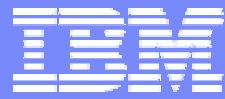


IBM Software Group

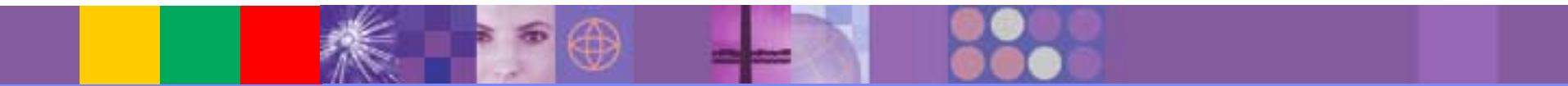
2006 B2B Customer Conference

B2B – Catch the Next Wave

A2: Overview – New features / Functions

WebSphere. software

Robin Pope



ON DEMAND BUSINESS

© IBM Corporation

Feature / Function

- Operational Ease of Use
  - Add email alert capability to WDI server
  - Provide email alert on overdue FA
  - Add WDI Client Role Based Access Control
  - Add Ability to generate Common Infrastructure Events
  - Improve exception handling (program readable event log, API to process log)
  - Allow job submission from the WDI Client
  - Provide Audit Trail for Client Objects rather than just last updated
- Performance related enhancements
  - Improve ability to process very large messages - support HL in Pageable AMM
  - Allow "Parse from File" for EDI and DF data
- S/R to DT Migration
  - Add Business Ids / Internal Trading Partner ID functionality for DT maps
  - Add SetElementAttribute / &ZEROSIG for DT Maps
  - Allow Management Reporting for DT maps, extend to XML and DF data
  - Add XML and flat file data to DT Transaction Store Interface

© IBM Corporation

Feature / Function

- Infrastructure
  - Remove z/OS Admin Facility User Interface
  - Upgrade to z/OS C/C++ Compiler from VM C/C++ compiler
  - Upgrade version of XML Toolkit for z/OS
  - Upgrade version of DB2, MQSeries
  - Convert print reports to HTML and eliminate Crystal Reports
- Other Feature / Function
  - Allow multiple, disjoint record ids (improves SAP support)
  - Add X12 999 FA support
  - Provide a Java API similar to the C++ API
  - Globalization improvements (allow encoding to be specified for all source/target syntaxes)

© IBM Corporation

Operational Ease of Use

e-mail Alert Capability

- The next release adds e-mail notification to the product.

- WDI allows the user to generate e-mail alerts via SMTP when errors or other conditions occur. These alerts could also be sent to pagers, cell phones, and any other devices that support SMTP text messages. A handler has been provided to process the program-readable message log, and generate an e-mail alert. Configuration parameters have been provided to allow users to customize the e-mail alerts.

- The use of a pluggable e-mail component allows the customer to integrate his own component.

- Sample source for the handler program will be provided, so customers can further customize it if they wish.

© IBM Corporation

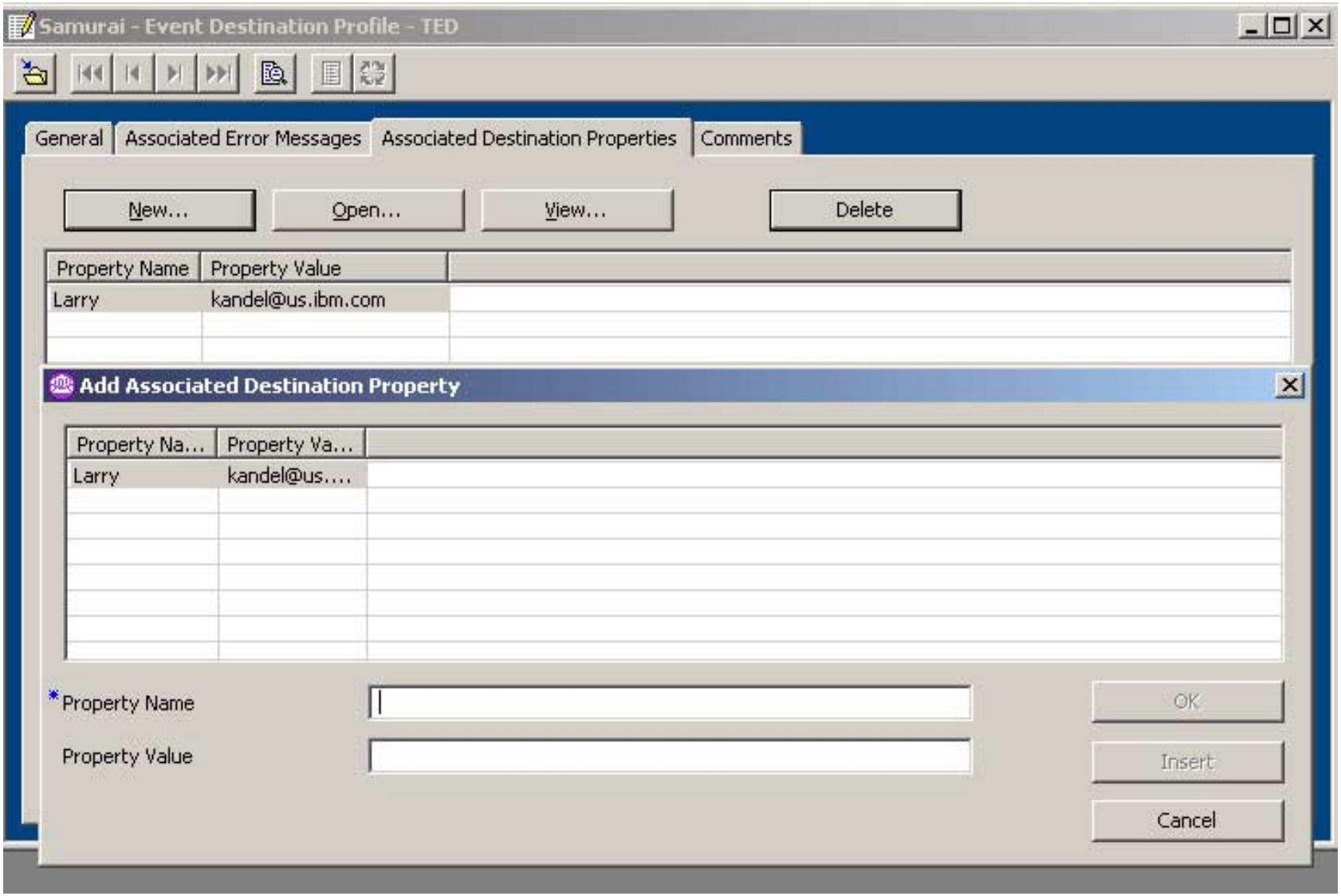
e-mail Alert Capability

Hello,
This message was generated by WDI Common Event Handling.
The attachment contains the XML Log
The log location is also at C:\Documents and Settings\Administrator/WDISessionLog1155239663292.txt .
The time now is Aug 10, 2006 3:54:23 PM

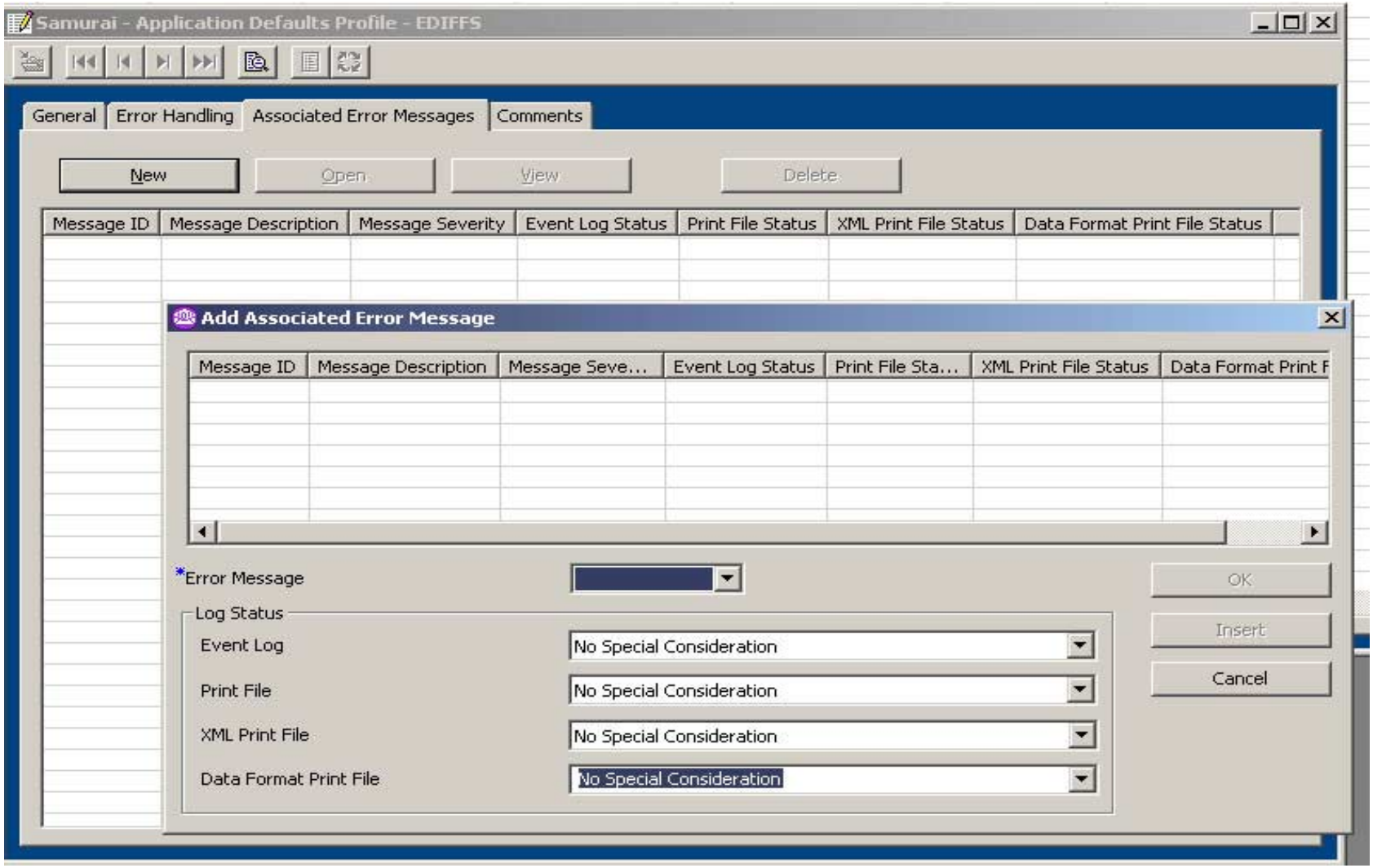
Have a nice day.

Attachment
<WDISessionLog>
<Header>
<Date>
<Year>2006</Year>
<Month>07</Month>
<Day>10</Day>
</Date>
<Time>
<Hour>15</Hour>

© IBM Corporation



© IBM Corporation



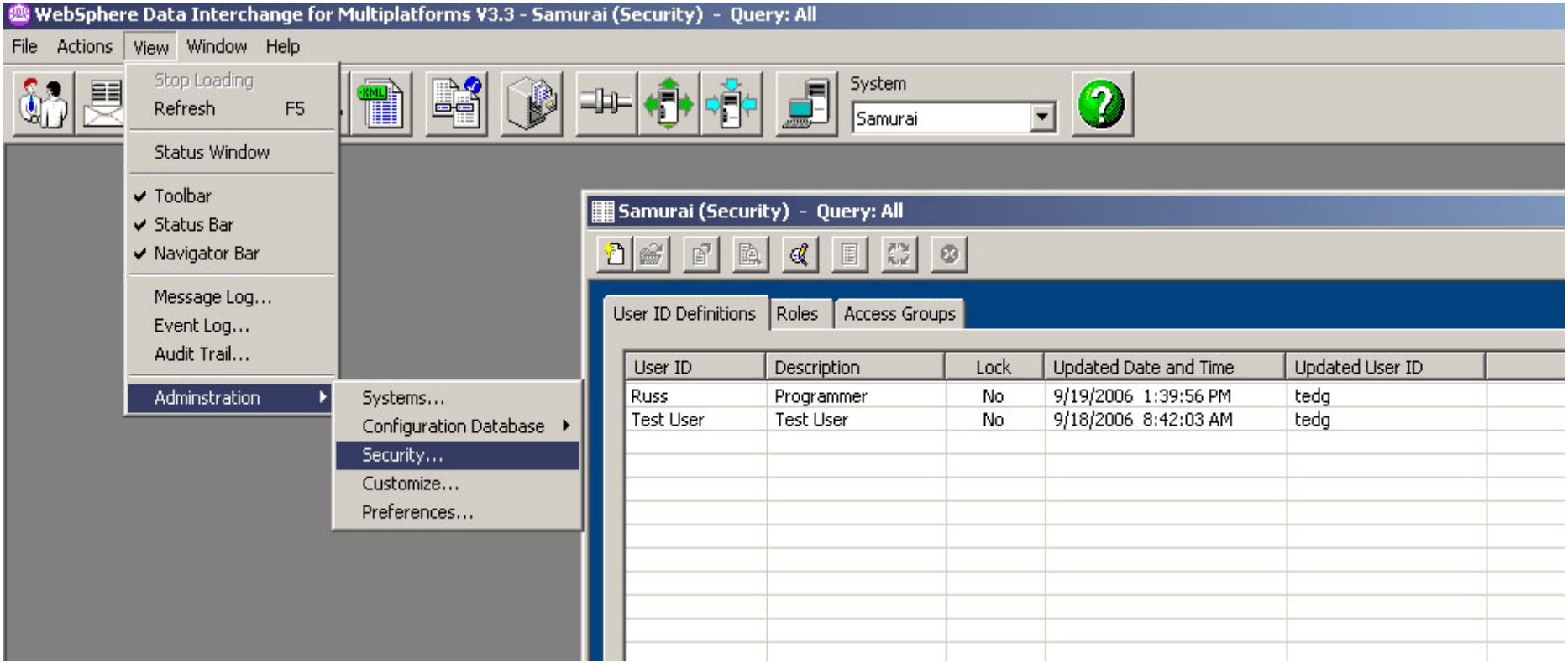
© IBM Corporation

Client Role Based Access Control

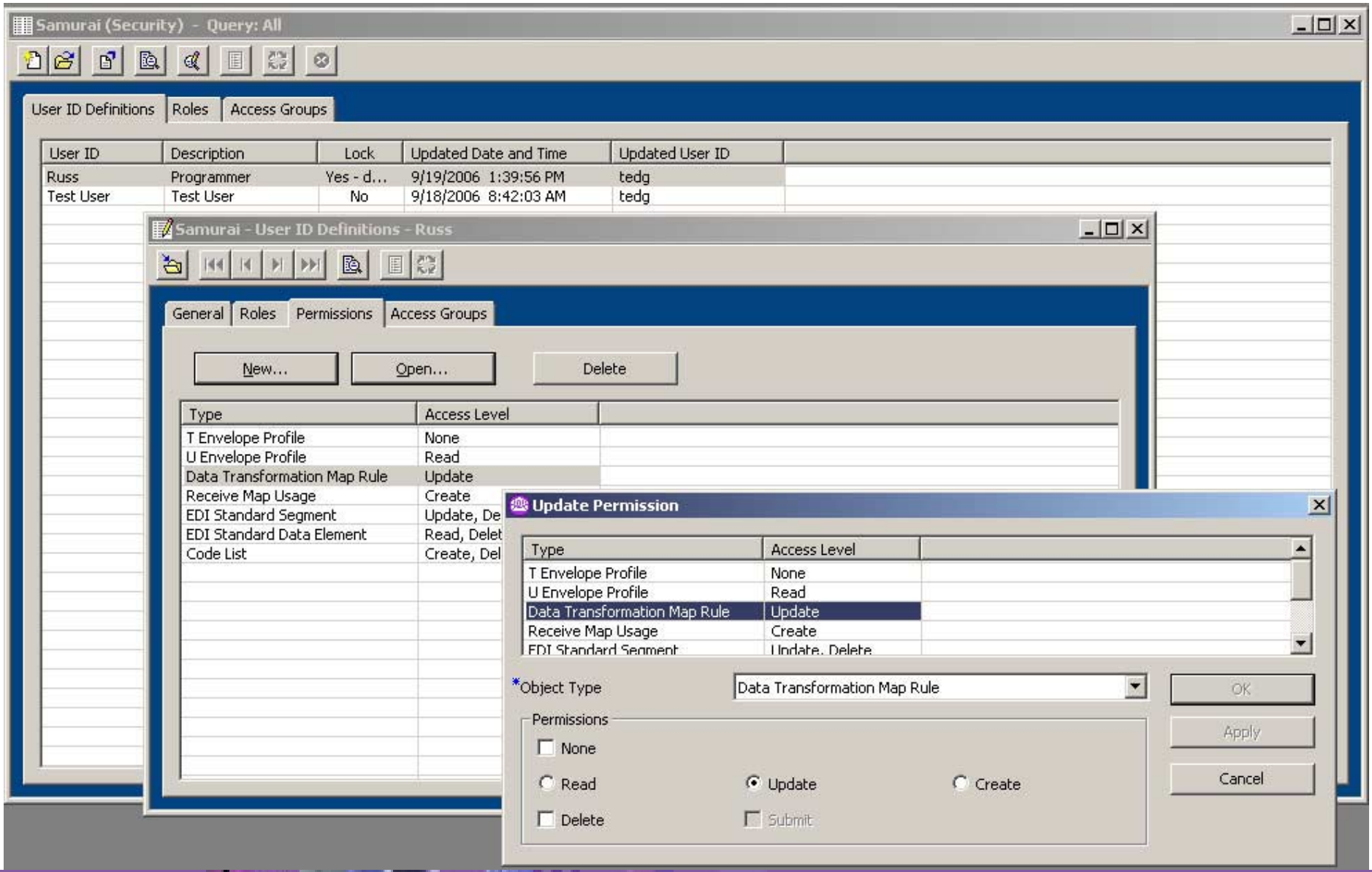
- In the current client, the only way to restrict users to specific functions is via DB2 GRANT authority.

- WDI now allows customers to configure their database to assign "roles" to users, and restrict access based on the user's assigned role.
  - Roles - specifies add/change/delete capability for WDI objects (maps, standards, TP profiles, etc)
  - Access Groups - segregates groups of an object, e.g. TP profiles by department, and allows the assignment of a group to a user or role
  - Users - userid used to connect to a database and the access rights of that user

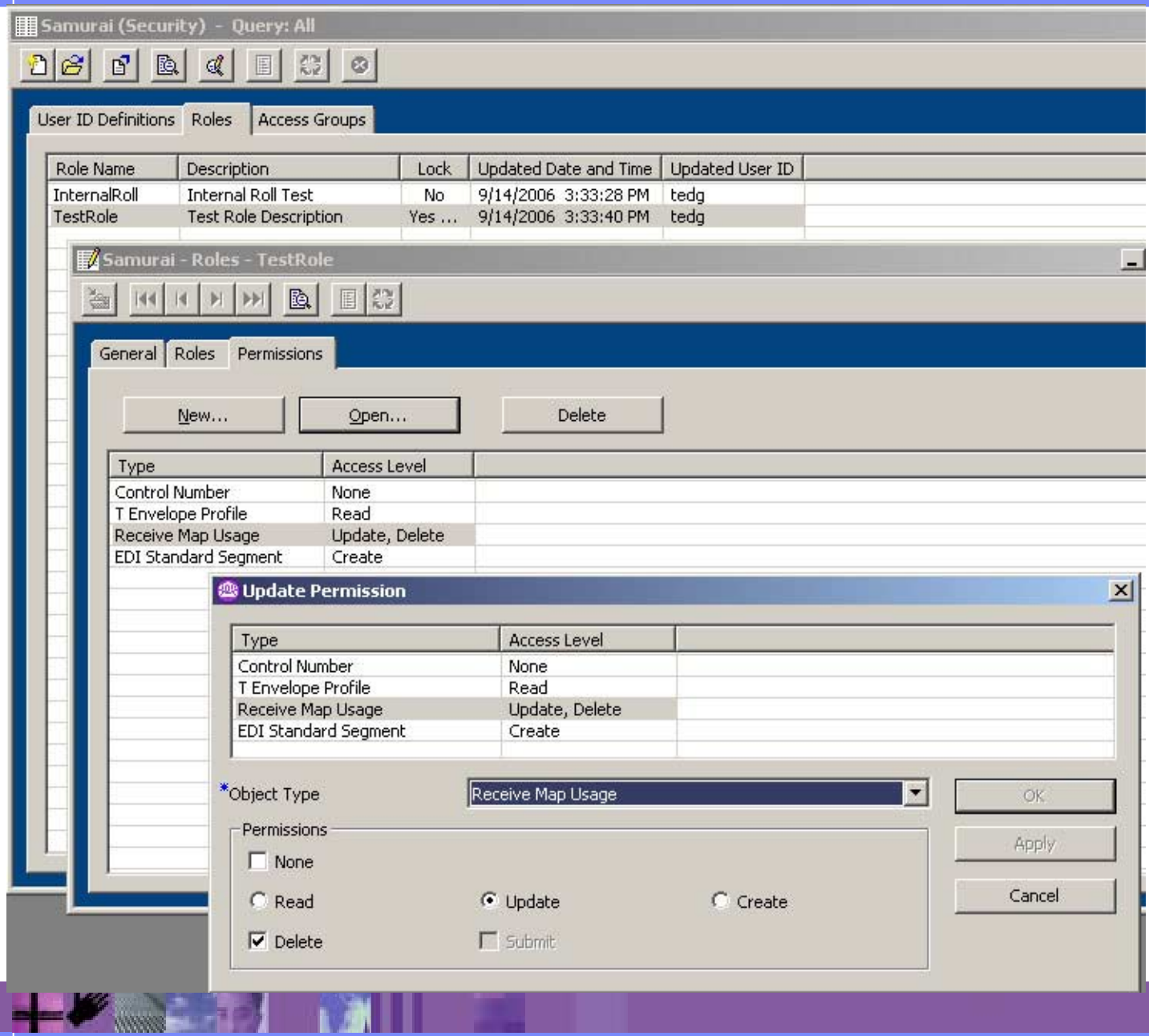
© IBM Corporation



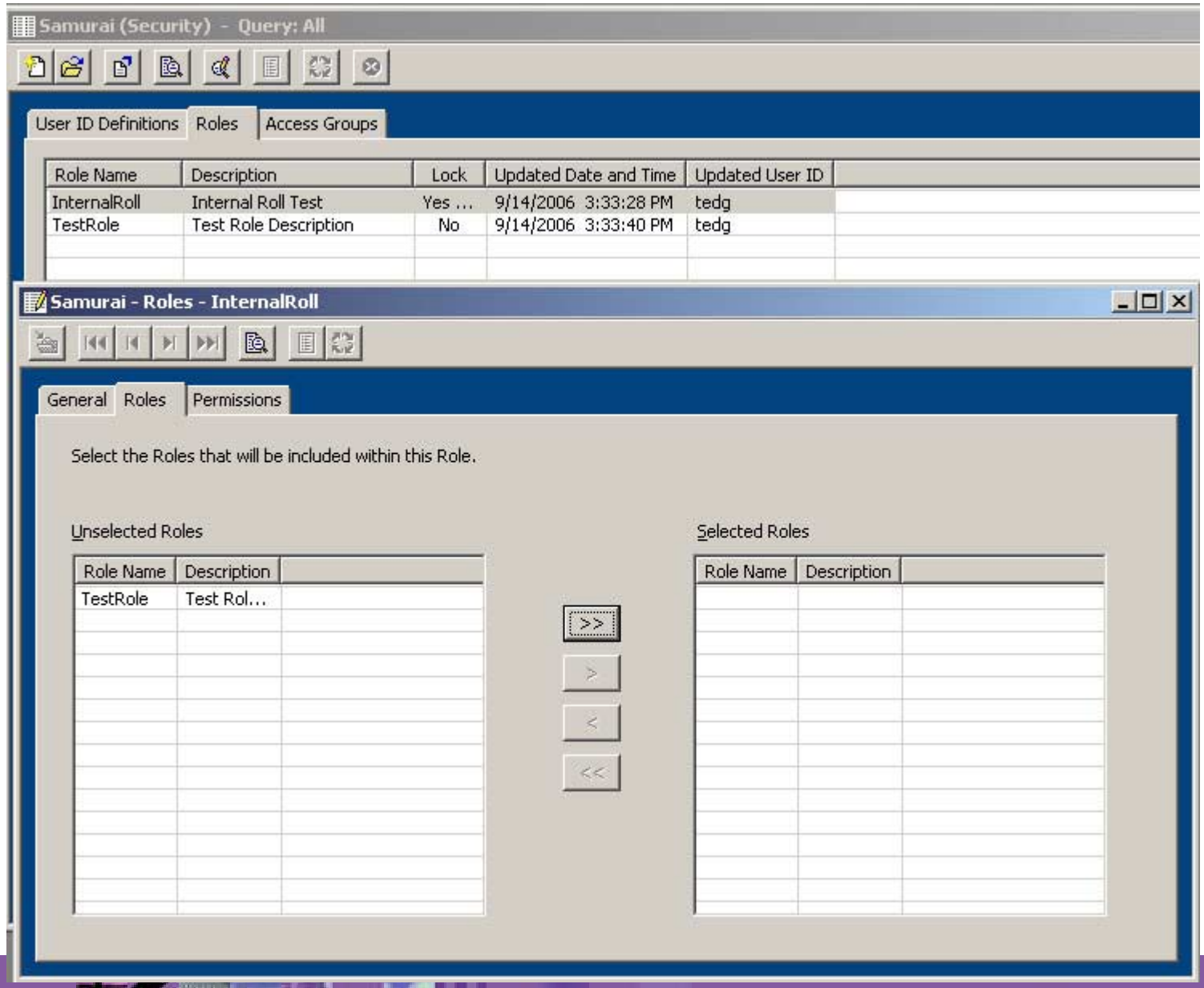
© IBM Corporation



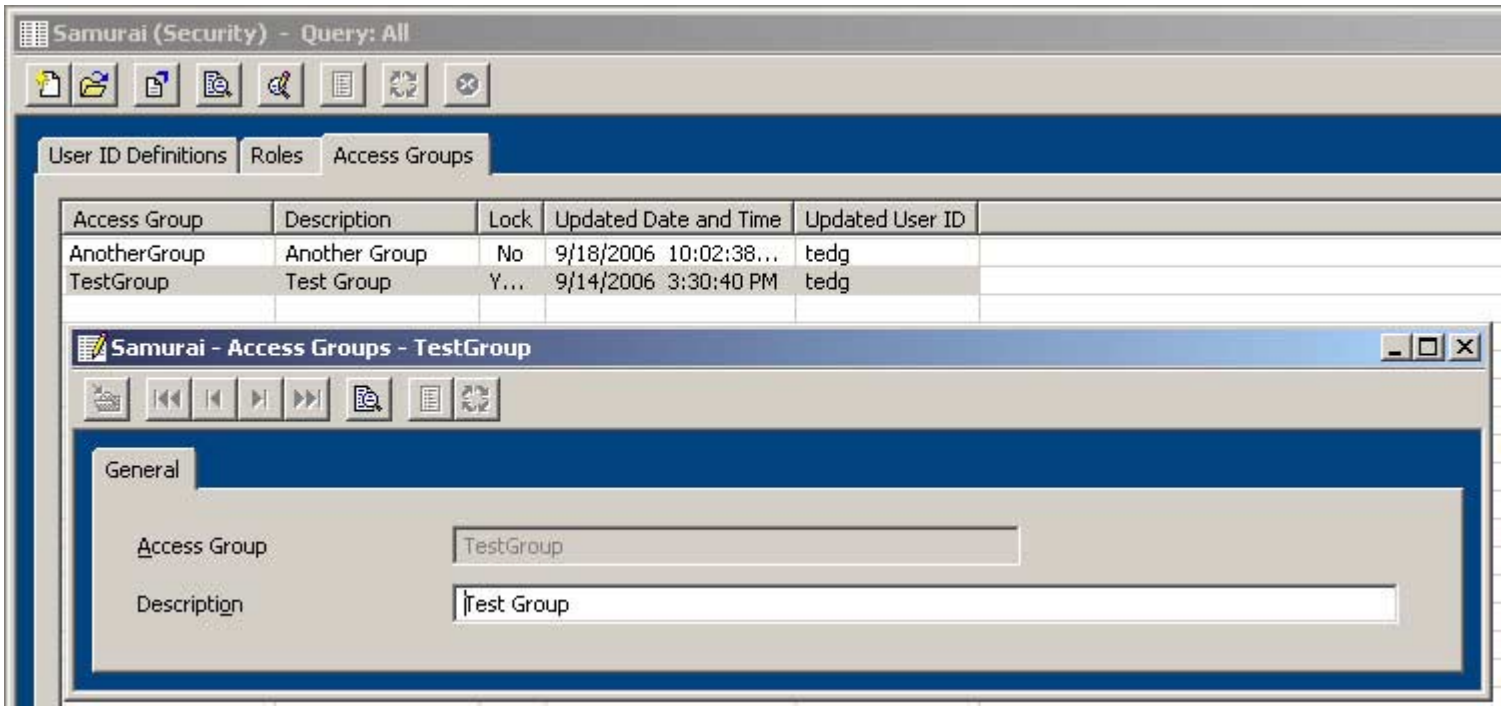
© IBM Corporation



© IBM Corporation



© IBM Corporation



© IBM Corporation

Common Event Infrastructure

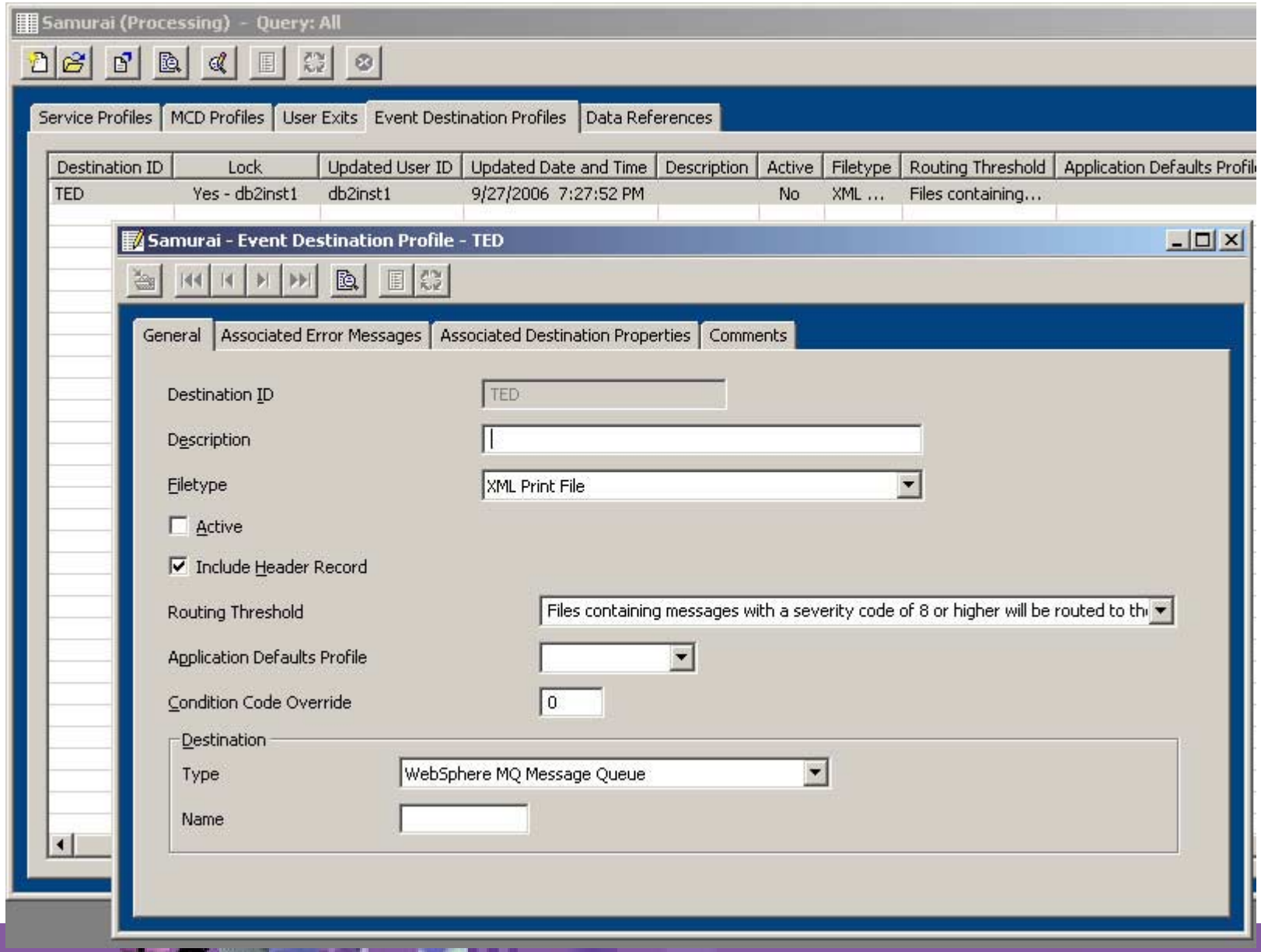
- WDI will provide a means to generate CEI events. This allows the user to have a common operational monitor for all applications when they are using the CEI monitor.
- CEI is based upon the Autonomic Computing Division's CBE specification, which defines a standard format for event information, which devices and software use to keep track of transactions and other activity.
- In WDI 3.3, the CEH architecture allows for a CBE plug-in handler.

© IBM Corporation

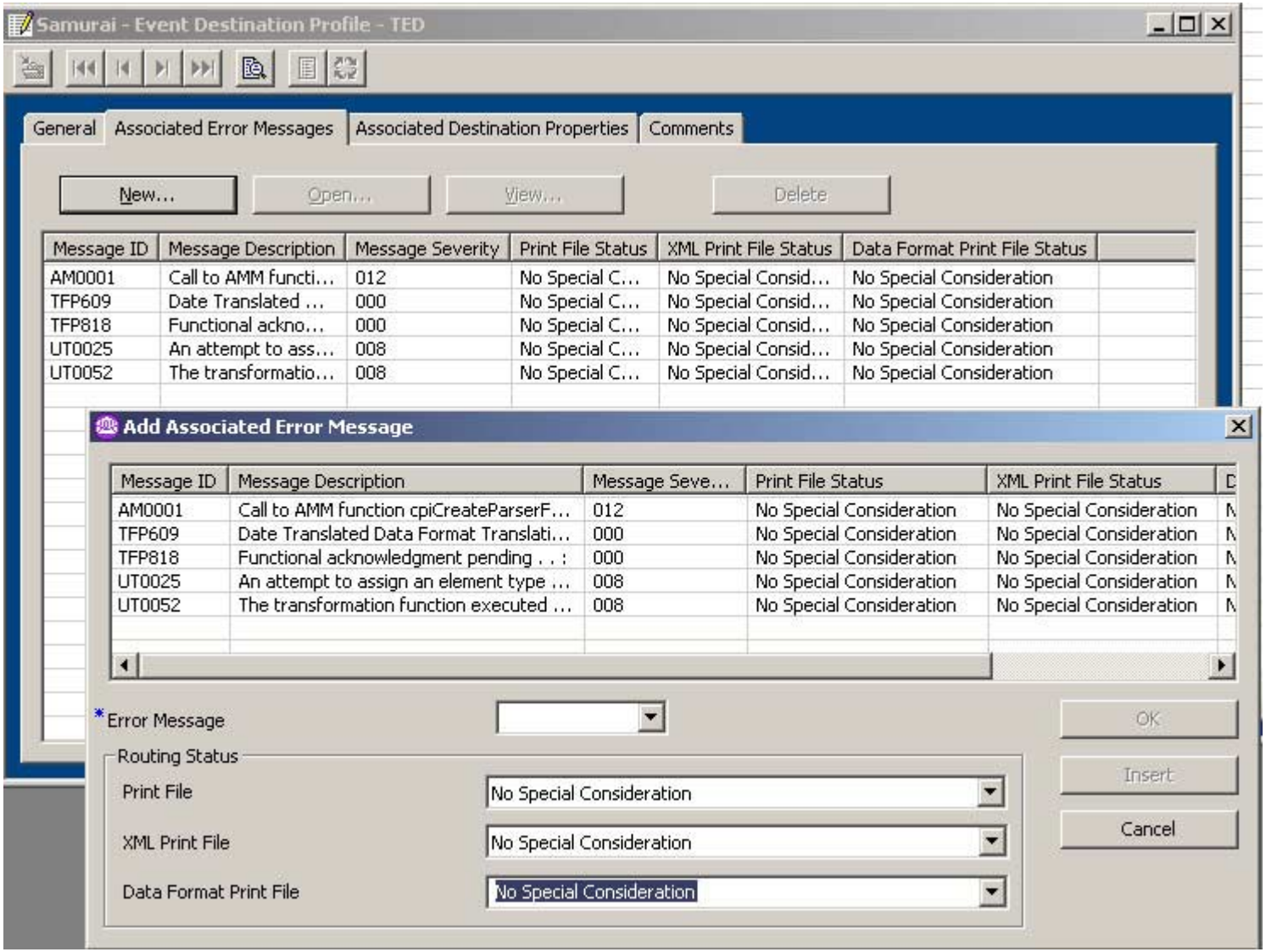
Improve Exception Handling

- WDI error handling includes a number of significant improvements.
  - Reworking Common Error Services as a Common Event Handler, to allow "pluggable" actions when any "event" (including any message) occurs.
  - Providing error and informational messages in a program-readable format (XML and/or fixed-record), to allow automated processing.
  - Allowing message files to be routed to designated files or WMQ queues for handling by a user-defined or a WDI-provided program. These are routed based on criteria specified by the user, such as a given error severity level or the presence of specific errors.
  - Providing a Java API to read and parse the message files, and allow users to process them easily.
  - Providing improved filtering of error messages to reduce the PRTFILE size
  - Providing improved performance for an event log update
  - Adding the physical filenames to messages in the PRTFILE.

© IBM Corporation



© IBM Corporation

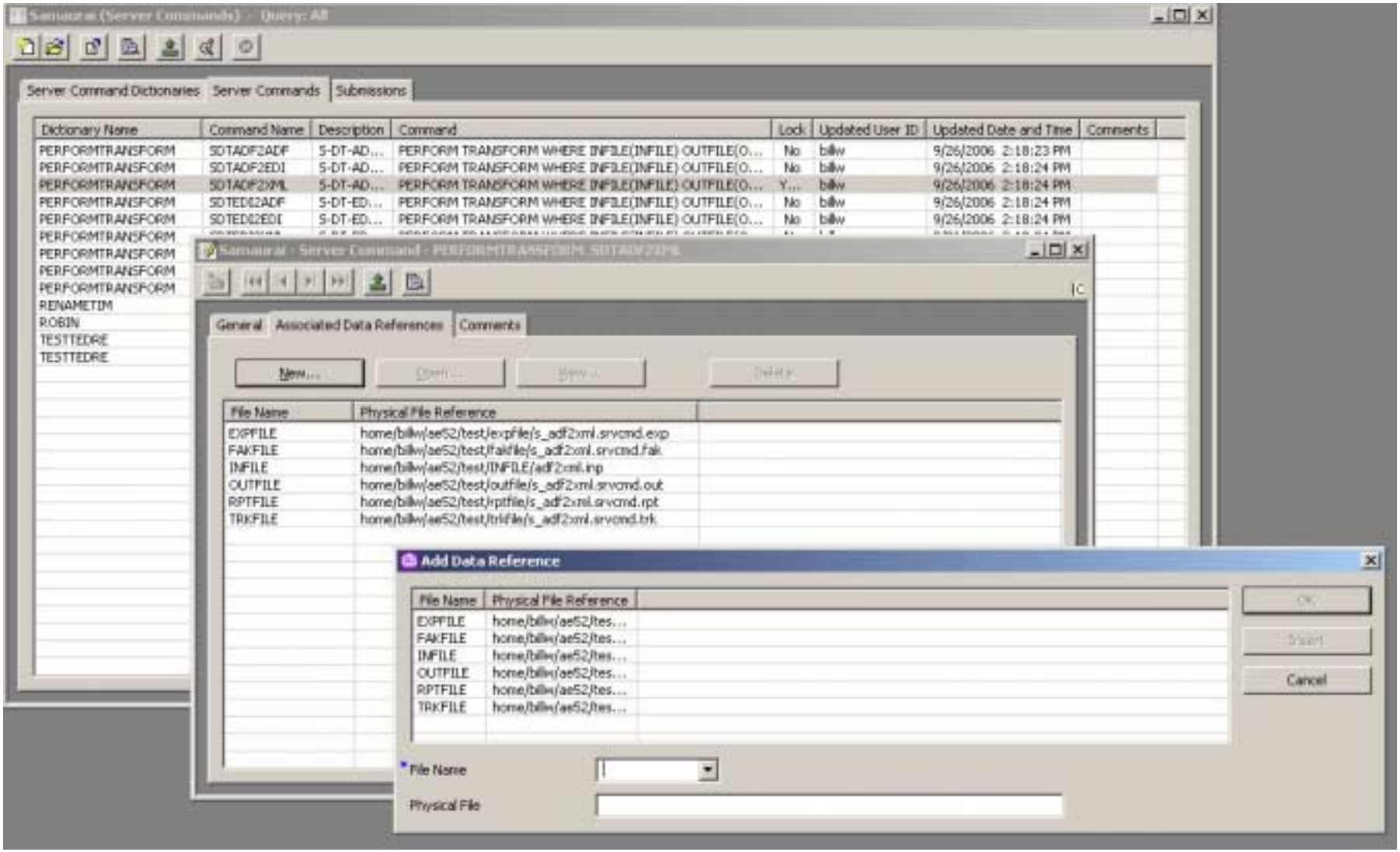


© IBM Corporation

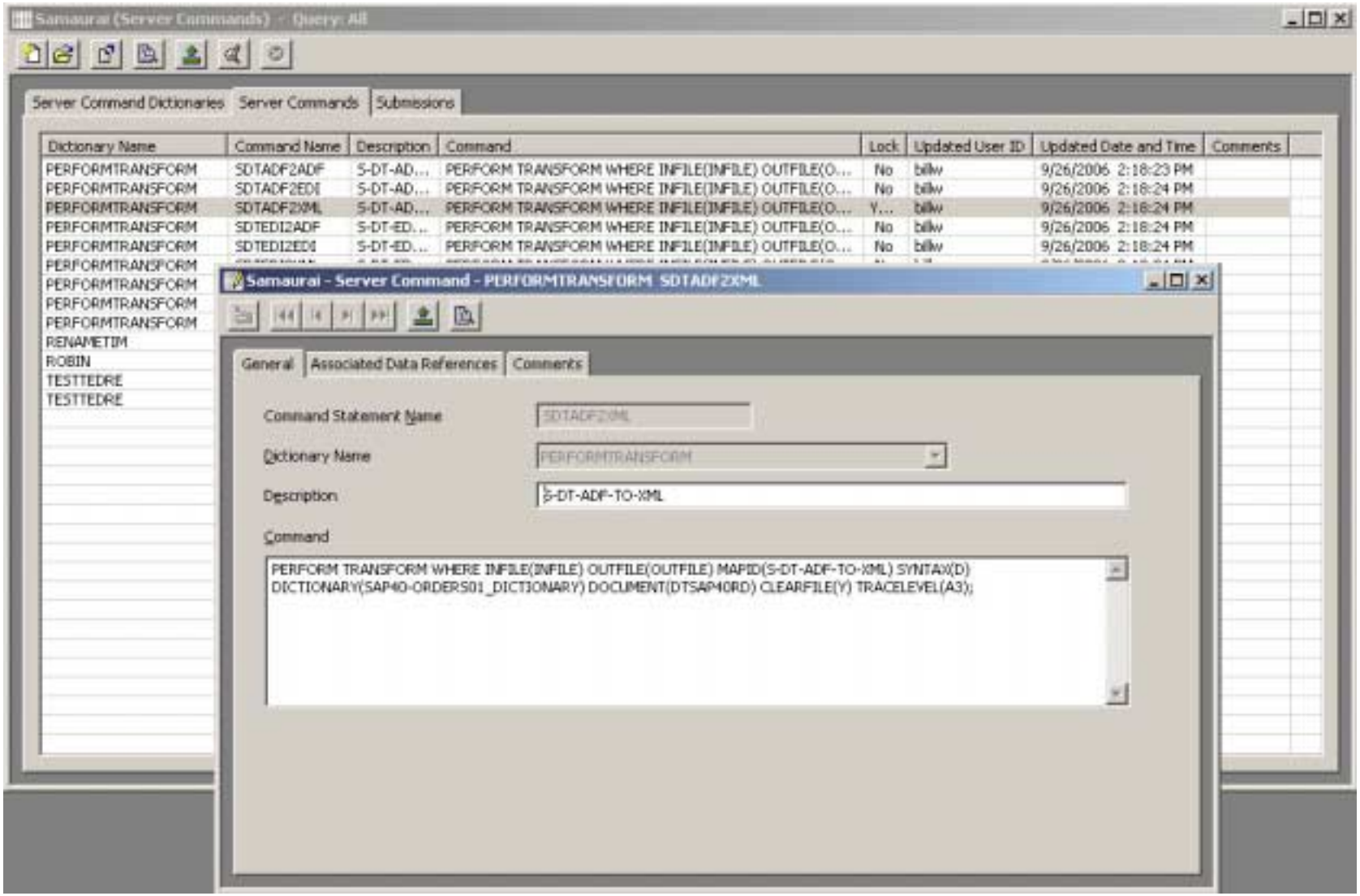
Job Submission

- Jobs can now be run on the server against the DB2 database
- An execution can be initiated from a Service Profile or from the Command subsystem
- The Client uses the Job Submission capability to perform Transaction Store functions – maintenance or TS, replay, and resend operations
- The print file may be viewed from the Client

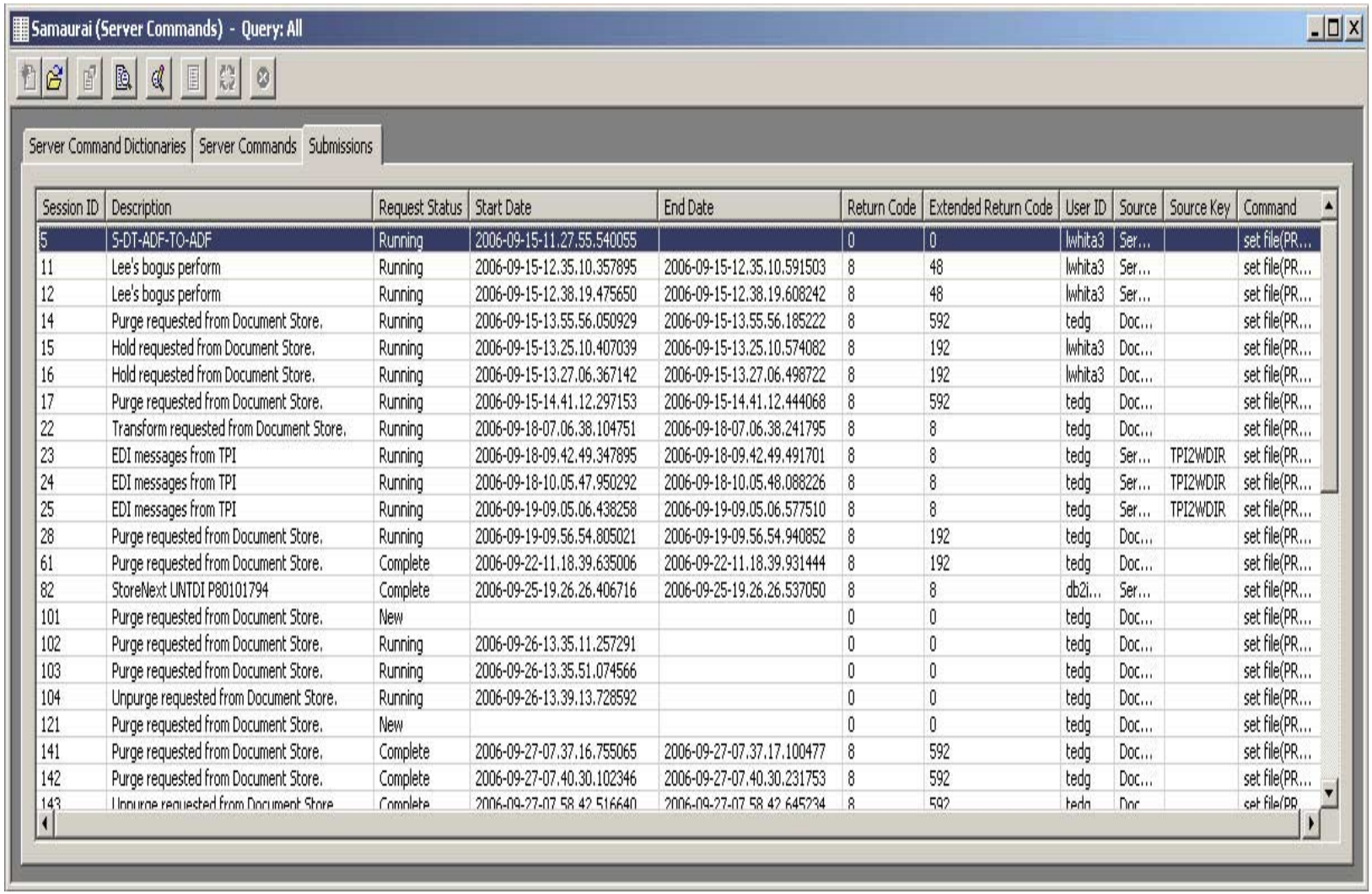
© IBM Corporation



© IBM Corporation

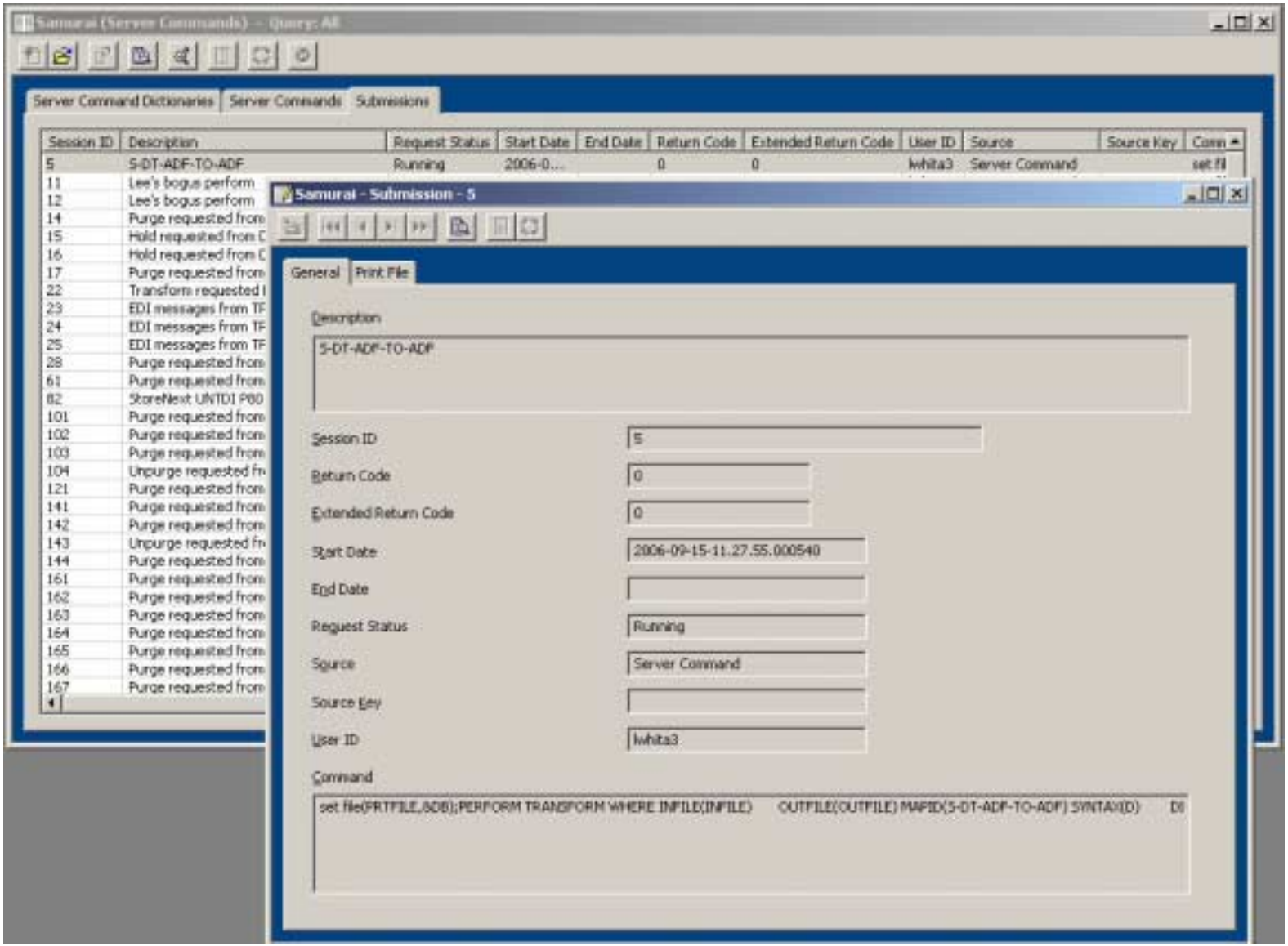


© IBM Corporation

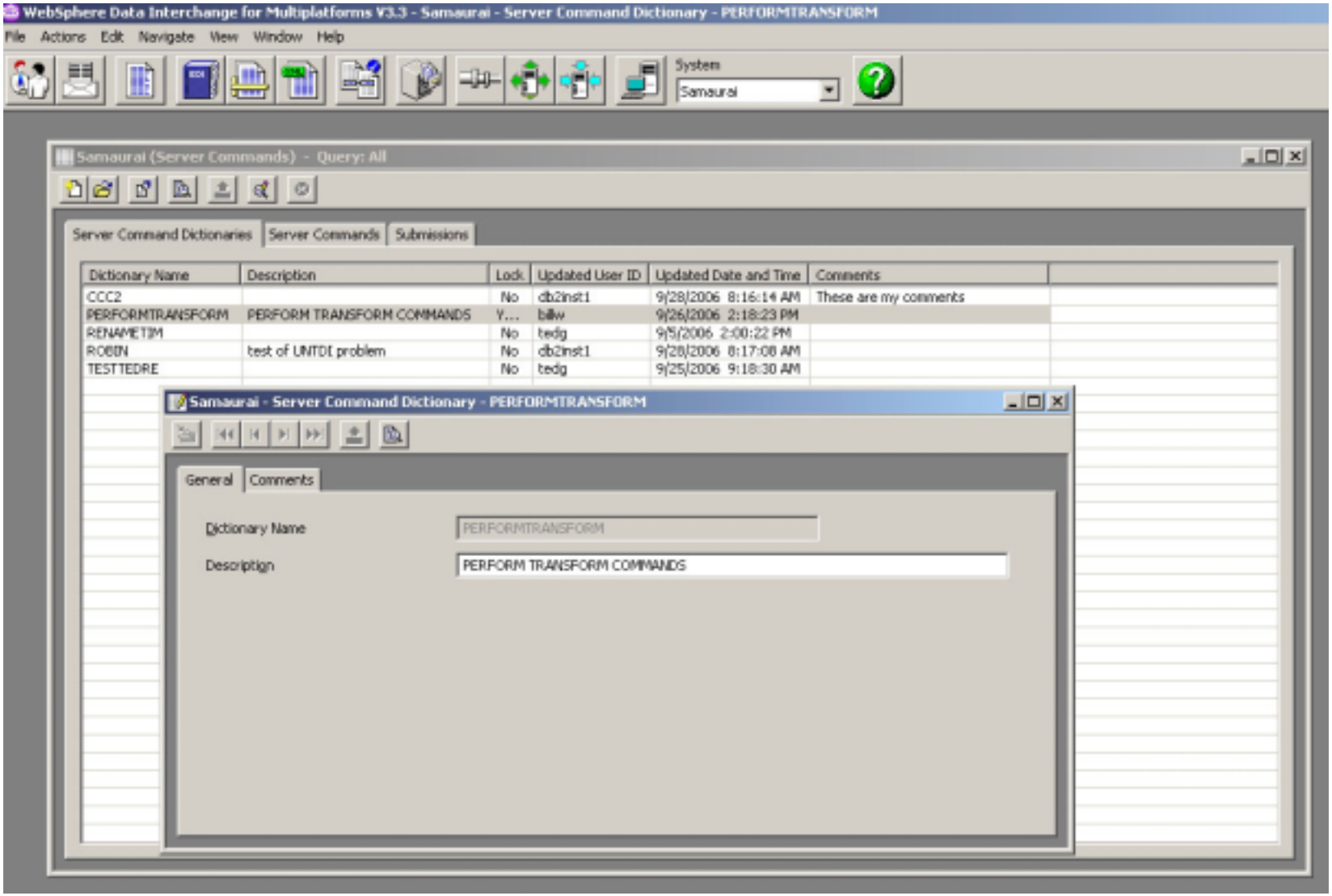


Session ID	Description	Request Status	Start Date	End Date	Return Code	Extended Return Code	User ID	Source	Source Key	Command
5	S-DT-ADF-TO-ADF	Running	2006-09-15-11.27.55.540055		0	0	lwhita3	Ser...		set file(PR...
11	Lee's bogus perform	Running	2006-09-15-12.35.10.357895	2006-09-15-12.35.10.591503	8	48	lwhita3	Ser...		set file(PR...
12	Lee's bogus perform	Running	2006-09-15-12.38.19.475650	2006-09-15-12.38.19.608242	8	48	lwhita3	Ser...		set file(PR...
14	Purge requested from Document Store.	Running	2006-09-15-13.55.56.050929	2006-09-15-13.55.56.185222	8	592	tedg	Doc...		set file(PR...
15	Hold requested from Document Store.	Running	2006-09-15-13.25.10.407039	2006-09-15-13.25.10.574082	8	192	lwhita3	Doc...		set file(PR...
16	Hold requested from Document Store.	Running	2006-09-15-13.27.06.367142	2006-09-15-13.27.06.498722	8	192	lwhita3	Doc...		set file(PR...
17	Purge requested from Document Store.	Running	2006-09-15-14.41.12.297153	2006-09-15-14.41.12.444068	8	592	tedg	Doc...		set file(PR...
22	Transform requested from Document Store.	Running	2006-09-18-07.06.38.104751	2006-09-18-07.06.38.241795	8	8	tedg	Doc...		set file(PR...
23	EDI messages from TPI	Running	2006-09-18-09.42.49.347895	2006-09-18-09.42.49.491701	8	8	tedg	Ser...	TPI2WDIR	set file(PR...
24	EDI messages from TPI	Running	2006-09-18-10.05.47.950292	2006-09-18-10.05.48.088226	8	8	tedg	Ser...	TPI2WDIR	set file(PR...
25	EDI messages from TPI	Running	2006-09-19-09.05.06.438258	2006-09-19-09.05.06.577510	8	8	tedg	Ser...	TPI2WDIR	set file(PR...
28	Purge requested from Document Store.	Running	2006-09-19-09.56.54.805021	2006-09-19-09.56.54.940852	8	192	tedg	Doc...		set file(PR...
61	Purge requested from Document Store.	Complete	2006-09-22-11.18.39.635006	2006-09-22-11.18.39.931444	8	192	tedg	Doc...		set file(PR...
82	StoreNext UNTDI P80101794	Complete	2006-09-25-19.26.26.406716	2006-09-25-19.26.26.537050	8	8	db2i...	Ser...		set file(PR...
101	Purge requested from Document Store.	New			0	0	tedg	Doc...		set file(PR...
102	Purge requested from Document Store.	Running	2006-09-26-13.35.11.257291		0	0	tedg	Doc...		set file(PR...
103	Purge requested from Document Store.	Running	2006-09-26-13.35.51.074566		0	0	tedg	Doc...		set file(PR...
104	Unpurge requested from Document Store.	Running	2006-09-26-13.39.13.728592		0	0	tedg	Doc...		set file(PR...
121	Purge requested from Document Store.	New			0	0	tedg	Doc...		set file(PR...
141	Purge requested from Document Store.	Complete	2006-09-27-07.37.16.755065	2006-09-27-07.37.17.100477	8	592	tedg	Doc...		set file(PR...
142	Purge requested from Document Store.	Complete	2006-09-27-07.40.30.102346	2006-09-27-07.40.30.231753	8	592	tedg	Doc...		set file(PR...
143	Unpurge requested from Document Store	Complete	2006-09-27-07.58.42.516640	2006-09-27-07.58.42.645234	8	592	tedg	Doc		set file(PR

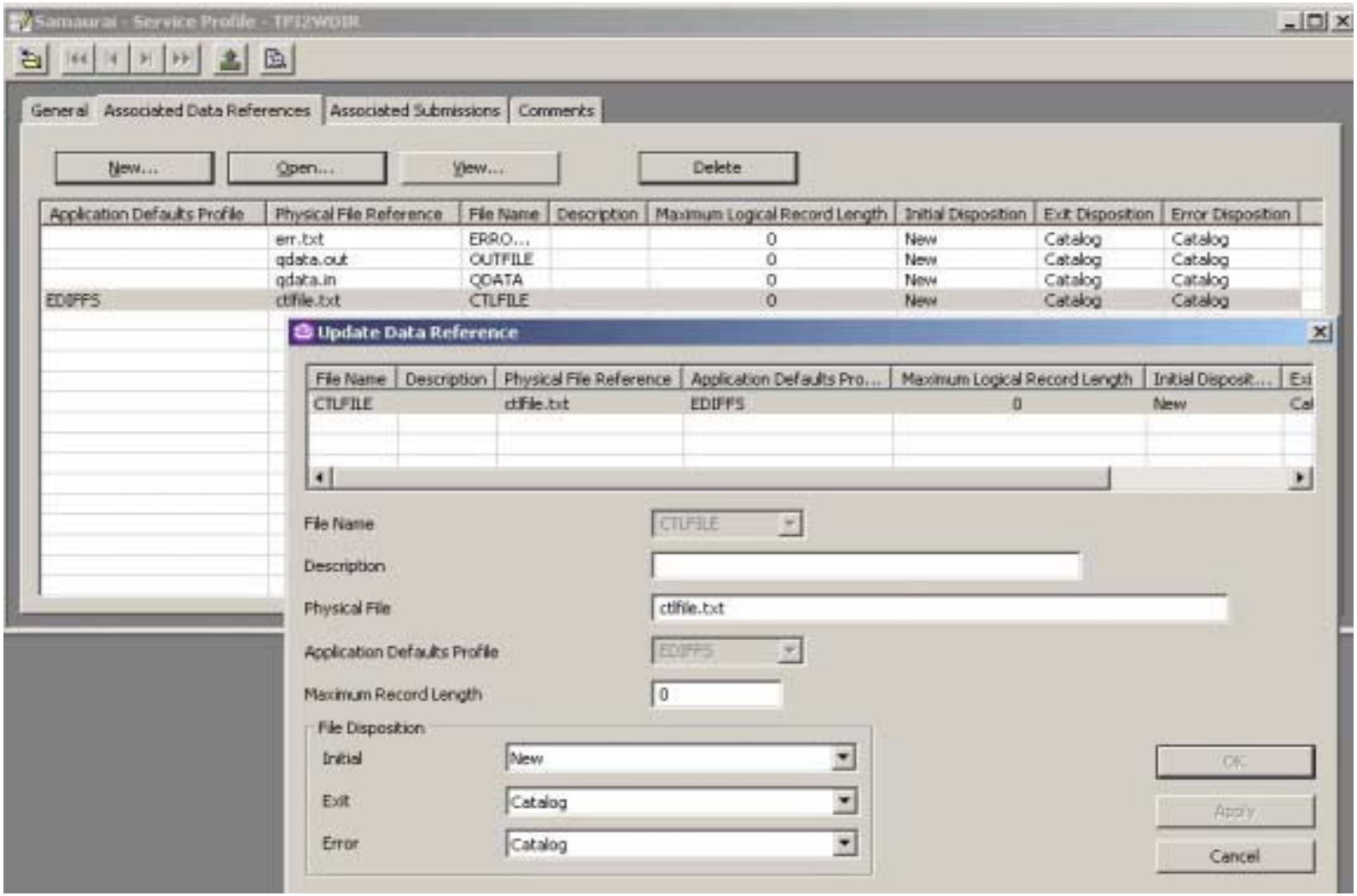
© IBM Corporation



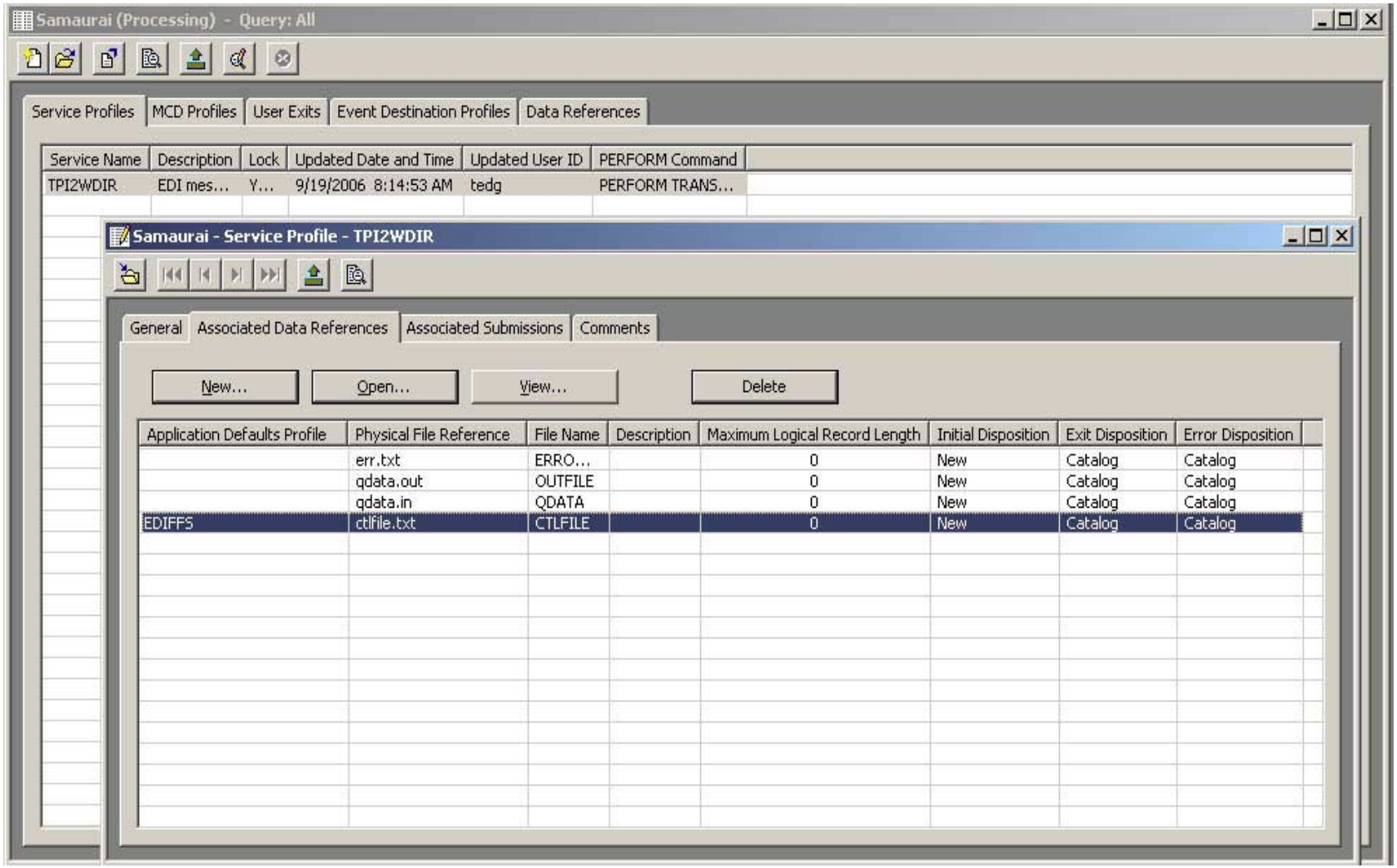
© IBM Corporation



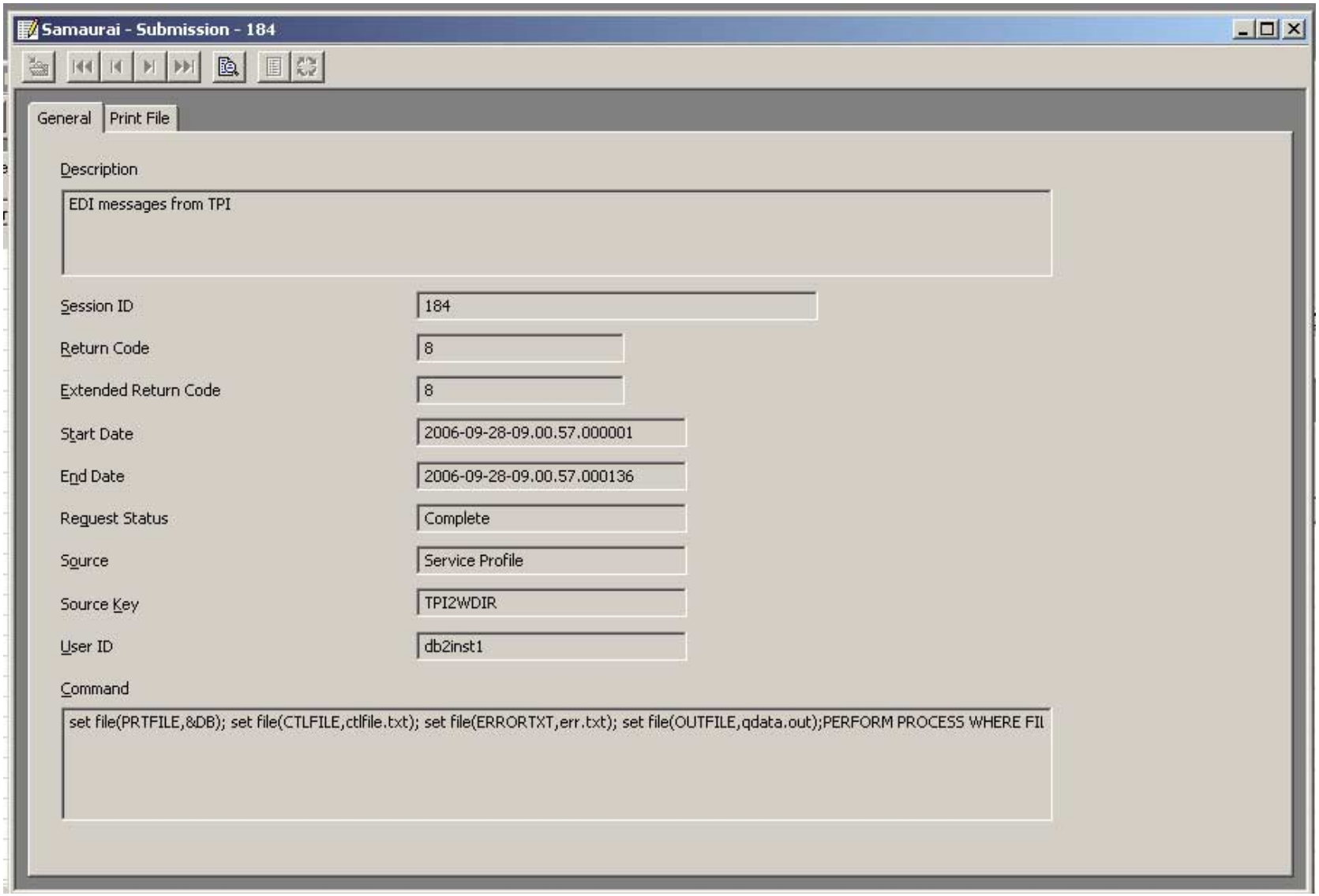
© IBM Corporation



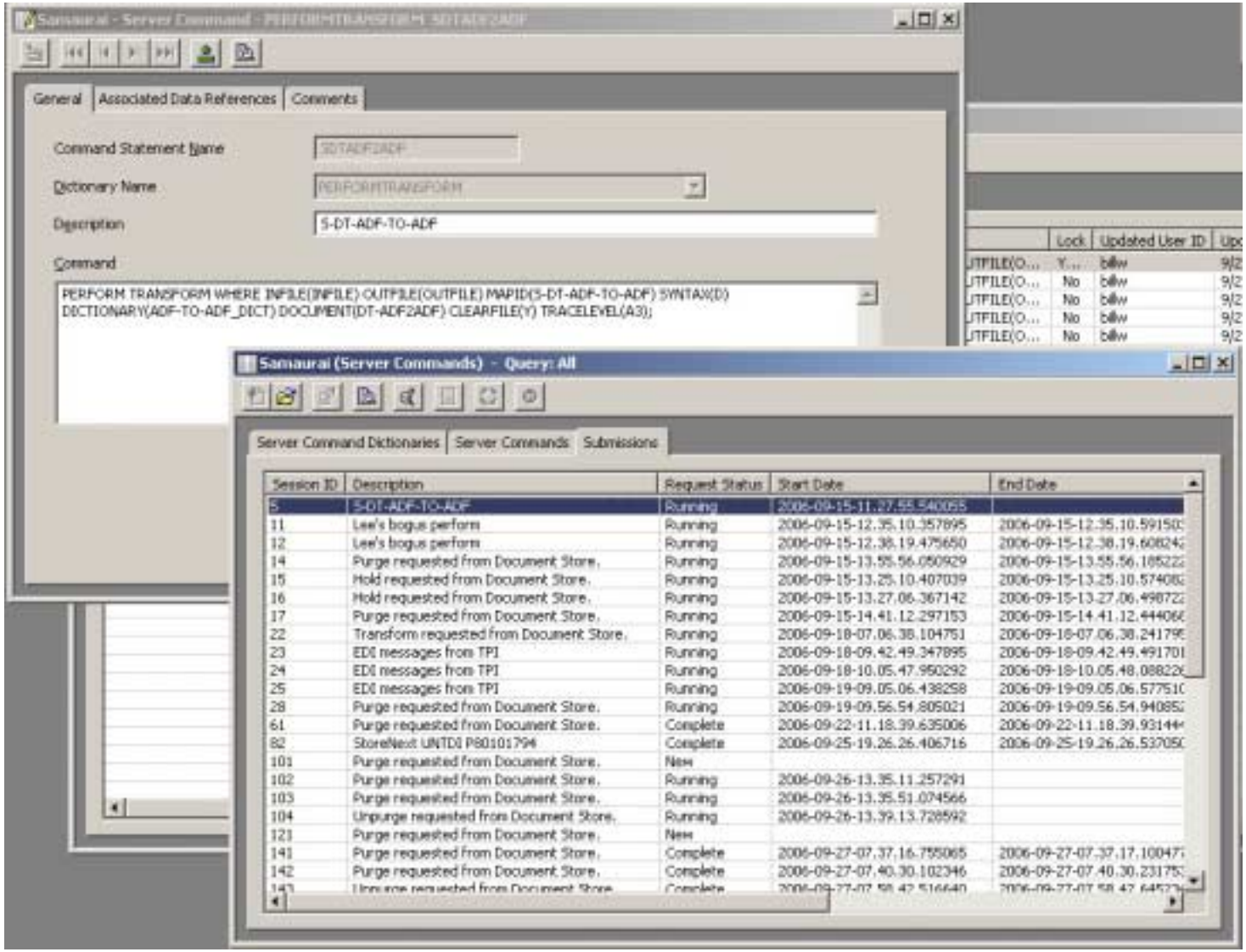
© IBM Corporation



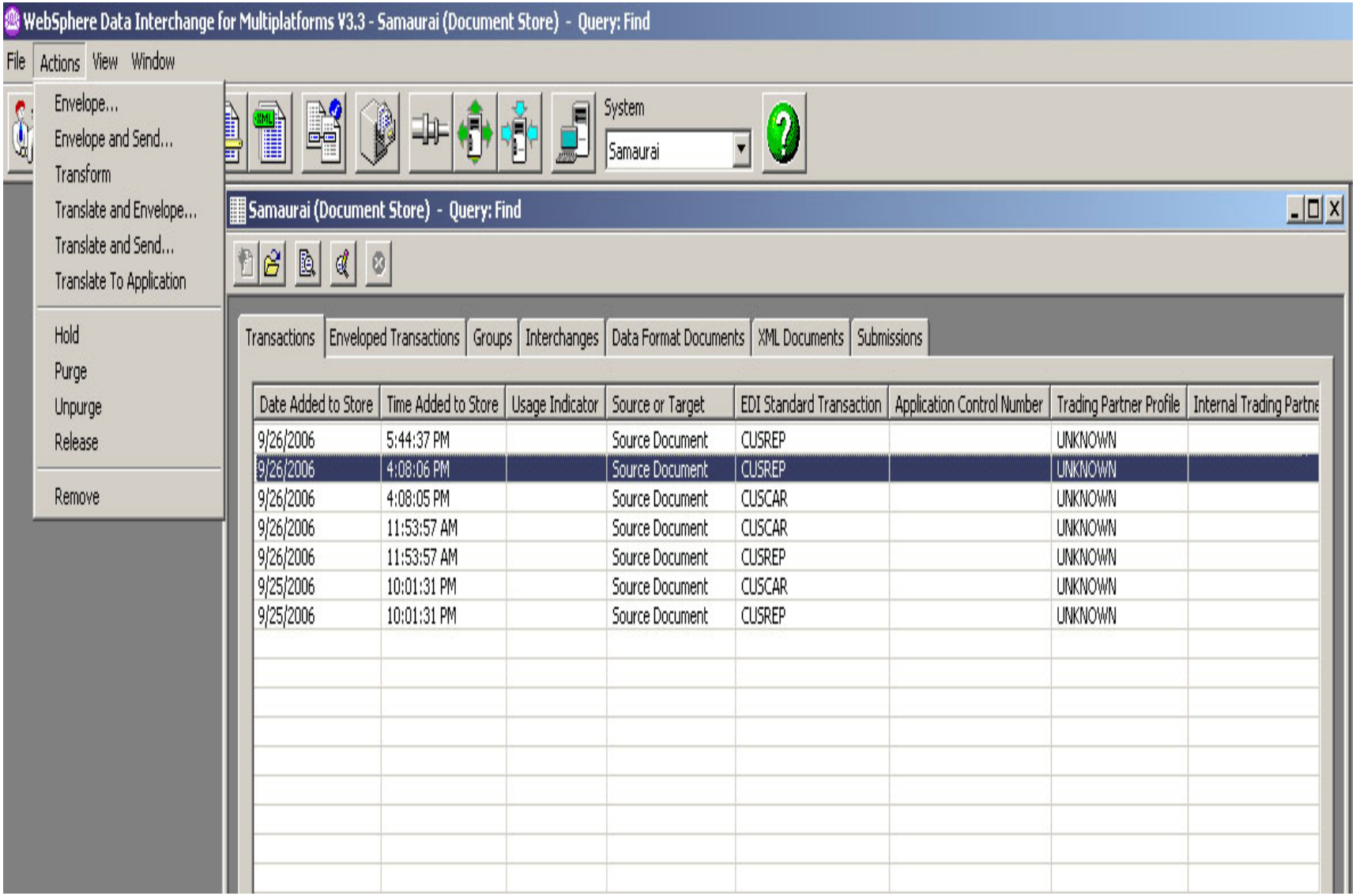
© IBM Corporation



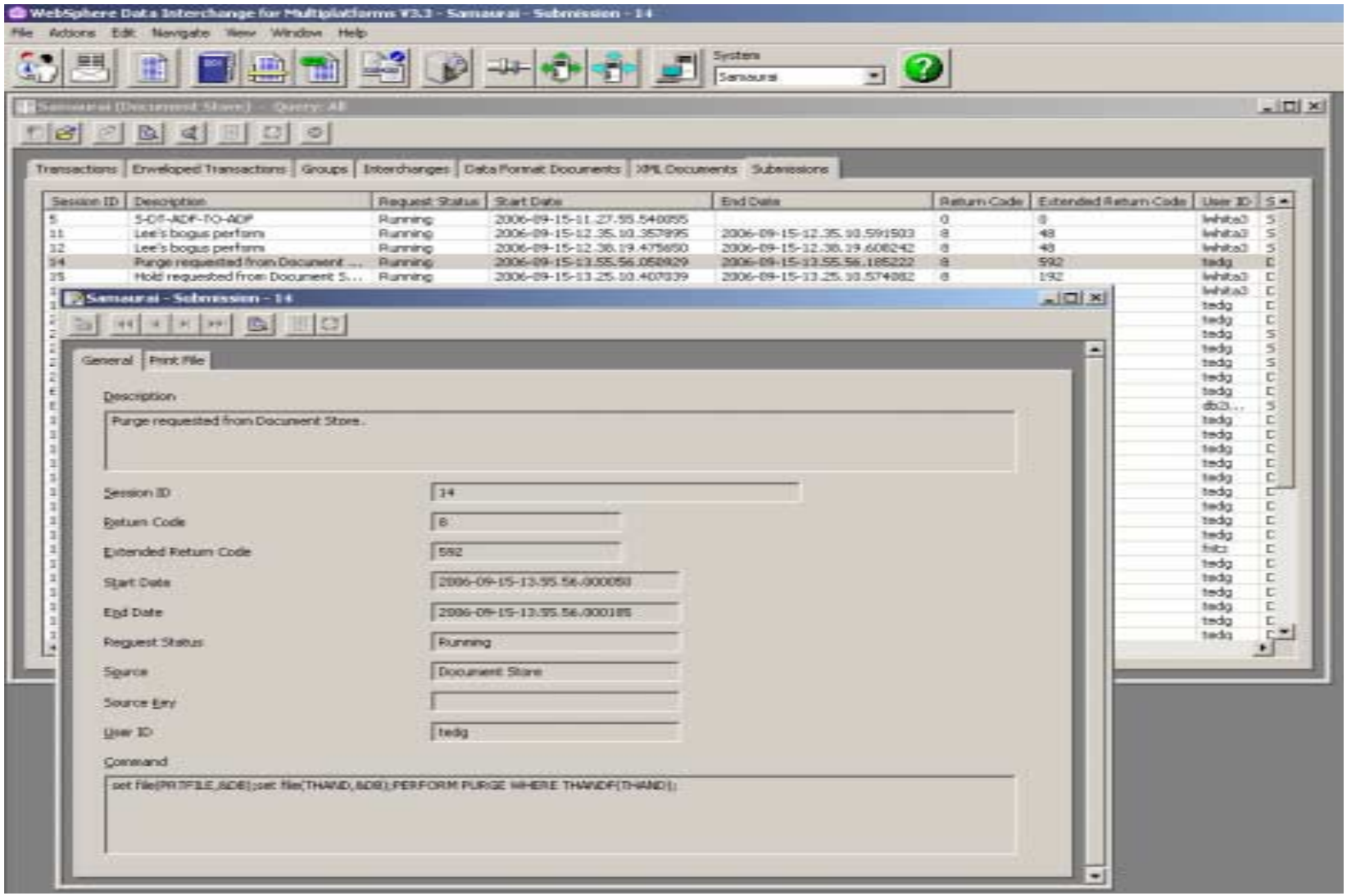
© IBM Corporation



© IBM Corporation



© IBM Corporation

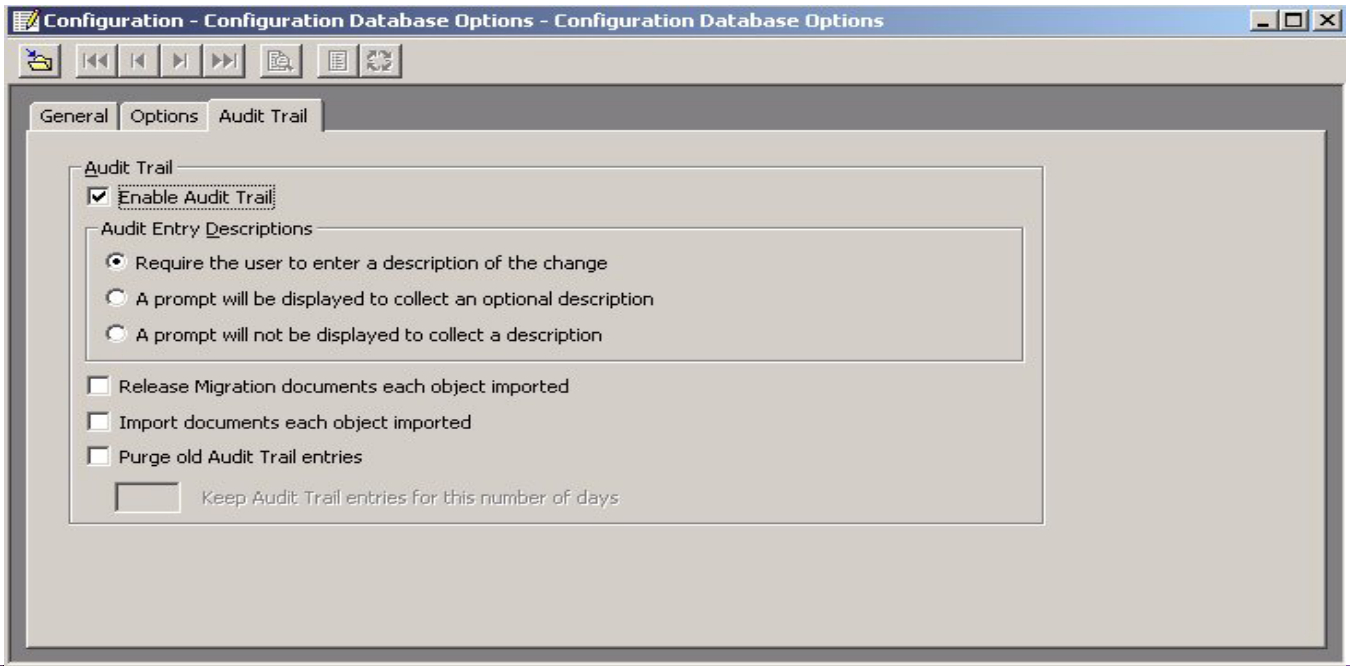


© IBM Corporation

Audit Trail of Changed Objects

- This enhancement keeps an audit trail of changed database objects. The audit trail will keep a record of the user id and date/time for each time a DB object is changed, not just the last updated date/time as is done in WDI 3.2. This is also done for server import.

- Use of the Audit trail is controlled from the client.



© IBM Corporation

Perfomance related enhancements

Processing Very Large Messages

- Currently WDI loads the entire document into memory as an Abstract Message Model. Some customers have 2GB EDI transactions they process regularly. Some have expressed a need to handle a 5GB document requirement or larger.
- WDI implemented a Pageable AMM, that is, the AMM (or Abstract Document) is stored on disk instead of in memory.
- Input and output are parsed and serialized directly from a file, and directly to a file, rather than from a buffer.
- This was delivered in a CSD in 3.2. It has been extended to include EDI transactions that use HL segments.

© IBM Corporation

Parse from File

- Input and output are parsed and serialized directly from a file, and directly to a file, rather than from a buffer.
- This is activated with a PERFORM keyword, PARSEFILE
- This was delivered for XML in 3.2 and has been extended to include EDI and DF data in this release.

© IBM Corporation

S/R to DT migration

Business IDs = ITP on Steroids

- Business IDs allow a trading partner to have different ids for different document types.
- Business IDs allow a more flexible variation of the "internal trading partner id" that was provided for send and receive maps.
- Business IDs allow multiple divisions of a company to be defined with a single Trading Partner Profile. They offer a migration path from the Send Map / Receive Map Internal Trading Partner technique.
- Business ID's are maintained with the trading partner.

© IBM Corporation

&ZEROSIG or SetElementAttribute Functionality

- WebSphere Data Interchange has created the Set Element Attribute command to support significant zeros in optional EDI data elements with Data Transformation processing.

- The purpose of the new mapping command is to control formatting of elements. WDI currently does automatic formatting of values on output. For example, EDI numeric elements will trim leading and trailing zeros. If the value is zero and the element is optional, the value is suppressed in the EDI output. With the SetElementAttribute mapping command customers can control this type of formatting including how zeros, leading and trailing blanks, left and right justification, and empty elements are handled for output.

- There is a particular need for customers to control zero values for an EDI optional element in Data Transformation mapping. This was handled with the &ZEROSIG mapping command for Send mapping.

© IBM Corporation

&ZEROSIG or SetElementAttribute Functionality

SetElementAttribute command

- Placed anywhere in a Data Transformation map
- Target path specification in the command
  - target path identifies the scope of the command execution.
  - scope can be for the
    - Entire document,
    - Specific compound elements (including loops, segments and records, and composite elements and structures),
    - Specific simple elements
- Allows customers to apply the formatting control at specific levels in the mapping without the need of a mapping command at the simple element level for all elements involved.

© IBM Corporation

SetElementAttribute Command Syntax:

SetElementAttribute (*path element_spec, string attribute_name, string value*)

This command does not apply to the following element types: XML sequence node (SQnnnn), XML choice node (CHnnnn), XML attribute list node (ATTLIST), and EDI Table node. Since these are not real nodes in the input data, they cannot have attributes associated with them at execution time.

element_spec – specifies the element on which to assign the property. Valid values are:

- path - The path to a target element. The target element can be an XML element, attribute, or value, an EDI loop, segment, composite element, or simple element or an ADF loop, record, structure, or field.
- this – The special keyword "this", which indicates the current source or target element.
- targetRoot – The special keyword "targetRoot", which refers to the root element of the target document. This means it would apply to the entire target document, unless the attribute is overridden at a lower level.

© IBM Corporation

SetElementAttribute Command Syntax:

string attribute_name - WDI attribute names.
Valid values are:

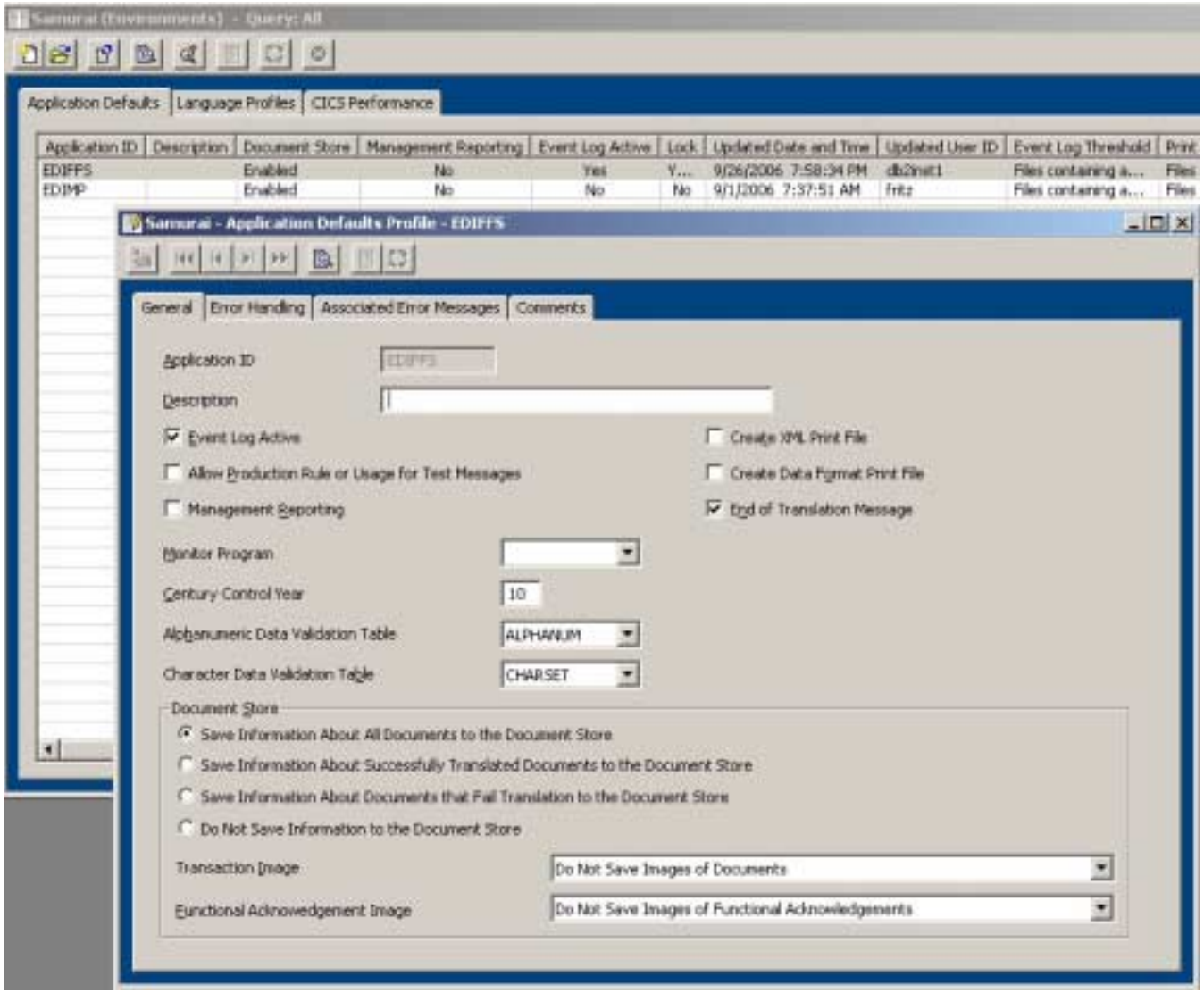
TrimLeadingZeros
TrimTrailingZeros
TrimLeadingBlanks
TrimTrailingBlanks
SuppressZeroValues
SuppressEmptyElements
CharValueTooShort
NumValueTooShort

© IBM Corporation

Management Reporting for DT maps

- This enhancement captures statistical information such as number of transactions, number of bytes, etc. for Data Transformation processing.
- In WDI 3.2, this type of information is only captured for Send/Receive processing.

© IBM Corporation



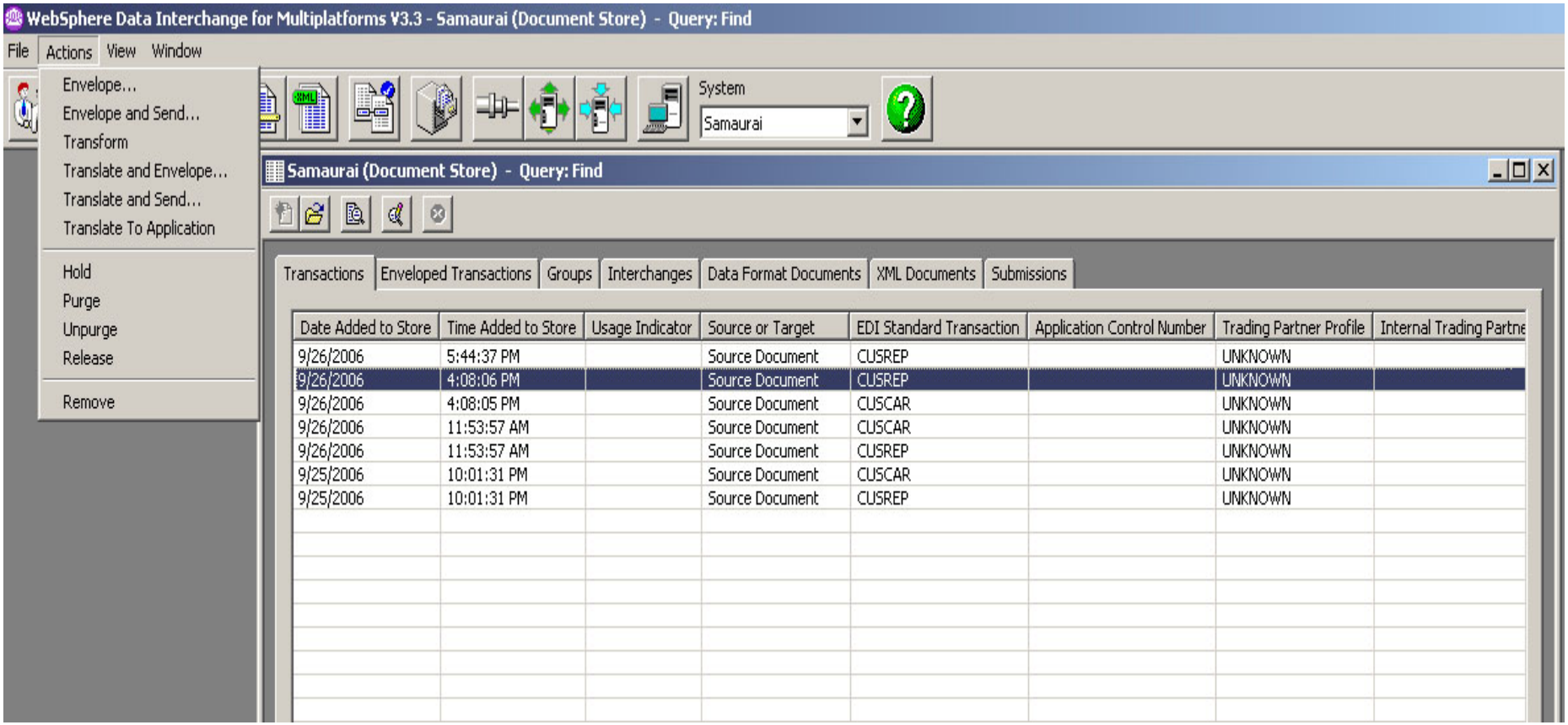
© IBM Corporation

Document Store for XML and DF data

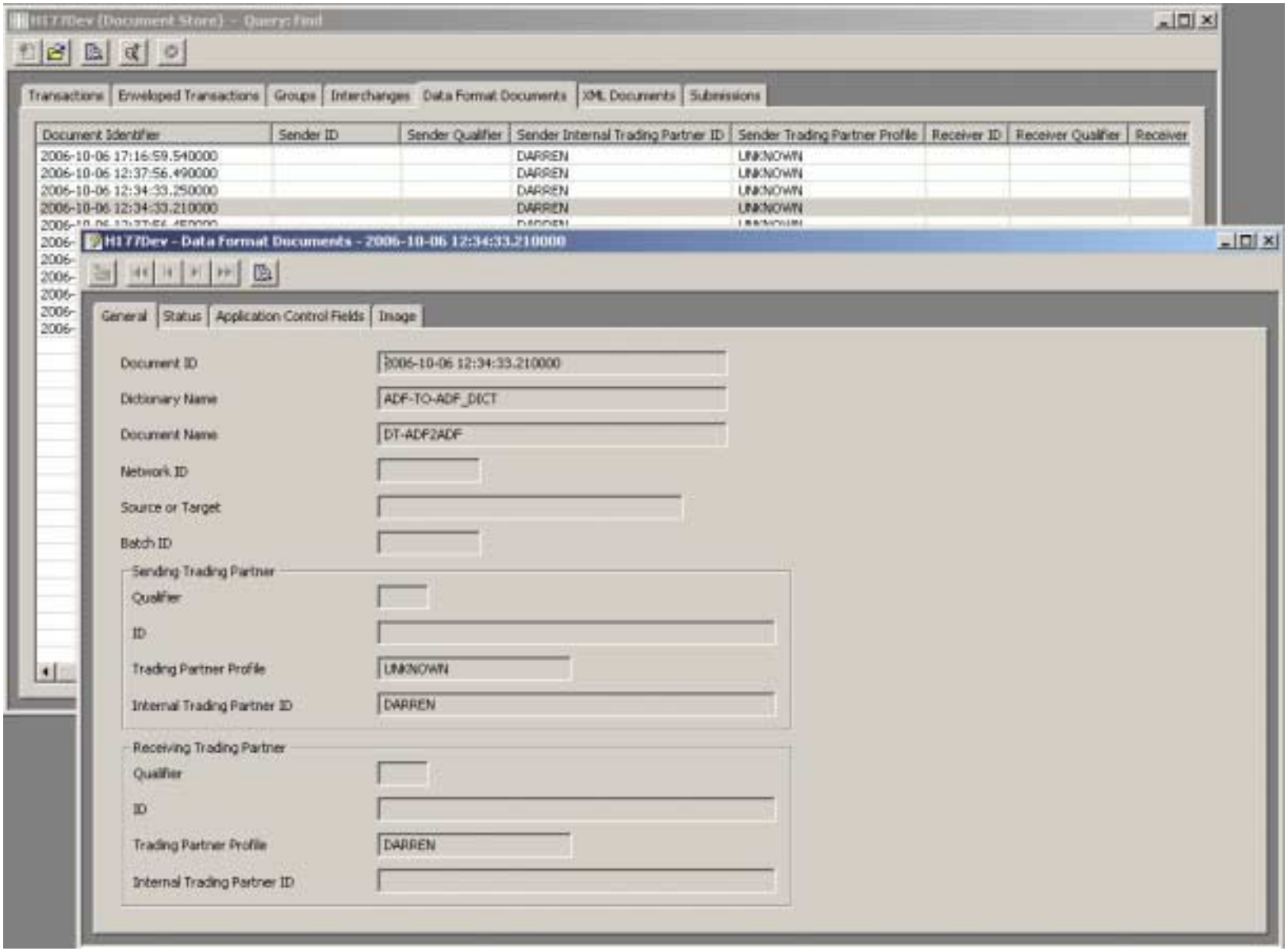
- The V3.2 Transaction Store was an EDI message repository for DT transformations.
- Send / Receive stored XML data in an EDIFACT syntax and DF data as a "fixed" standard.

- In WDI 3.3, the Document Store is introduced. It provides
  - a message repository for XML and Data Format data
  - the ability to replay and resend messages from the client
  - a view of messages for status inquiry and error handling
  - the additional transaction store capabilities for Muliplatform customers, instead of limiting these functions to z/OS only customers

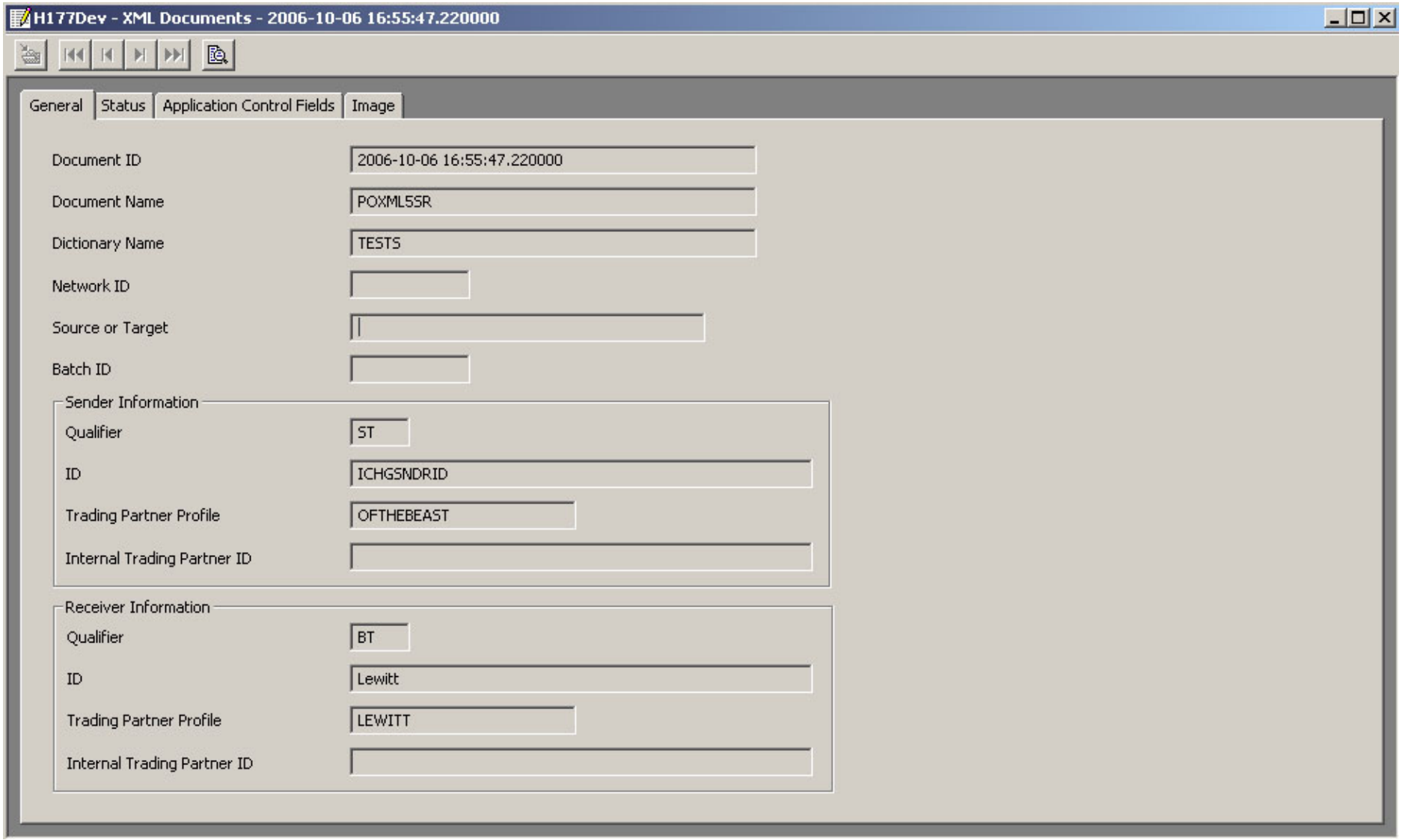
© IBM Corporation



© IBM Corporation



© IBM Corporation



© IBM Corporation

Infrastructure changes

Product Currency

- z/OS Version 1.8
- XML Toolkit versions 1.9
- CICS TS 3.1
- DB2 8.2
- WebSphere MQ v6
- LE benefits

© IBM Corporation

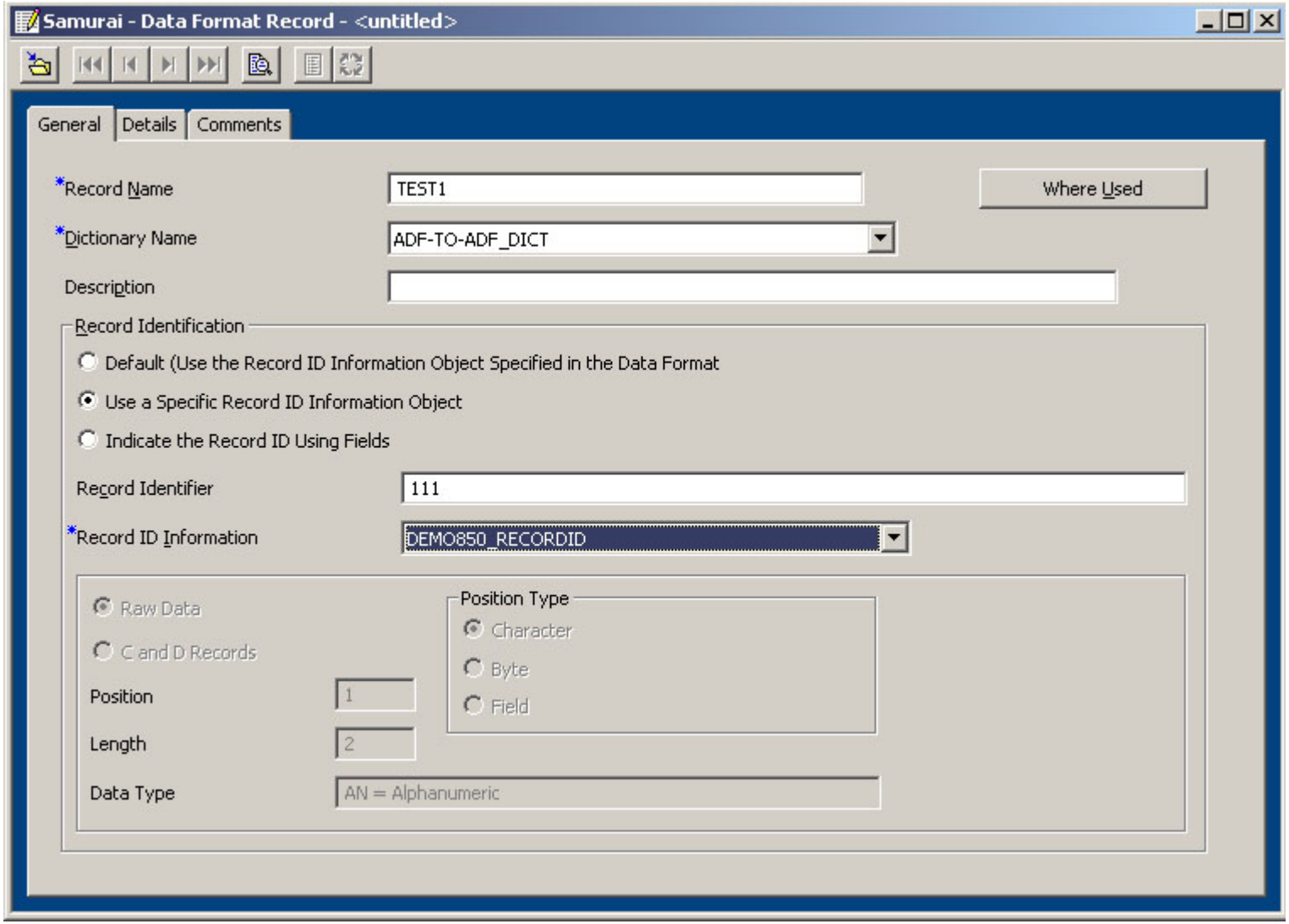
Other Feature / Function

Allow Multiple Record IDs

- SAP has an extended key length - i.e. multiple values with a size greater than 16 bytes. WDI allows for a 16 byte "floating" key.

- This change will allow WDI to have its existing primary record key of up to 16 bytes, and a secondary record key, dependent upon the value of the primary key. The two keys need not be consecutive or adjoining.

© IBM Corporation



© IBM Corporation

ANSI X12 999 Transaction Set Support

- ANSI ASC X12 has implemented the Acknowledgment Transaction Set 999. The purpose of the 999 is to report validation errors when a message is validated against an implementation guideline. This is different from the 997 that is used to report errors validating against the definition of the message published by the X12 standards bodies. The 999 would replace the 997 when used.

- The 999 is now supported to compliment the validation map feature of WDI. The validation map validates the implementation guideline and feeds error information into the 999 transaction, while the validation component validates against the base message definition and feeds error information into the 997 transaction.

© IBM Corporation

Java API

- Java API for accessing the WDI Utility
- Sample is provided that shows how to interface WDI with WebSphere Process Server as a Service

© IBM Corporation

Globalized Data Improvements

- WDI V3.2 enhanced the XML serializer to support a user controlled encoding for data output.
- This is now extended to EDI output and ROD output as well.
- Double byte character set support is now available during translation and as part of the WDI database

© IBM Corporation

New Envelope Fields for Standards

- Users will be able to access and set the new fields as follows:
- When the new fields are specified in an input EDI interchange, users can get the values in their map using the GetProperty() command.
- Users can use the SetProperty() command to set the values of the new fields in an output EDI interchange.
- Users can specify the new fields in the envelope profile.
- The ST03 value will be used as part of the dictionary lookup for X12 transactions, and the UNH05 and/or UNH06 values will be used as part of the dictionary and document lookup for EDIFACT transactions.
- Existing data elements will support the wider lengths if defined by the newer EDI standards.

© IBM Corporation

New Envelope Fields for Standards

- In addition, various other existing issues with the envelope profiles, deferred enveloping, and transaction store will be addressed.
- These are not really new functions or features, but resolve long-standing limitations, problems, and usability issues.

© IBM Corporation

New Envelope Fields for Standards

- Some envelope profiles values are ignored by the translator, such as control numbers, dates, times, and segment counts. Users will no longer be able to set these values in the envelope profile.

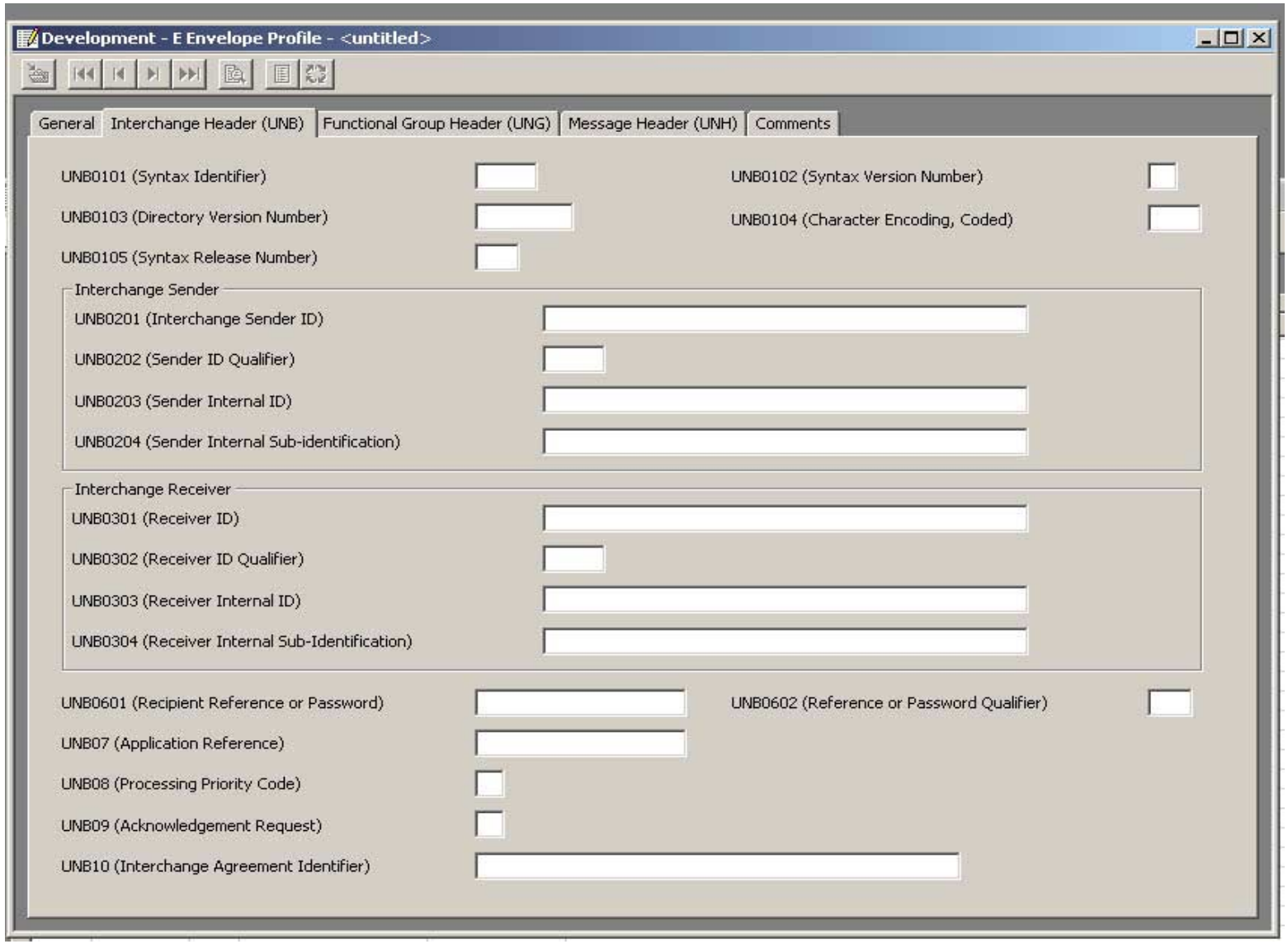
- EDIFACT and UN/TDI envelope profiles are displayed to the users with labels such as UNBnn, even when they are actually subelements. For example, element 3, subelement 2 of the UNB segment (receiver qualifier) is displayed as "UNB07", which makes very little sense to a user. These will be changed to the form UNBeess, where ee is the data element, and ss is the subelement. For example, UNB0302. This would make the envelope profile label consistent with the property name used in GetProperty and SetProperty commands.

© IBM Corporation

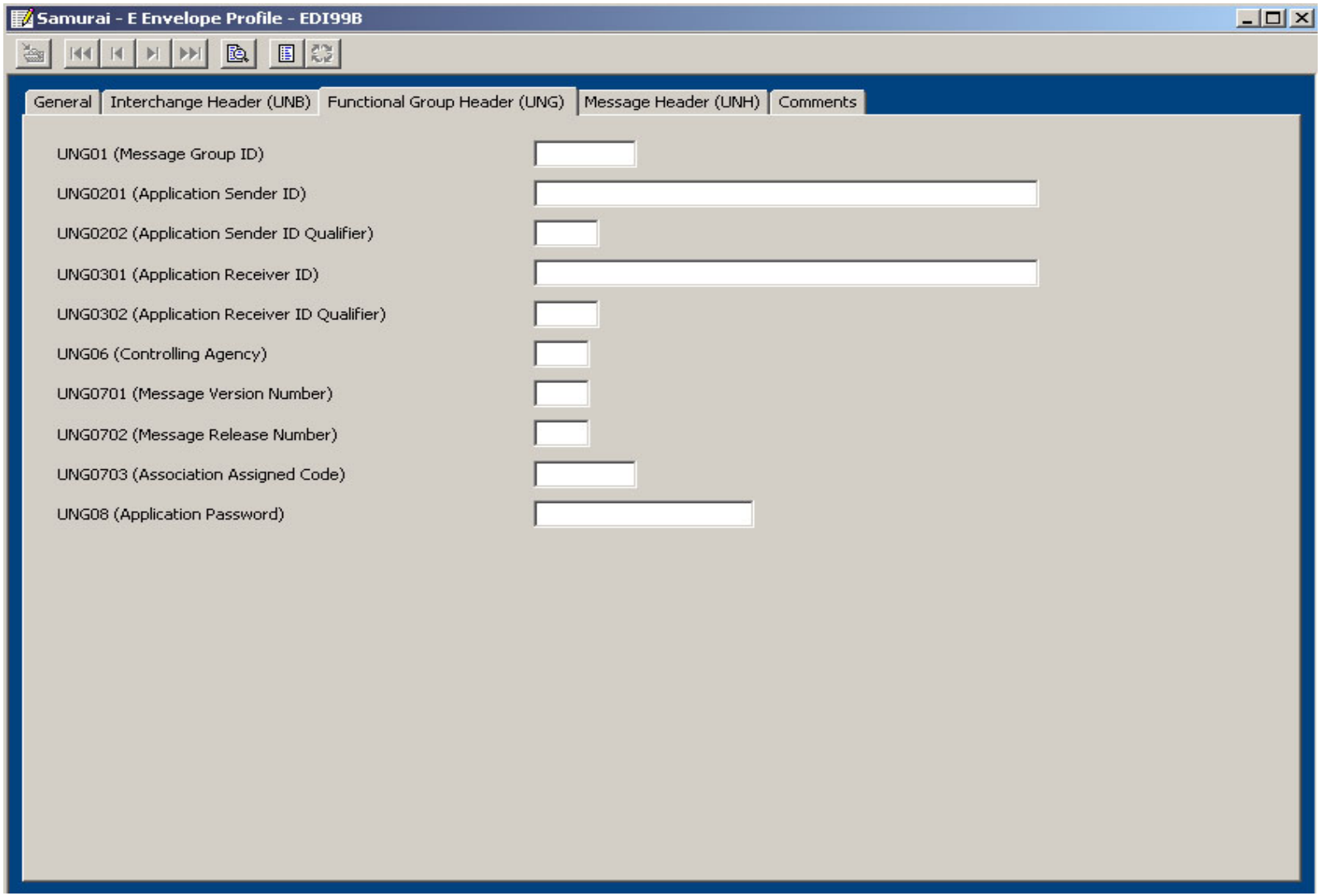
New Envelope Fields for Standards

- When doing deferred enveloping, only a subset of the envelope properties are held in the EDITSTO table. The remaining properties are discarded. This results in different envelope values depending on whether the transaction was enveloped immediately or enveloping was deferred. The EDITSTO table and handling has been updated so all envelope properties can be stored.
- In certain cases, transaction store does not work correctly with minimal trading partners. If the sender TP nickname is UNKNOWN, then two interchanges with the same control number are treated as a duplicate, even if the sender id is different. This has been corrected.
- The T (UNTDI/Tradacoms) envelope now sets the transaction store overrides correctly.

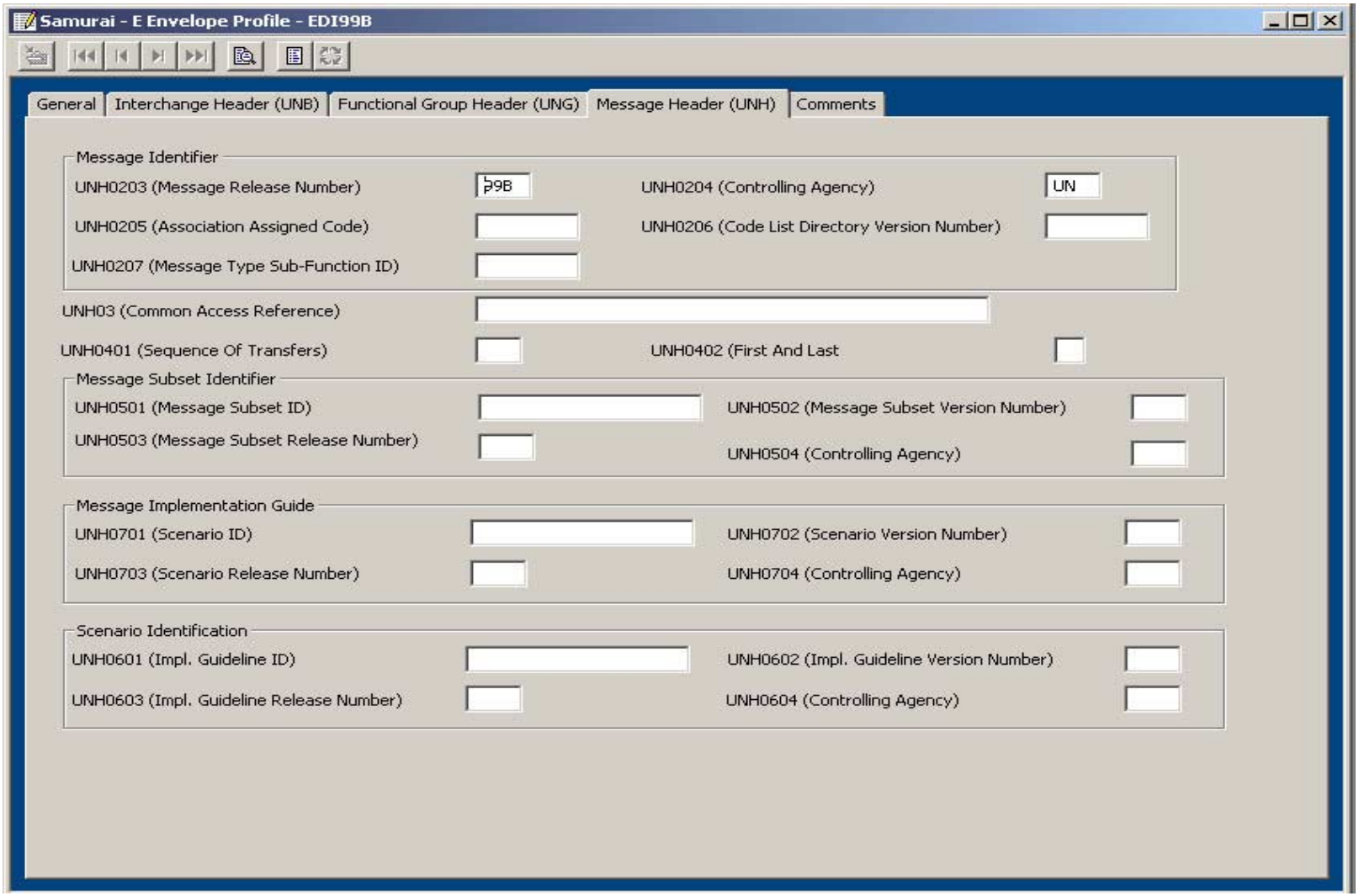
© IBM Corporation



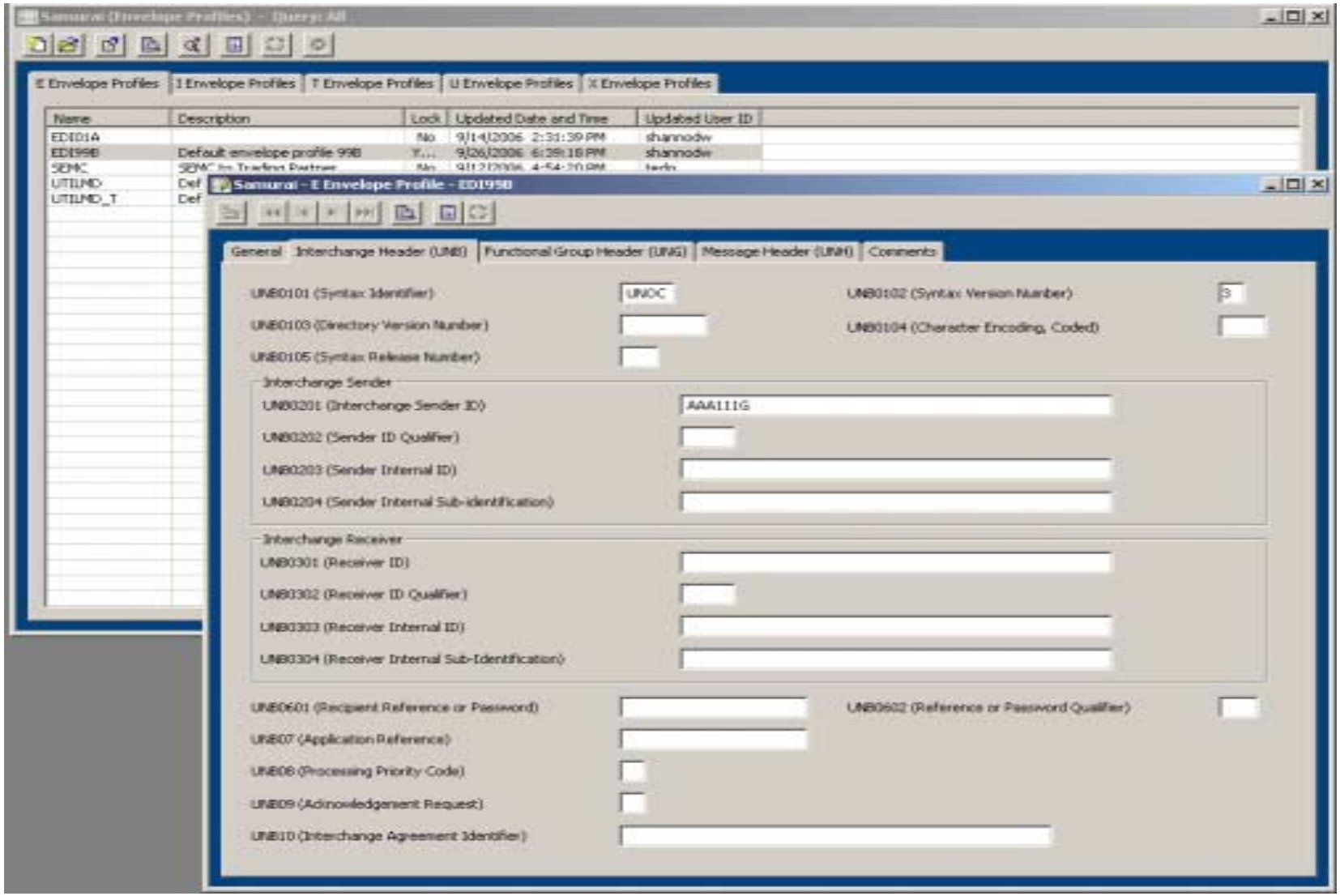
© IBM Corporation



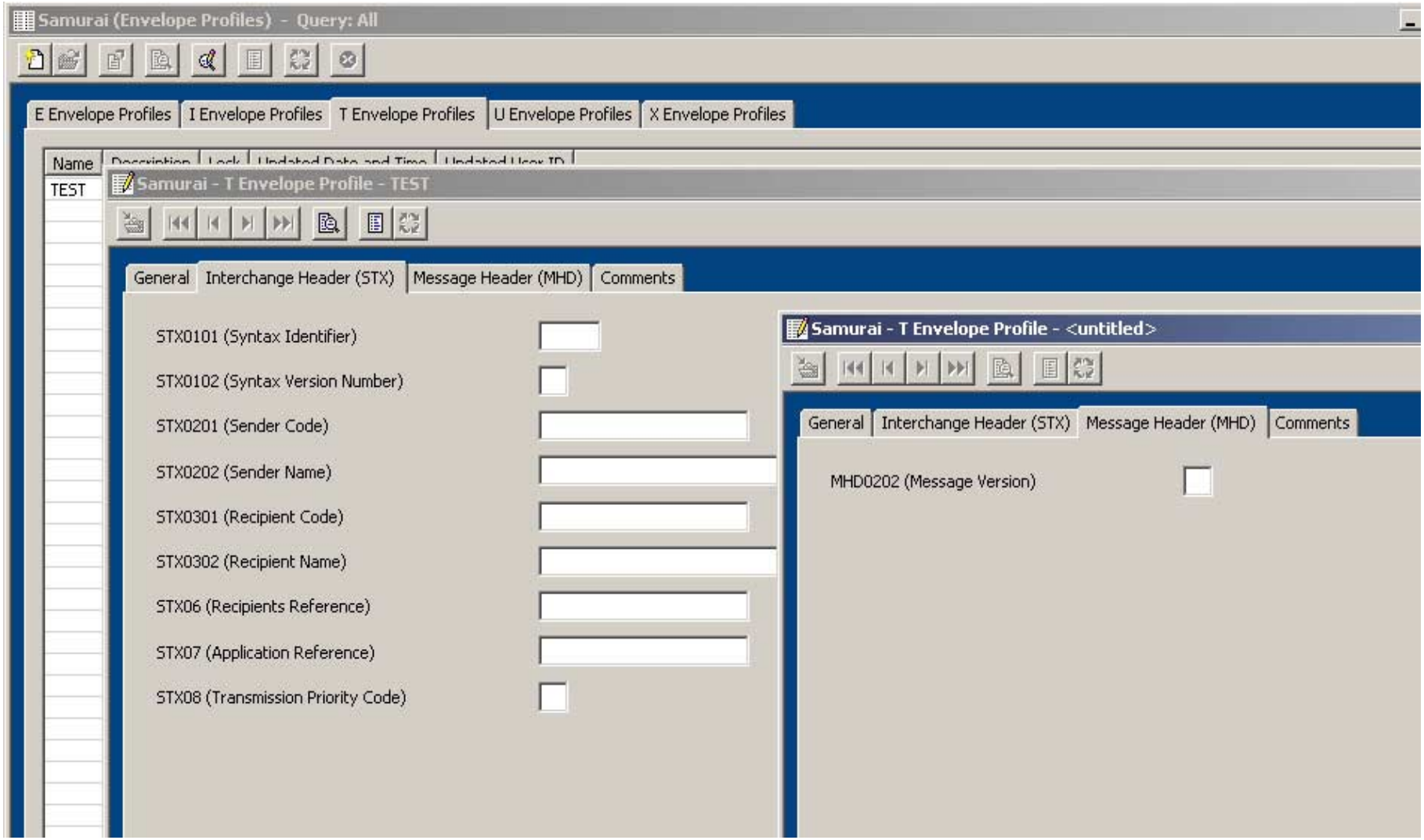
© IBM Corporation



© IBM Corporation



© IBM Corporation



© IBM Corporation

Summary

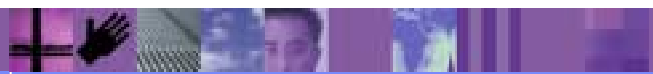
The next release addresses features dealing with:

- Operational Ease of Use
- Performance related enhancements
- S/R to DT Migration capability
- Product Currency and Infrastructure
- Small enhancements

© IBM Corporation

Questions

Thank you for your interest



© IBM Corporation