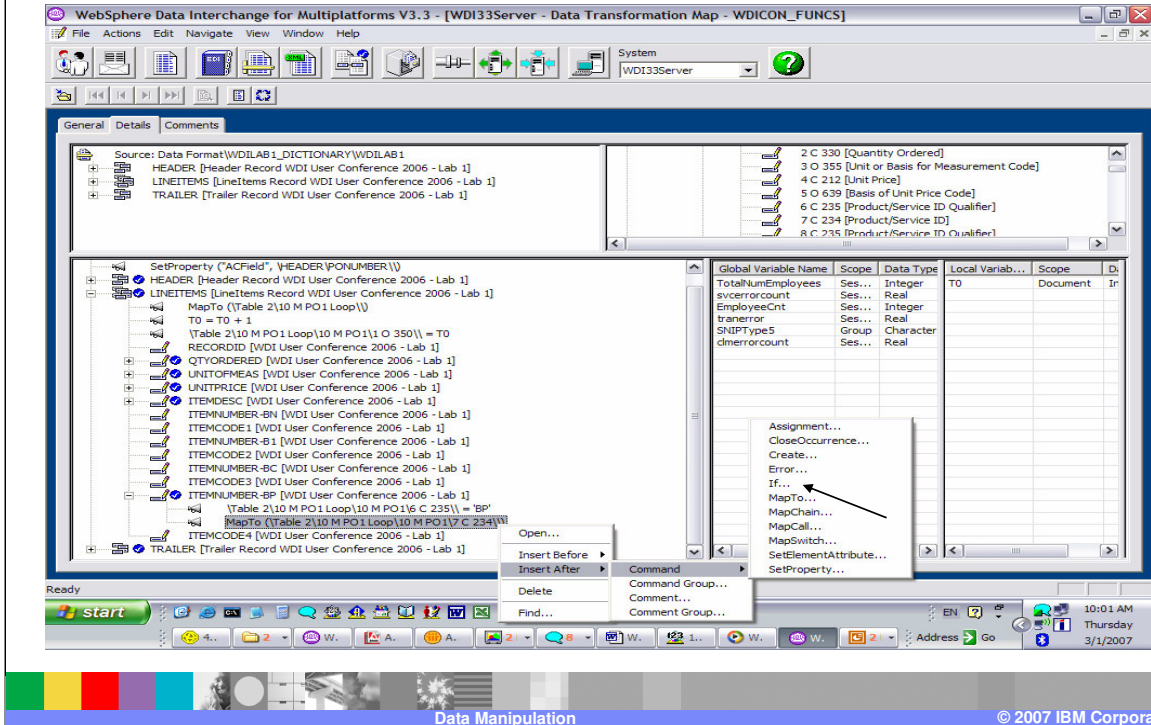
- Check to see if length 7
  - If (Length (\LINEITEMS\ITEMNUMBER-BP\) = 7)
- Use SubString to get machine number
  - \Table 2\10 M PO1 Loop\10 M PO1\13 C 234\ =
  - SubString (\LINEITEMS\ITEMNUMBER-BP\, 1, 4)
- Use SubString to get model number
  - \Table 2\10 M PO1 Loop\10 M PO1\15 C 234\ =
  - SubString (\LINEITEMS\ITEMNUMBER-BP\, 5, 3)
- Map the results



The steps to manipulate the part number are:

1. Check to see if the length is 7.
2. Use the SubString function to get the machine number
3. Use the SubString function to get the model number
4. Map the results

# Data Manipulation



First you need to check the length. If length is 7 you need to split the part number. You need to add an If command.

# Data Manipulation

The screenshot displays the IBM WebSphere Data Interchange for Multiplatforms V3.3 interface. The main window shows a Data Transformation Map (WDICON\_FUNCS) with a tree view on the left and a list of mappings on the right. A Mapping Command Editor dialog box is open, showing the command: `If (Length (LINEITEMS\ITEMNUMBER-BP\)) EQ 7)`. The dialog box has buttons for OK, Insert, and Cancel. The background window shows a list of mappings with columns for Global Variable Name, Scope, Data Type, and Local Variable Name. The Global Variable Name column contains values like TotalNumEmployees, svccerrorcount, EmployeeCnt, tranerror, and COUNTRY. The Scope column contains values like Integer, Real, Integer, Real, and Character. The Data Type column contains values like Integer, Real, Integer, Real, and Character. The Local Variable Name column contains values like T0, Document, and Ir. The Mapping Command Editor dialog box is open over the main window, showing the command: `If (Length (LINEITEMS\ITEMNUMBER-BP\)) EQ 7)`. The dialog box has buttons for OK, Insert, and Cancel. The background window shows a list of mappings with columns for Global Variable Name, Scope, Data Type, and Local Variable Name. The Global Variable Name column contains values like TotalNumEmployees, svccerrorcount, EmployeeCnt, tranerror, and COUNTRY. The Scope column contains values like Integer, Real, Integer, Real, and Character. The Data Type column contains values like Integer, Real, Integer, Real, and Character. The Local Variable Name column contains values like T0, Document, and Ir.

The Length function will return the length of a string but the value could have leading or trailing blanks. You can create a variable to hold the trimmed part number and add the assignment to do the trimming when you have finished the If command.



# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - WDICON\_FUNCS]

System: WDI33Server

Global Variable Name | Scope | Data Type | Local Variab... | Scope | D

Global Variable Name	Scope	Data Type	Local Variab...	Scope	D
TotalNumEmployees	Ses...	Integer	T0	Document	Ir
sverrorcount	Ses...	Real	ItemNumber	Document	Cl
EmployeeCnt	Ses...	Integer			
trerror	Ses...	Real			
Outp...	Docu...	Document			

Mapping Command Editor

Enter the parameters of the command:

If (Length (ItemNumber) EQ 7)

OK Cancel

Ready

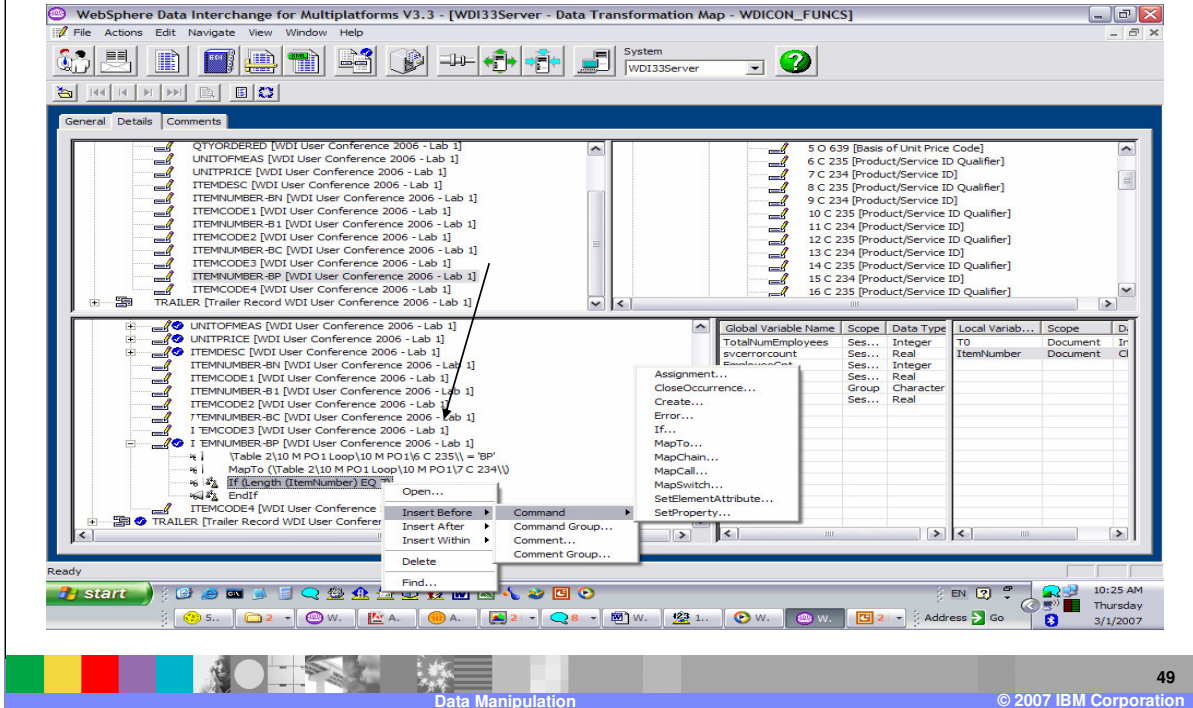
10:24 AM Thursday 3/1/2007

Data Manipulation © 2007 IBM Corporation 48

Drag and drop the new variable ItemNumber to the Length function.



# Data Manipulation



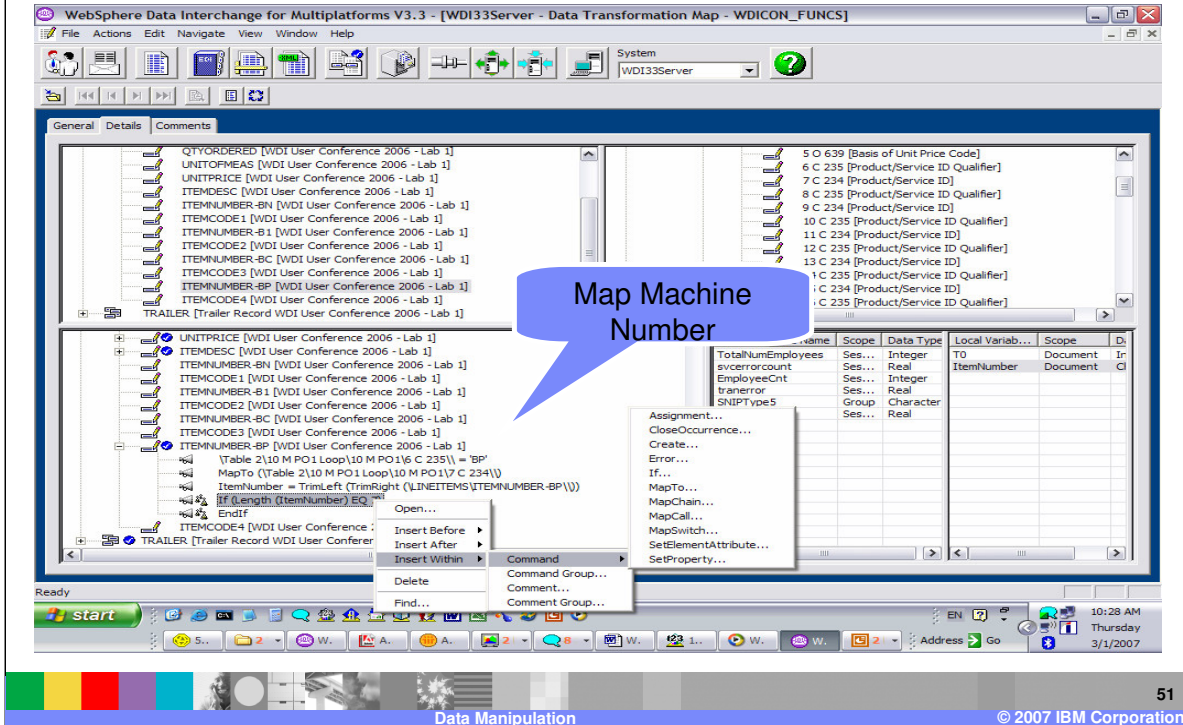
You need to insert the Assignment command to assign a value to the variable ItemNumber.

# Data Manipulation

The screenshot displays the WebSphere Data Interchange for Multiplatforms V3.3 interface. The main window shows a mapping editor with a tree view on the left and a list of variables on the right. A 'Mapping Command Editor' dialog box is open, showing the command: `ItemNumber = TrimLeft (TrimRight (LINEITEMS\ITEMNUMBER-BP\))`. The dialog has 'OK', 'Insert', and 'Cancel' buttons. The background window shows a list of variables including 'QTYORDERED', 'UNITOFMEAS', 'UNITPRICE', 'ITEMDESC', 'ITEMNUMBER-BN', 'ITEMCODE1', 'ITEMNUMBER-B1', 'ITEMCODE2', 'ITEMNUMBER-BC', 'ITEMCODE3', 'ITEMNUMBER-BP', 'ITEMCODE4', and 'TRAILER'. The right pane lists variables like 'S O 639 [Basis of Unit Price Code]', '6 C 235 [Product/Service ID Qualifier]', etc.

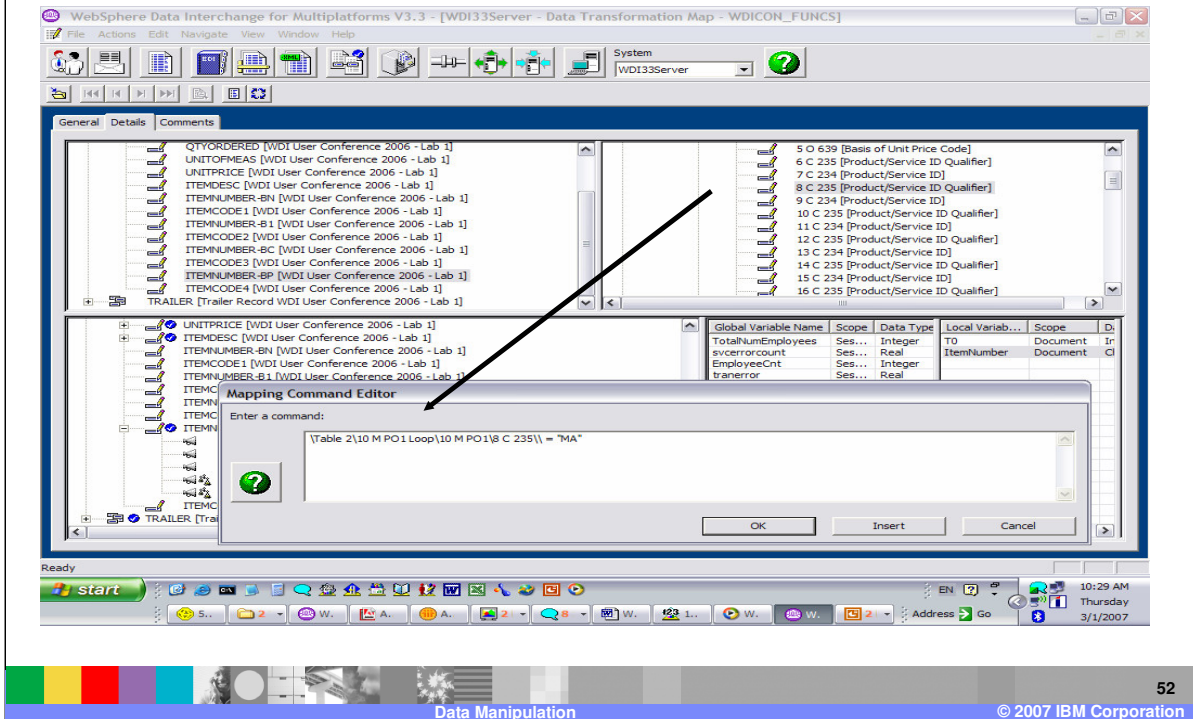
You can use the TrimLeft and TrimRight functions to remove the leading and trailing blanks from the part number.

# Data Manipulation



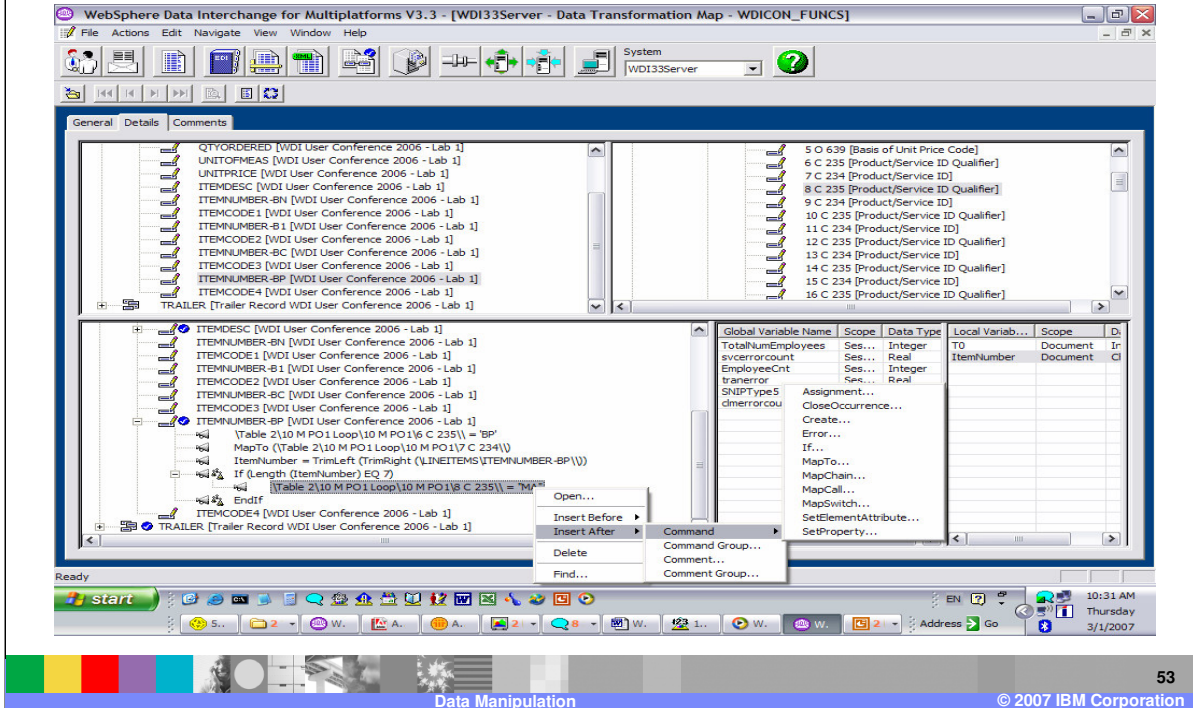
Now you need to map the machine number using an Assignment command within the If command.

# Data Manipulation



First you need to map the Product/Service Id Qualifier.

# Data Manipulation



Map the machine number using an Assignment command.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - WDI\_CON\_FUNCS]

System: WDI33Server

Global Variable Name	Scope	Data Type	Local Variab...	Scope	D.
TotalNumEmployees	Ses...	Integer	T0	Document	tr
svccerrorcount	Ses...	Real	ItemNumber	Document	CI
EmployeeCnt	Ses...	Integer			
trerrorr	Ses...	Real			

Mapping Command Editor

Enter a command:

```
\\Table 2\\10 M PO 1 Loop\\10 M PO 1\\9 C 234\\ = SubString (ItemNumber, 1, 4)
```

OK Insert Cancel

Ready

10:34 AM  
Thursday  
3/1/2007

Data Manipulation © 2007 IBM Corporation 54

Machine number is the first 4 digits in the part number which is in the ItemNumber variable. This example is using the SubString function.

# Data Manipulation

The screenshot displays the WebSphere Data Interchange for Multiplatforms V3.3 interface. The main window shows a list of data elements on the left and right sides, with a central area for mapping. A 'Mapping Command Editor' dialog box is open, showing the command: `{Table 2(10 M PO 1 Loop(10 M PO 1) C 234)} = Left (ItemNumber, 4)`. The dialog box has an 'Enter a command:' label and a text area containing the command. Below the text area are 'OK' and 'Cancel' buttons. The background window shows a list of data elements including QTYORDERED, UNITFORMEAS, UNITPRICE, ITEMDESC, ITEMNUMBER-BN, ITEMNUMBER-B1, ITEMNUMBER-B2, ITEMNUMBER-B3, ITEMNUMBER-BP, ITEMNUMBER-B4, TRAILER, and various C 234 and O 639 elements. The Windows taskbar at the bottom shows the date as Thursday, 3/1/2007, and the time as 10:46 AM.

You can also use the Left function to get the left most characters.

# Data Manipulation

The screenshot shows the 'WebSphere Data Interchange for Multiplatforms V3.3' interface. The main editor displays XSLT code for a transformation map. A blue callout bubble points to the 'ITEMNUMBER-BP' node in the tree view, with the text 'Map Model Number'. The variable declaration table on the right is as follows:

Global Variable Name	Scope	Data Type	Local Variab...	Scope	D
TotalNumEmployees	Ses...	Integer	T0	Document	Ir
svccerrorcount	Ses...	Real	ItemNumber	Document	Cl
EmployeeCnt	Ses...	Integer			
tranerror	Ses...	Real			
SNIPTYPE5	Group	Character			
derrorcount	Ses...	Real			

Next you need to map the Model number.



## Data Manipulation

- Data Transformation Mapping Functions: Field Manipulation
  - ▶ Did you know you can copy mapping commands?
    - Highlight the command and hold
    - Press <Shift> key
    - Move to where you want to copy the command (like Drag/Drop)
    - Release hold



This is a mapping tip. You can copy commands using the Shift key on the keyboard and Drag and Drop.

# Data Manipulation

The screenshot displays the WebSphere Data Interchange for Multiplatforms V3.3.3 interface. The main window shows a Data Transformation Map configuration for 'WDI33Server - Data Transformation Map - WDICON\_FUNCS'. The map editor contains several commands, including 'Map Model Number', which is highlighted by a blue callout bubble. The map editor also shows a table of global variables with columns for Global Variable Name, Scope, Data Type, and Local Variable Name.

Global Variable Name	Scope	Data Type	Local Variable Name	Scope	D
TotalNumEmployees	Ses...	Integer	T0	Document	In
svccerrorcount	Ses...	Real	ItemNumber	Document	Cl
EmployeeCnt	Ses...	Integer			
tranerror	Ses...	Real			
SNIPType5	Group	Character			
dmererrorcount	Ses...	Real			

Since you copied the commands for Machine number, you can open the commands and modify them for the Model Number mapping.

# Data Manipulation

WebSphere Data Interchange for Multiplatforms V3.3 - [WDI33Server - Data Transformation Map - WDICON\_FUNCS]

File Actions Edit Navigate View Window Help

System WDI33Server

General Details Comments

QTYORDERED [WDI User Conference 2006 - Lab 1]  
 UNITOPMEAS [WDI User Conference 2006 - Lab 1]  
 UNITPRICE [WDI User Conference 2006 - Lab 1]  
 ITEMDESC [WDI User Conference 2006 - Lab 1]  
 ITEMNUMBER-BN [WDI User Conference 2006 - Lab 1]  
 ITEMCODE1 [WDI User Conference 2006 - Lab 1]  
 ITEMNUMBER-B1 [WDI User Conference 2006 - Lab 1]  
 ITEMCODE2 [WDI User Conference 2006 - Lab 1]  
 ITEMNUMBER-B3 [WDI User Conference 2006 - Lab 1]  
 ITEMCODE3 [WDI User Conference 2006 - Lab 1]  
 ITEMNUMBER-BP [WDI User Conference 2006 - Lab 1]  
 ITEMCODE4 [WDI User Conference 2006 - Lab 1]  
 TRAILER [Trailer Record WDI User Conference 2006 - Lab 1]

5 O 639 [Basis of Unit Price Code]  
 6 C 235 [Product/Service ID Qualifier]  
 7 C 234 [Product/Service ID]  
 8 C 235 [Product/Service ID Qualifier]  
 9 C 234 [Product/Service ID]  
 10 C 235 [Product/Service ID Qualifier]  
 11 C 234 [Product/Service ID]  
 12 C 235 [Product/Service ID Qualifier]  
 13 C 234 [Product/Service ID]  
 14 C 235 [Product/Service ID Qualifier]  
 15 C 234 [Product/Service ID]  
 16 C 235 [Product/Service ID Qualifier]

Global Variable Name Scope Data Type Local Variab... Scope D  
 TotalNumEmployees Ses... Integer TO Document In  
 svcerrorcount Ses... Real ItemNumber Document Cl

Mapping Command Editor

Enter a command:

Table 2\10 M PO 1 Loop\10 M PO 1\10 C 235\|= "MN"

OK Cancel

Ready

start

Address Go

10:51 AM Thursday 3/1/2007

59

Data Manipulation © 2007 IBM Corporation

Don't forget to check and change the target path.

# Data Manipulation

The screenshot displays the WebSphere Data Interchange for Multiplatforms V3.3 interface. The main window shows a list of variables on the left and right sides, including ItemNumber and various Product/Service ID Qualifiers. A Mapping Command Editor dialog box is open, showing the command: `\Table 2\10 M PO1 Loop\10 M PO1\11 C 234\ = Right (ItemNumber, 3)`. An arrow points from the ItemNumber variable in the right pane to the command editor. The Windows taskbar at the bottom shows the date and time as 10:52 AM Thursday 3/1/2007.

The Right function can be used to get the Right most characters from the ItemNumber variable.

# Data Manipulation

SEND/RECEIVE Mapping Commands:

- Literal of: &SAVE bpartnum
- Literal of: &SET mapit &E(CHAR(bpartnum) SC 8.1)
- Literal of: &IF (mapit = ") &SET machinetype &E(CHAR(bpartnum) SC 1.4)
- Literal of: &IF (mapit = ") &SET modeltype &E(CHAR(bpartnum) SC 5.3)
- Literal of: &IF (mapid = ") MA
- Literal of: &USE machinetype
- Literal of: &IF (mapid = ") MN
- Literal of: &USE modeltype

The screenshot shows the WebSphere Data Interchange for Multiplatforms V3.3.3 interface. The main window displays a mapping configuration for a 'TRAILER' record. The configuration includes several mapping commands, such as 'MapTo', 'ItemNumber = TrimLeft(TrimRight(...))', and conditional logic using '&IF' and '&ENDIF'. A blue cloud-shaped overlay is placed over the mapping commands, listing the specific SEND/RECEIVE commands used in the configuration. The interface also shows a table of global and local variables on the right side.

Global Variable Name	Scope	Data Type	Local Variab...	Scope	D...
TotalNumEmployees	Ses...	Integer	T0	Document	I-
sverrorcount	Ses...	Real	ItemNumber	Document	I-
EmployeeCnt	Ses...	Integer			
tranerror	Ses...	Real			
SNIPType5	Group	Character			
dmerrorcount	Ses...	Real			

61

Data Manipulation © 2007 IBM Corporation

This results in 6 mapping commands including the Assignment for the ItemNumber variable, the If command, and mapping for the 4 elements to contain the machine type and model number. In a Send or Receive map this would have taken up to 8 mapping commands.

## Summary

- Documentation for Data Transformation commands and functions can be found:
  - ▶ WDI 3.3 Mapping Guide – Chapter 12
  - ▶ WDI Client Help
  - ▶ WDI Client Mapping Wizard
- Mapping commands can be moved and copied
- Most Mapping commands and functions are available for Validation purposes.



More information can be found in the WebSphere Data Interchange Version 3.3 Mapping Guide chapter 12.

# Trademarks, copyrights, and disclaimers

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

IBM	CICS	IMS	WMO	Tivoli
IBM (logo)	Cloudscape	Informix	OS/390	WebSphere
ef (logo)/business	DB2	iSeries	OS/400	xSeries
AIX	DB2 Universal Database	Lotus	pSeries	zSeries

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are registered trademarks of Microsoft Corporation in the United States, other countries, or both.

Intel, ActionMedia, LANDesk, MMX, Pentium and ProShare are trademarks of Intel Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a registered trademark of Linus Torvalds.

Other company, product and service names may be trademarks or service marks of others.

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements and/or changes in the product(s) and/or program(s) described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

Information is provided "AS IS" without warranty of any kind. THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (e.g., IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

© Copyright International Business Machines Corporation 2006. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights-Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract and IBM Corp.

