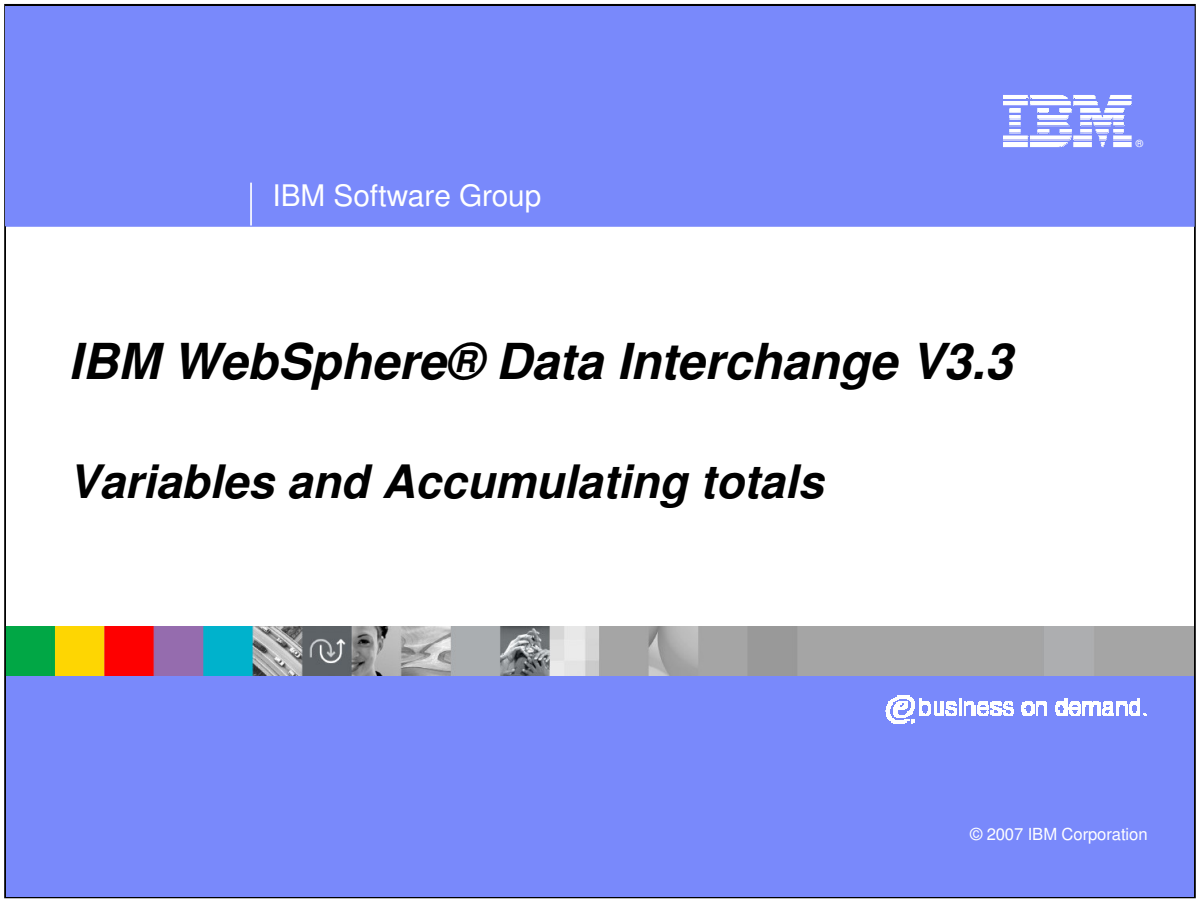


This presentation will demonstrate how to accumulate totals in a Data Transformation map.

Agenda

- Review global and local variables
- Demonstrate how to obtain totals

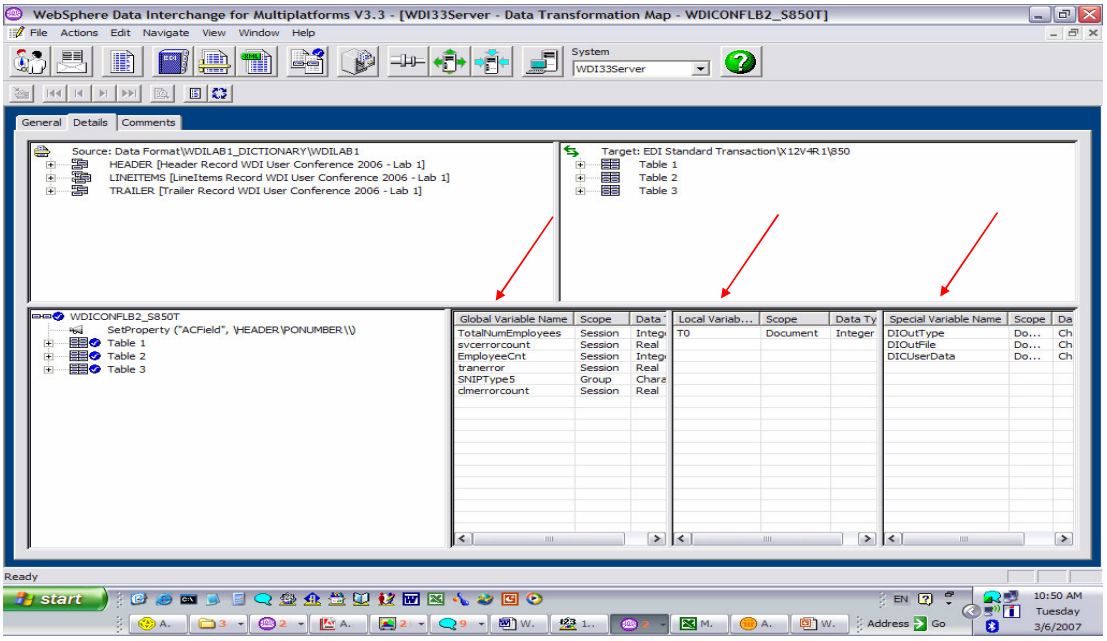
The presentation will review global and local variables and demonstrate how to obtain totals.

Variables and Accumulating Totals

- Variables
  - Global, local, and special
  - Hold values for data manipulation
  - Maximum length for a value is 32K

Map variables are used like variables in any programming language. They are an integral part of the WebSphere Data Interchange mapping command language. Variables are used to hold and manipulate values assigned to them by the user. WebSphere Data Interchange supports three types of variables: *local*, *global*, and *special variables*. A variable can have a value with a maximum length of 32K.

Variables and Accumulating Totals



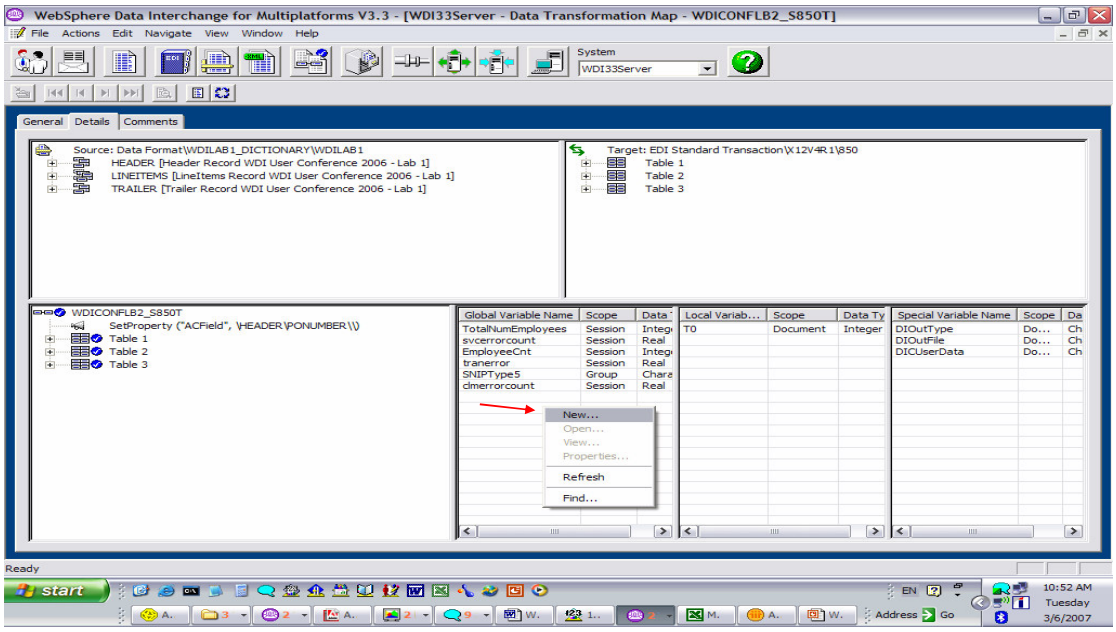
Global variables can be defined and viewed in the Mapping functional area and defined and removed in the Global Variable tab. Local variables can be defined and removed in the Mapping functional area. Special variables may only be viewed.

Variables and Accumulating Totals

- Global variables
  - Used across translations
  - Scope of the variables determines when the value is reset
  - Scope can be session, interchange, or group

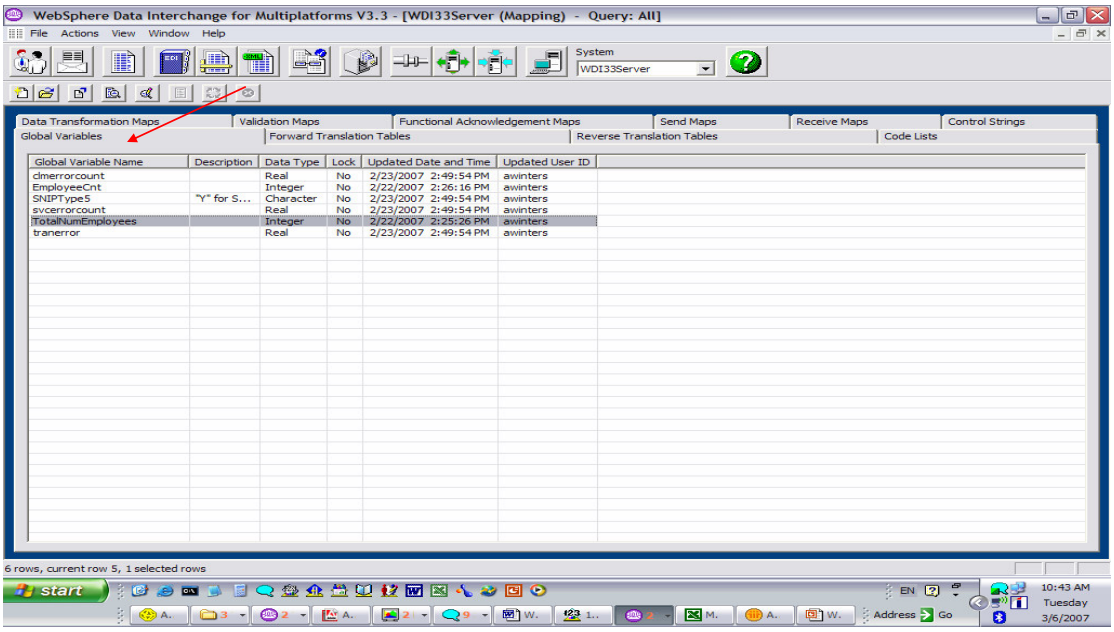
A **Global Variable** defines a variable that can be used across translations. These variables are used much like variables in most programming languages. They can hold and manipulate data in Data Transformation Maps, Validation Maps, and Functional Acknowledgement Maps. While a document is being translated, data can be put into a Global Variable. After the translation of the document ends, the data remains in the Global Variable. The data in the variable may be available in the next translation, depending on the *scope* of the variable, regardless of the map that is used to perform the translation. During subsequent translations within the scope of the variable, the data in the Global Variable can be obtained, manipulated and changed. The scope can be session, interchange, or group.

Variables and Accumulating Totals



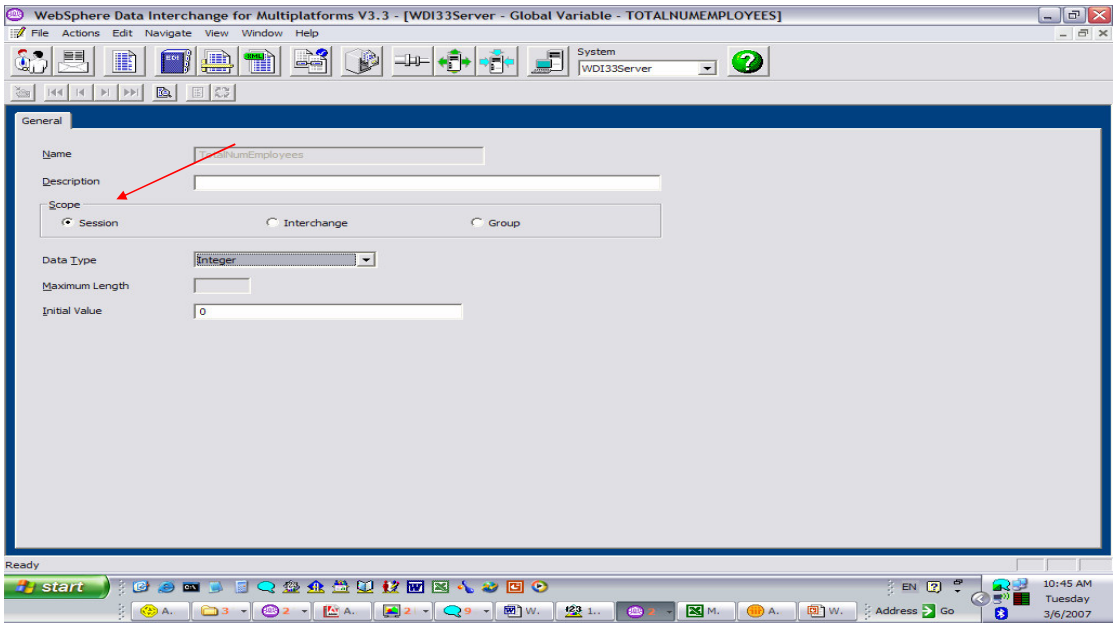
Global variables are displayed in the Global Variable window. You can define a Global Variable by using right click and selecting New but you cannot remove a Global variable.

Variables and Accumulating Totals



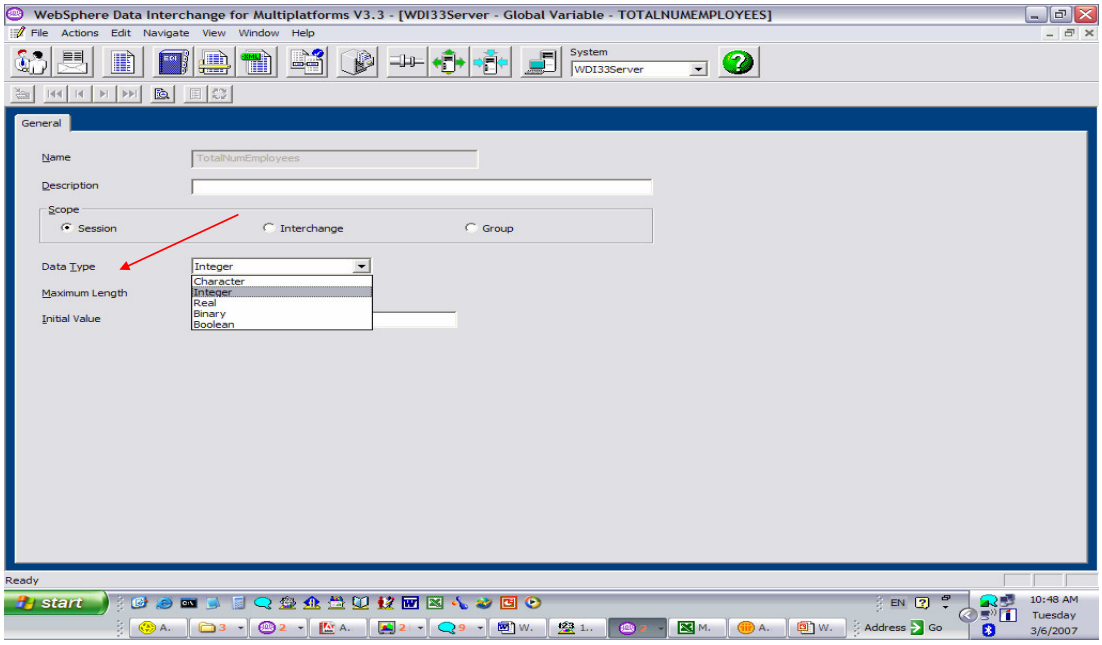
The Global Variable tab in the Mapping functional area contains a list of the Global variables. Variables can be defined and removed.

Variables and Accumulating Totals



The scope of a Global variable can be Session, Interchange, or group. The variable will reset based on the scope of the variable.

Variables and Accumulating Totals



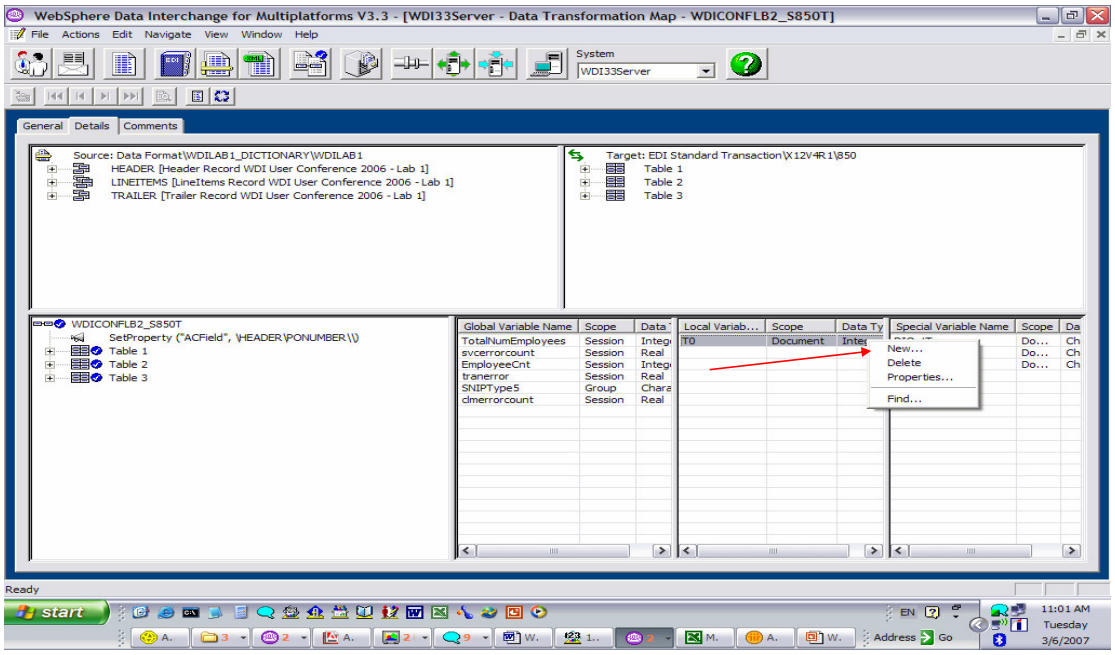
The data type for the variable can be selected from the drop down list.

Variables and Accumulating Totals

- Local variables
  - Unique to the map where they are defined
  - Scope of the variables determines when the value is reset
  - Scope can be document or loop

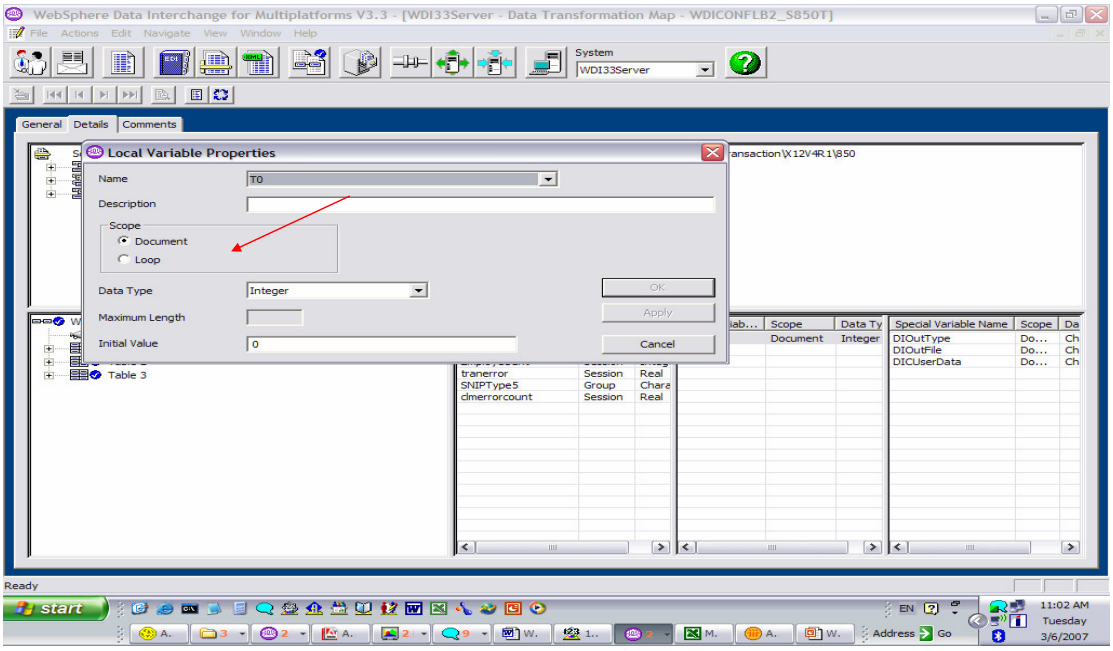
Local variables are unique to the map they are defined in. A local variable must be defined to a map before it can be used in that map. Local variables have a scope of *document* or *loop*. During translation, local variables defined with a scope of *document* are created at the start of every document and deleted at the end of the document. Variables defined with a scope of *loop* are created and initialized whenever a new loop iteration is started, and destroyed at the end of each loop iteration. A loop variable does not disturb the value of another variable with the same name at another level of looping. Local variables are maintained within the map in which they are defined. You can add, delete, and alter the properties of any local variable.

Variables and Accumulating Totals



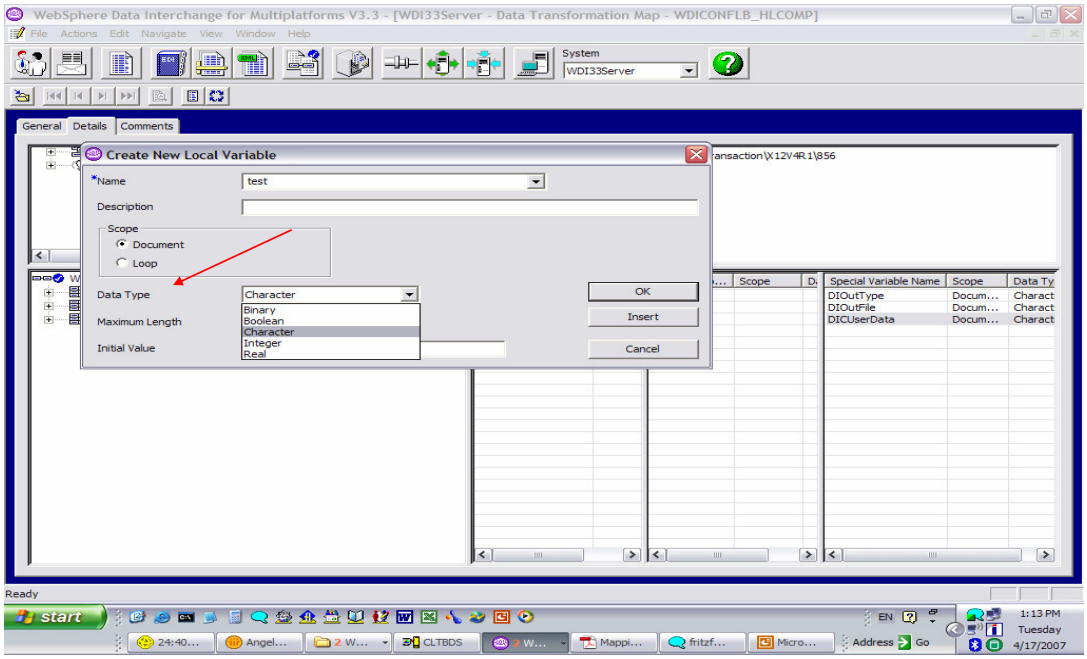
Local variables are displayed in the Local Variable window. You can define a Local Variable by using right click and selecting New. You can remove a Local Variable by selecting the variable and selecting Delete.

Variables and Accumulating Totals



The scope of a Local variable can be Document or Loop. The variable will reset based on the scope of the variable.

Variables and Accumulating Totals



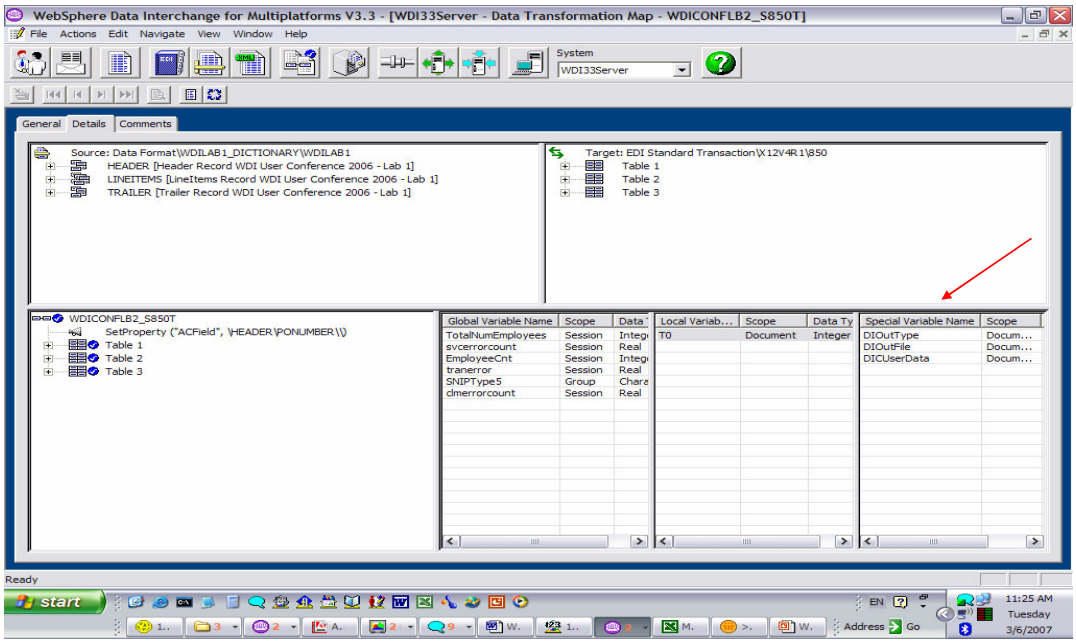
The data type for the variable can be selected from the drop down list.

Variables and Accumulating Totals

- Special variables
  - Predefined
  - View properties using double click
  - Begin with characters “DI”
  - Write only, cannot be used in an expression

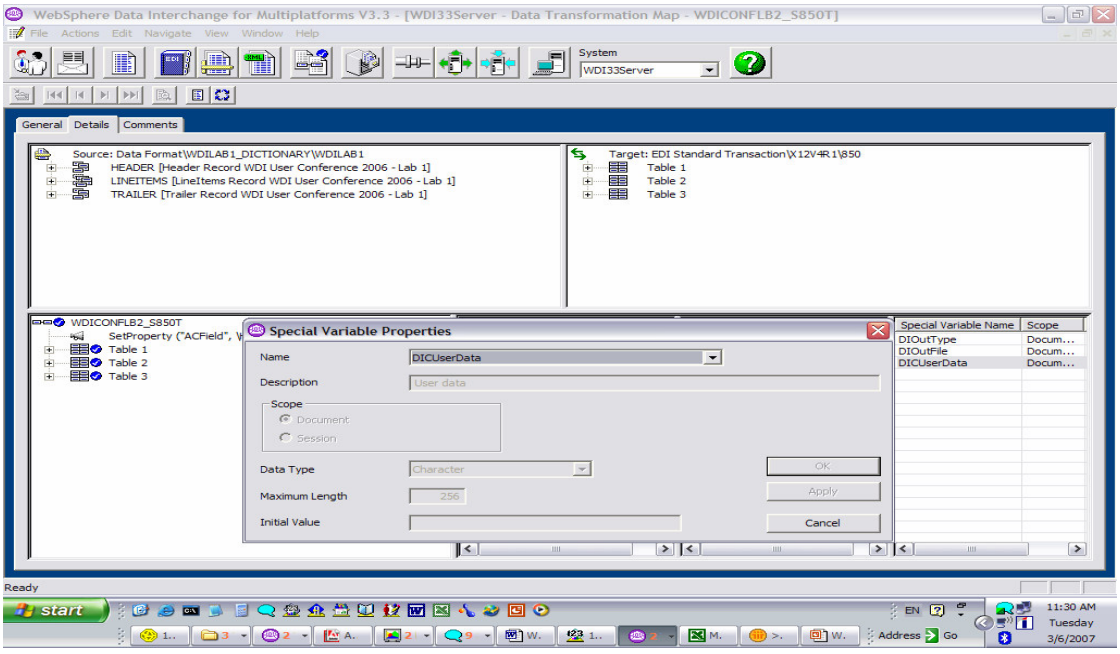
Special variables are a group of predefined variables used by WebSphere Data Interchange. They function much like local or global variables, except they each have a special purpose. A user can view properties of a special variable, but no changes can be made. Special variables always start with “DI”, which is reserved. Special variables are write-only. That means you can set the value of a special variable, but cannot read it or use it in an expression.

Variables and Accumulating Totals



Special variables are displayed in the Special Variable window.

Variables and Accumulating Totals

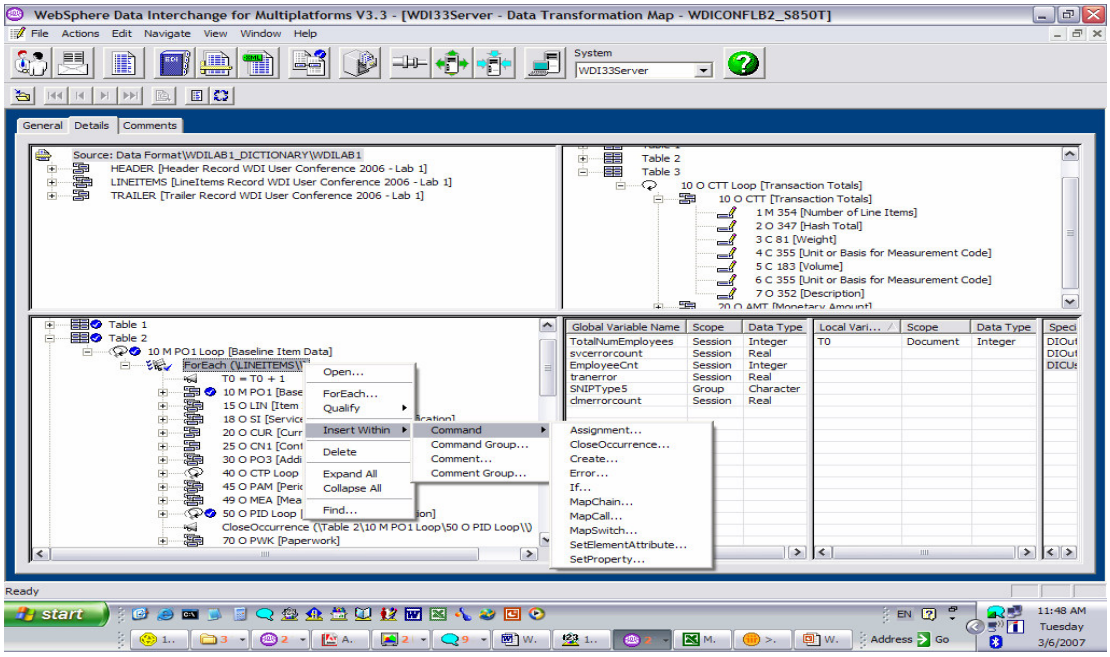


You can view the properties of the special variable but you cannot make any changes.

Section

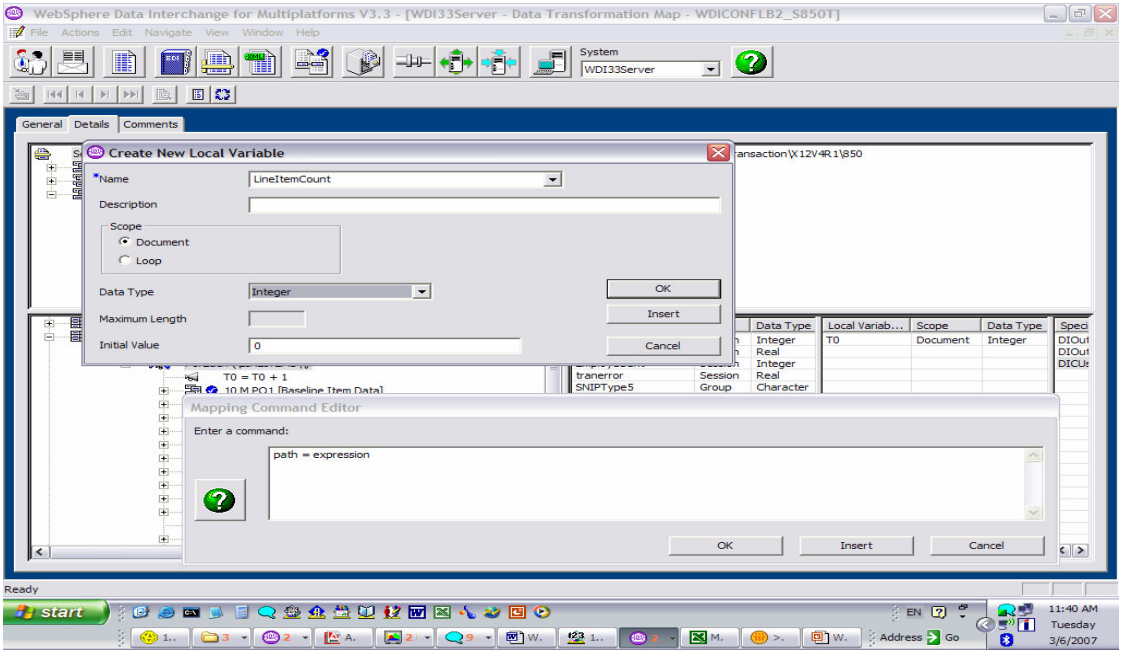
Accumulating Totals

Variables and Accumulating Totals



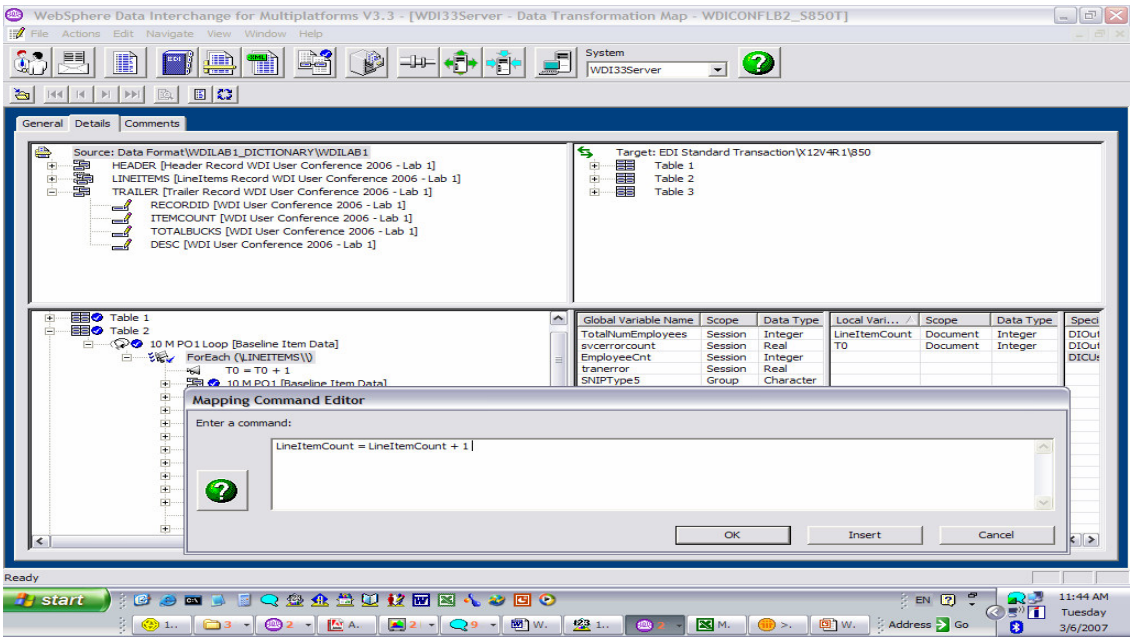
In this example you will accumulate the total line items mapped to the PO1 Loop and map this to the total to the CTT Segment in the target document. This is a target based map and the PO1 Loop will have a ForEach Qualification under the PO1 Loop. You can add a local variable LineItemCount with type Integer and use this variable as the accumulator. Within the ForEach command you want to use the Assignment command.

Variables and Accumulating Totals



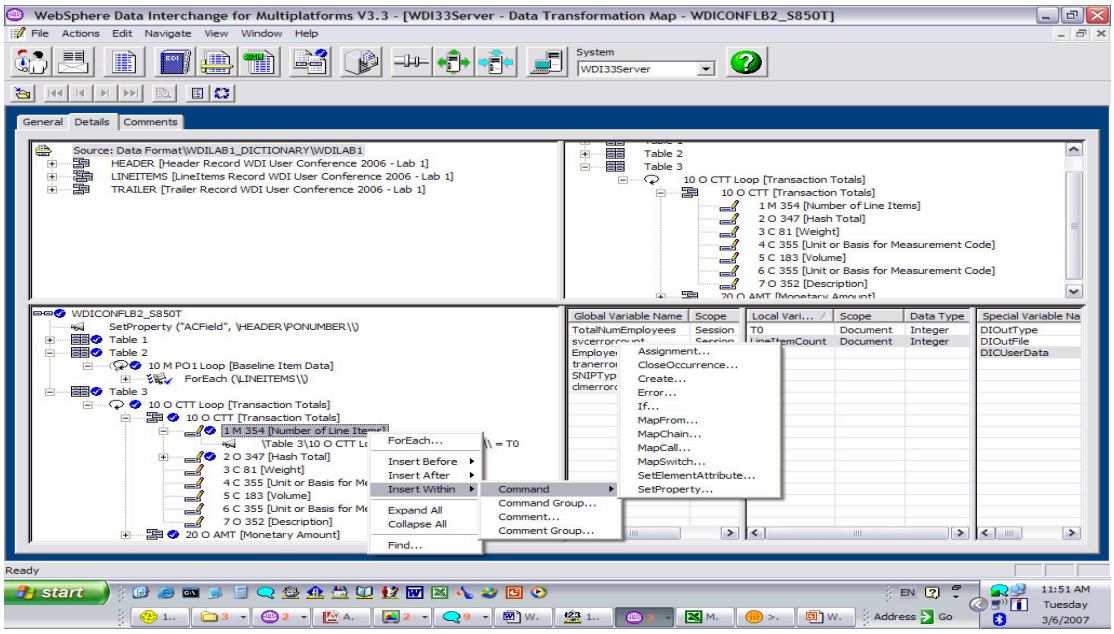
The Assignment command has 2 arguments path and expression. You can move to the Local Variable Window and create a new Local Variable using Right Click. A scope of Loop will reset the variable value when the loop is finished but you want to map the total later in the map execution so for this example the scope will be Document. The initial value is set to zero. This will set the value of the variable to 0 each time this map is executed.

Variables and Accumulating Totals



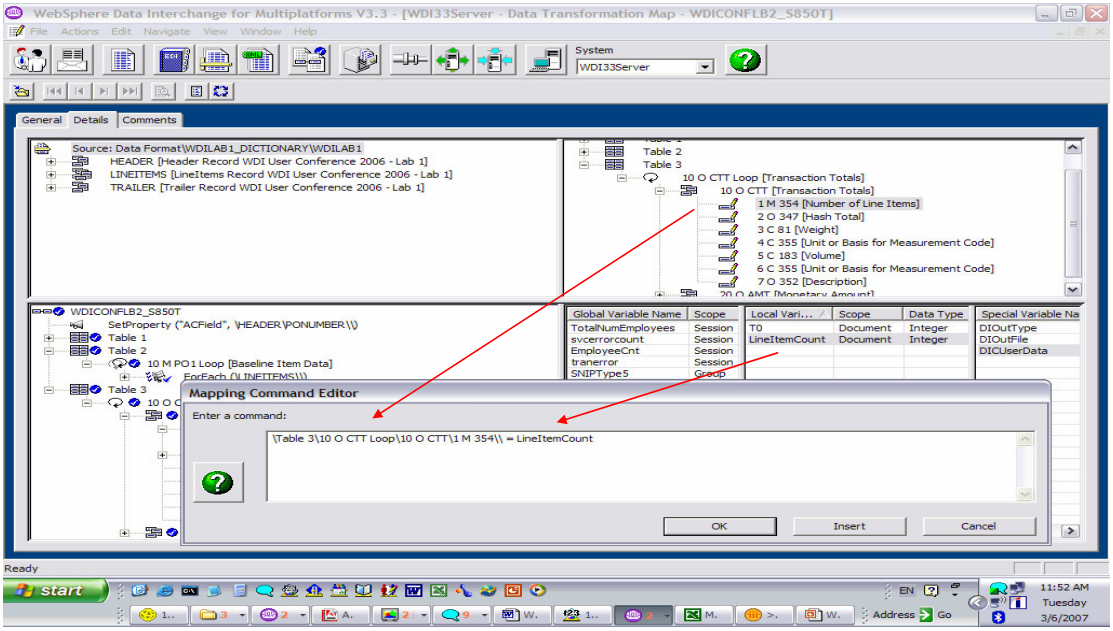
You can assign a value to LineItemCount by using the drag from the Local Variable window and drop on to the path argument. Since you are counting the number of line items you can just add 1 to the variable.

Variables and Accumulating Totals



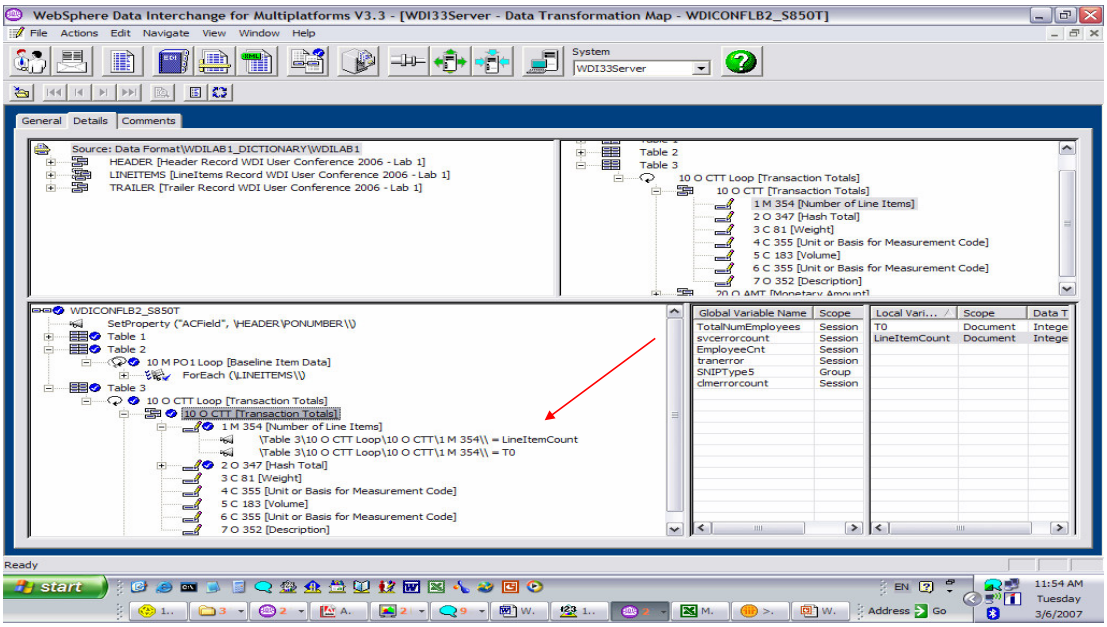
You can map the variable to the CTT segment using the Assignment command.

Variables and Accumulating Totals



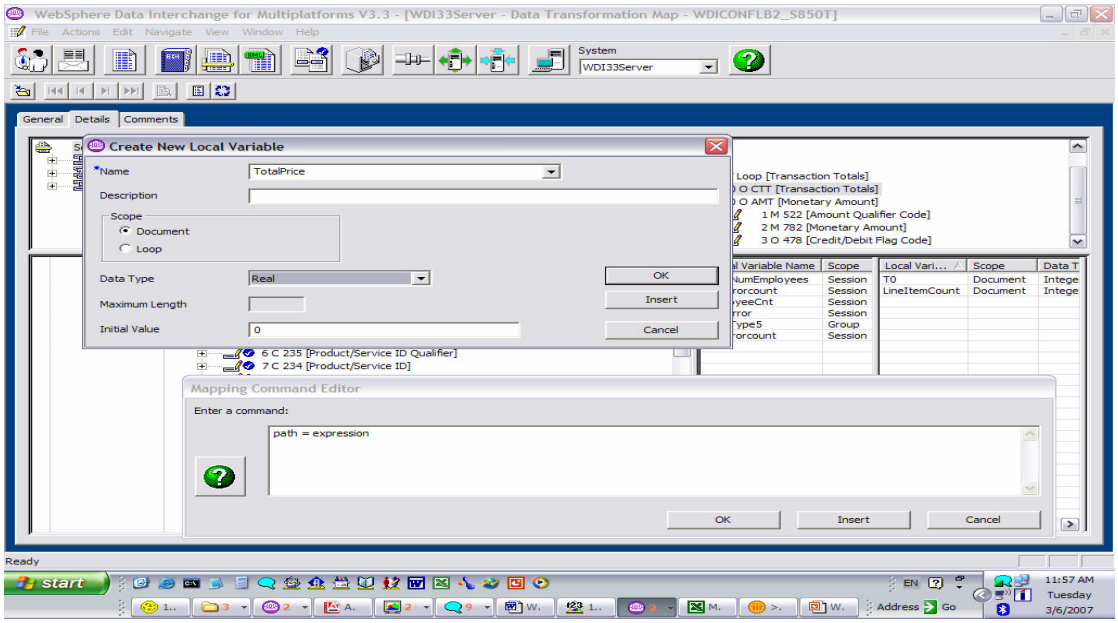
Drag and drop the target path to the path argument and drag and drop the Local Variable LineItemCount to the expression argument.

Variables and Accumulating Totals



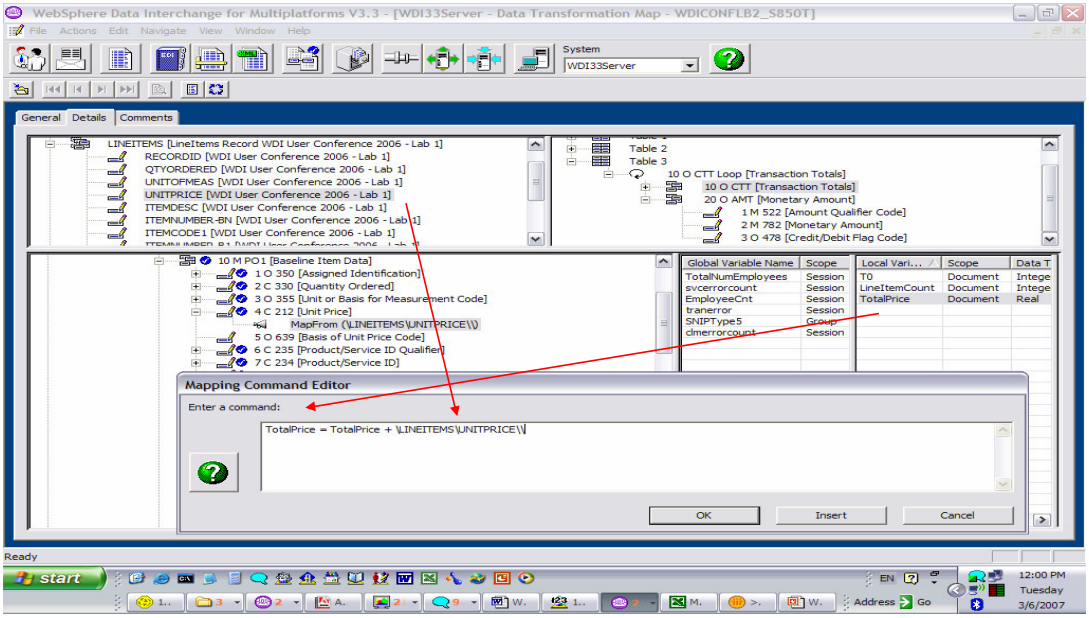
This is the completed mapping.

Variables and Accumulating Totals



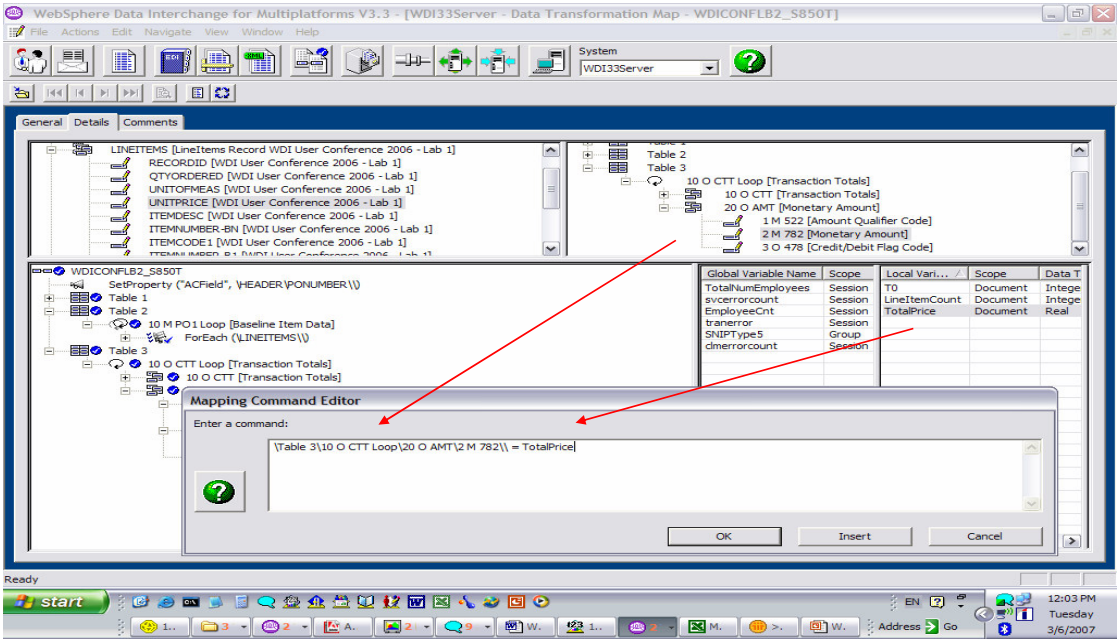
Now lets accumulate the total price from the line item loop and map that total to the AMT segment. You can use the Assignment command to accumulate the total in the Local Variable TotalPrice.

Variables and Accumulating Totals



The Local Variable is used for the path argument and part of the expression. The plus operator is used as part of the expression. And you can use drag from the source document window and drop after the operator.

Variables and Accumulating Totals



Now you can map the TotalPrice variable to the AMT segment.

Reference

- More information can be found in the WDI V3.3 Mapping Guide.

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

Template Revision: 04/25/2006 11:09 AM

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	WMQ	Tivoli
IBM(logo)	Cloudscape	Informix	OS/390	WebSphere
e(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.

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.