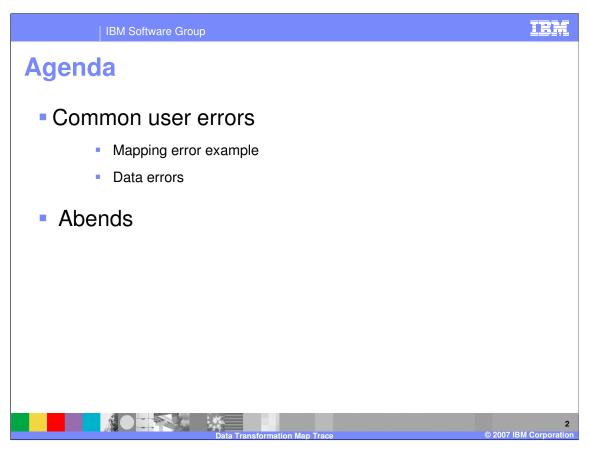
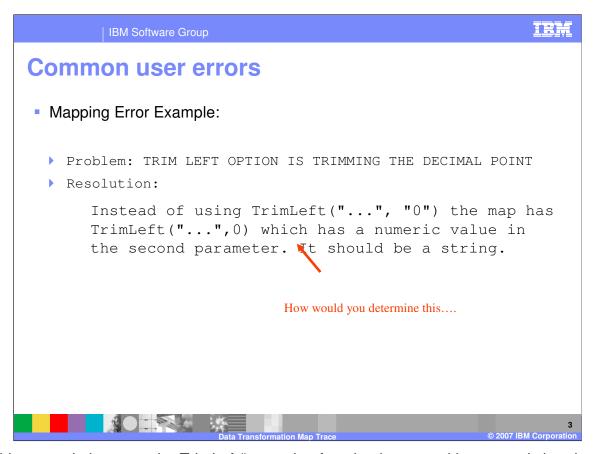


This presentation will review the Data Transformation Map Trace.



The presentation will cover common user errors and abends.



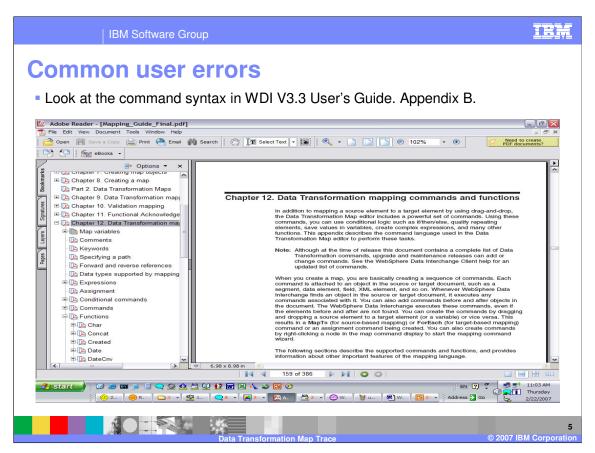
With this example it seems the TrimLeft() mapping function is not working properly but the resolution is the command it not correct. Lets see how you can determine this.

Common user errors

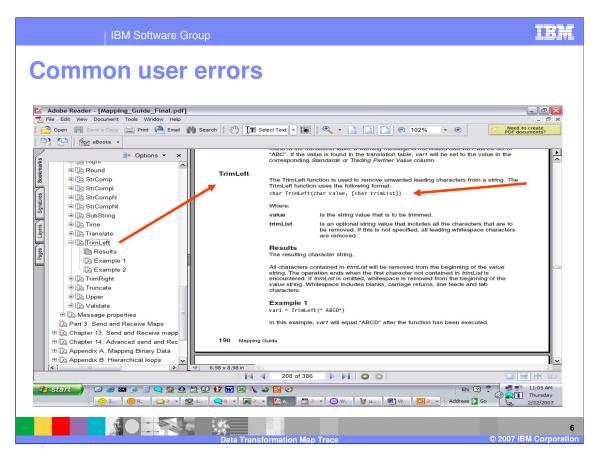
Look at the map
Look at the command syntax in WDI User's Guide. Appendix B.
Determine if the command is incorrect
Try to correct the command or use a different command
Execute translation to see if the command change works.

If the command syntax is incorrect (user error).
If the command syntax is correct and a different command corrects it (work-around found).

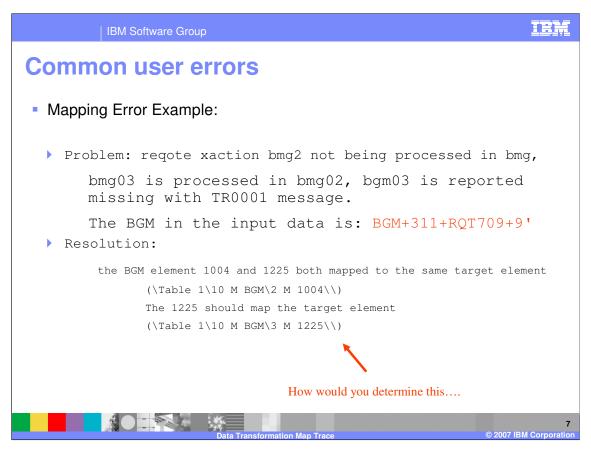
This is a set of steps that can be used to identify if the mapping command is correct.



Appendix B in the WDI version 3.2 User's Guide contains the format of the Data Transformation mapping commands and functions. For WDI version 3.3 this is located in Chapter 12 of the WDI version 3.3 Mapping Guide.



Look at the command syntax for TrimLeft(). The map has TrimLeft("...",0) which is a numeric value in the second parameter. It should be a string



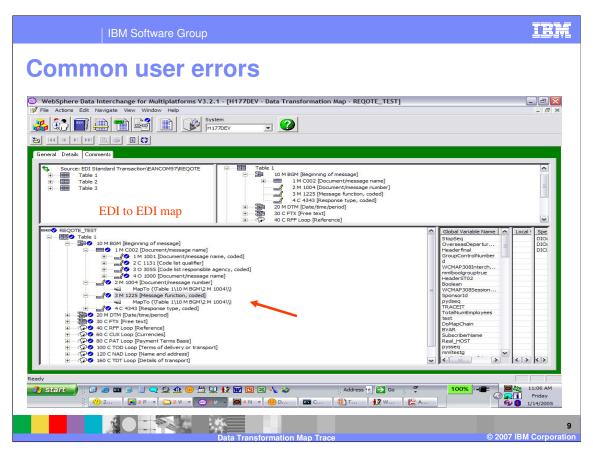
With this example it seems the translation and validation is not working properly but the resolution is the mapping it not correct. Lets see how you can determine this.

IBM Software Group

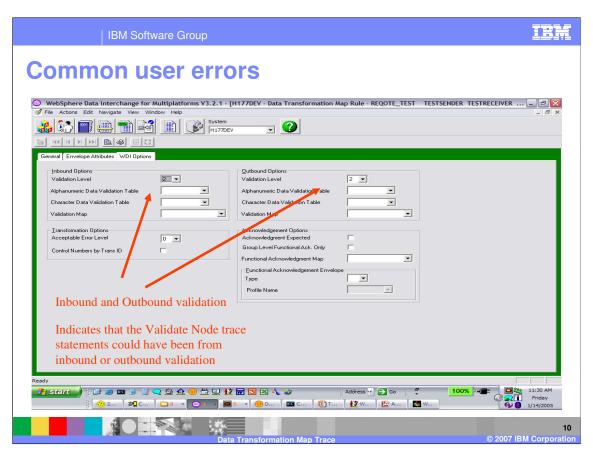
Common user errors

- Look at the mapping on the BGM
- Check the mapping Rule
- Look at the trace and try to determine inbound or outbound validation error (TR0001)
- Look at the Trace and the Source abstract message after parsing
- Look at the Trace and the Target abstract message after transform
- Try to correct the map
- Execute translation to see if the command change works.

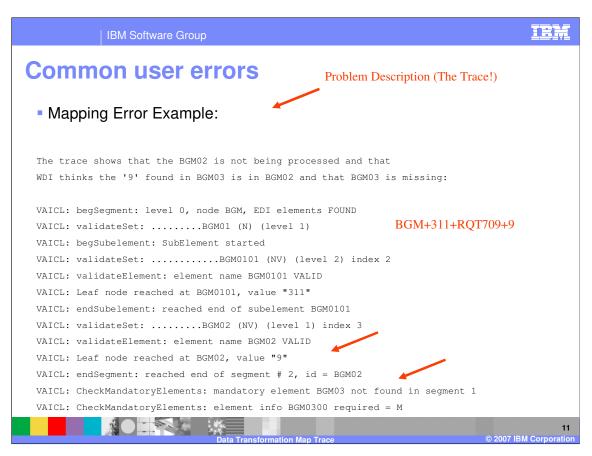




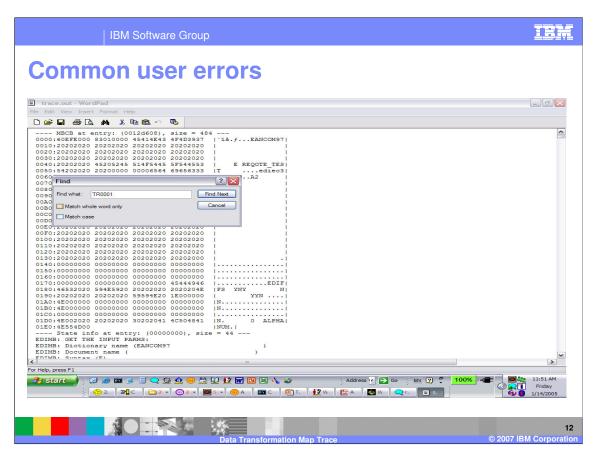
Look at the mapping for the BGM segment.



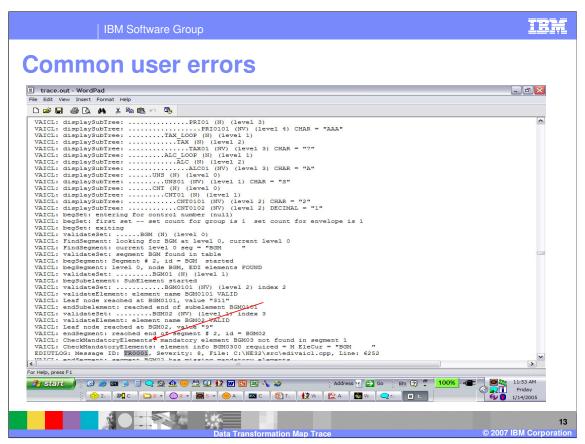
Check the mapping Rule. Inbound and Outbound validation indicates that the Validate Node trace statements and the TR0001 message can be from inbound or outbound validation.



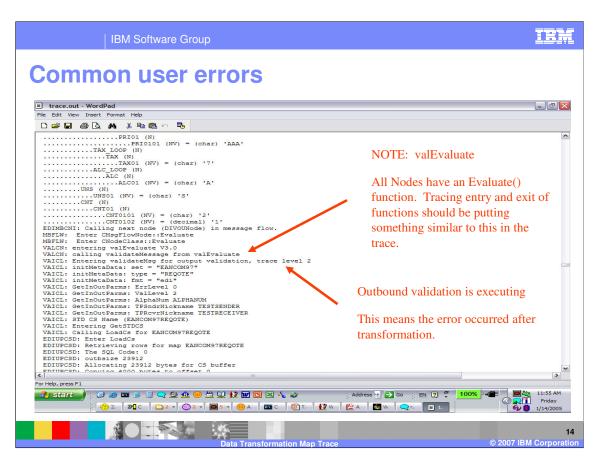
The trace shows that the BGM02 is not being processed and that WDI thinks the value '9' found in BGM03 is in BGM02 and that BGM03 is missing. VAICL: is the component for the WDI Validate Node.



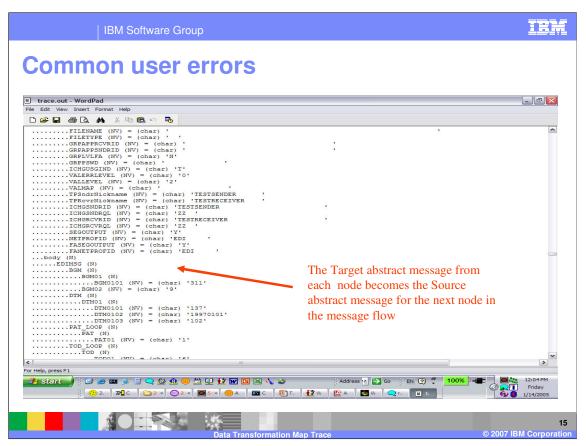
Look at the trace and try to determine inbound or outbound validation error (TR0001).



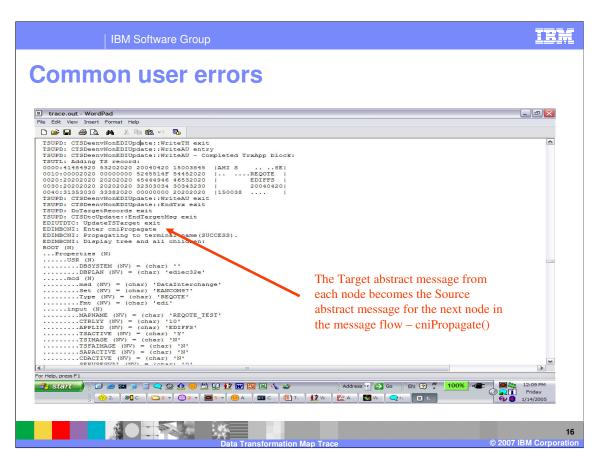
Look at the trace and try to determine inbound or outbound validation error (TR0001). Begin paging up looking for entry for Validate Node Execution.



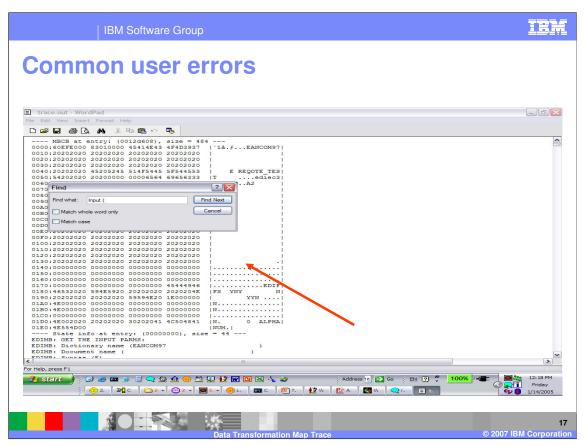
All processing Nodes have an Evaluate() function. Tracing entry and exit of functions should be putting something similar to this in the trace. Outbound validation is executing. This means the error occurred after transformation.



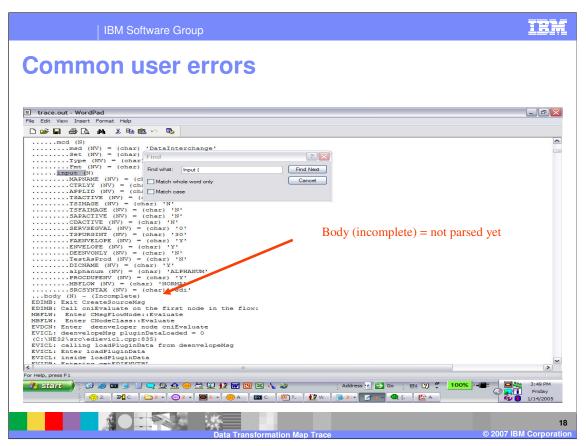
Look at the Trace and the Target abstract message after transform. Keep paging up in the trace. The Target abstract message from each node becomes the Source abstract message for the next node in the message flow.



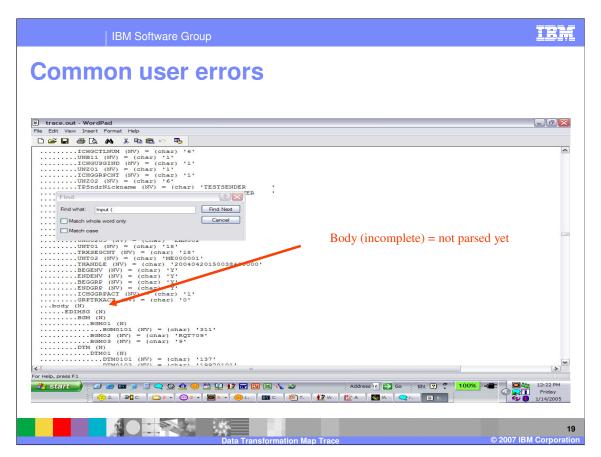
The cniPropagate() indicates the Target message from the current node processing is going to the next node and will become the Source message for the next processing node.



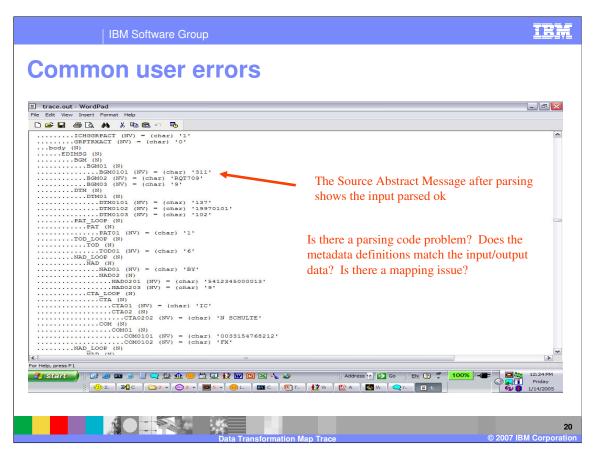
Look at the Trace and the Source abstract message after parsing. Go back to the top of the trace and do some searching. You can search on the value "Input (" to find the abstract message for each processing node.



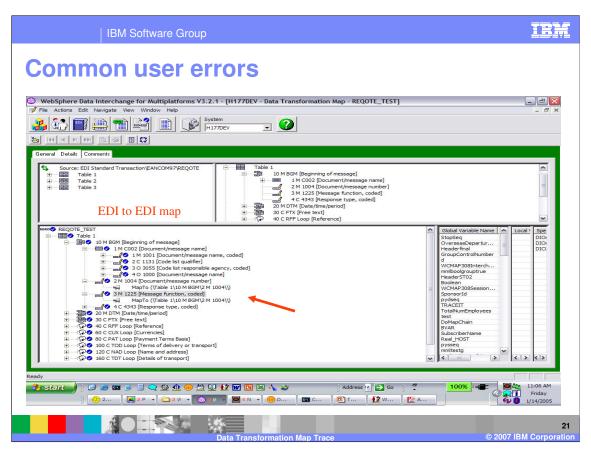
Begin paging down and executing Find until you see the abstract message.



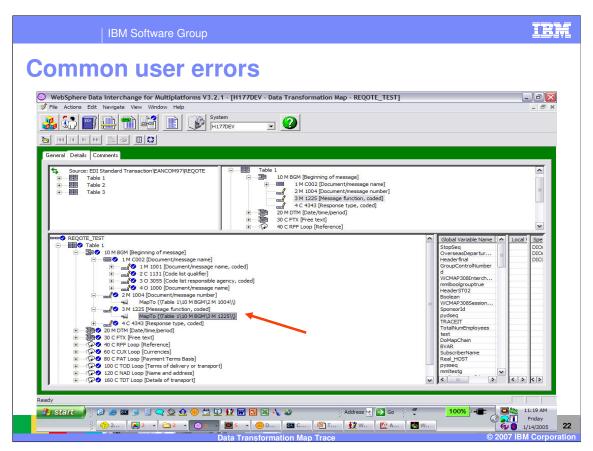
Since the Body element does not say incomplete, the first message in the input has been parsed.



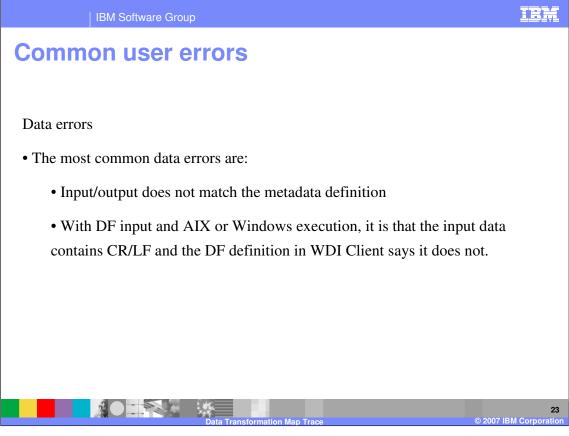
The abstract message (AMM) is a hierarchical representation of the source (input message) and target (output message). The source and target metadata definitions (XML, DF, Standard) can be viewed using Client and the structure and parsing can be verified.



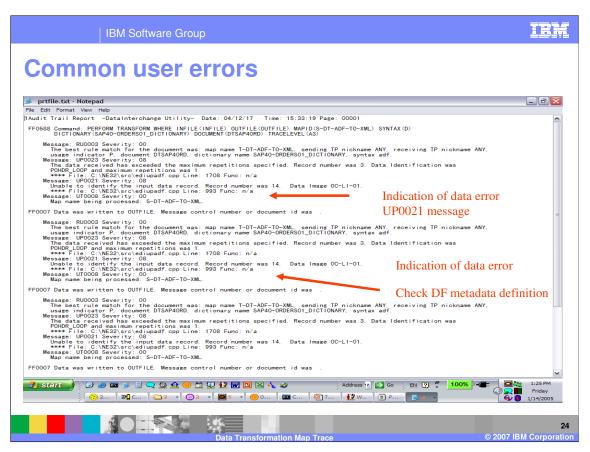
Look at the mapping again for the BGM segment. BGM03 is mapping to the same target element as BGM02.



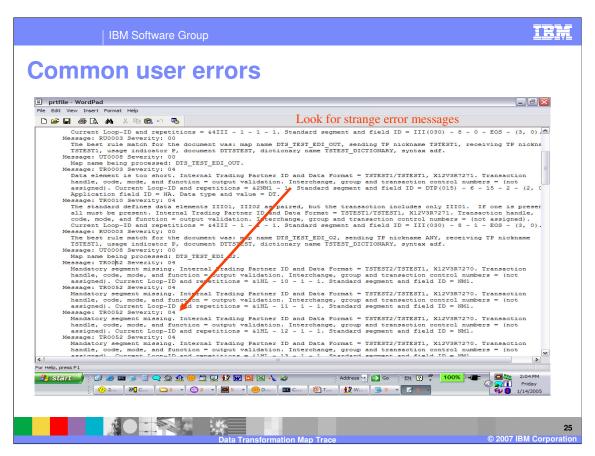
Corrected Map.



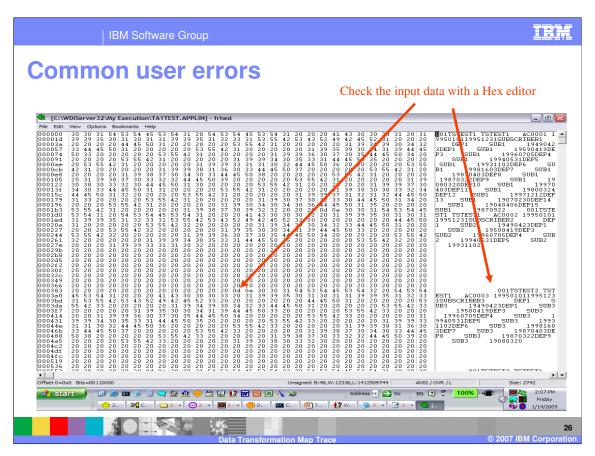
The most common data errors are when the input or output does not match the metadata definition.



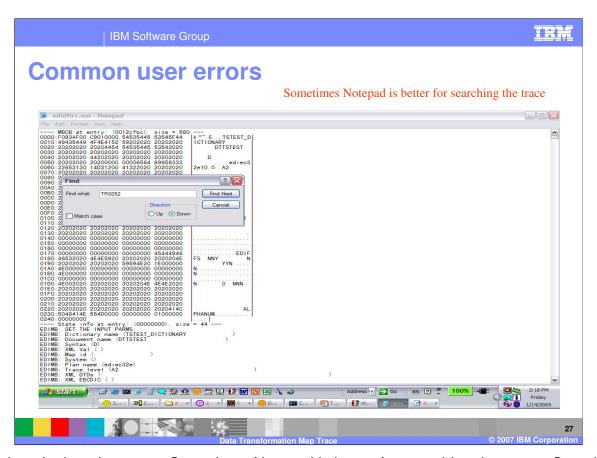
This is a sample print file PRTFILE. The UP0021 messages are from the parsers and could be an indication of data errors.



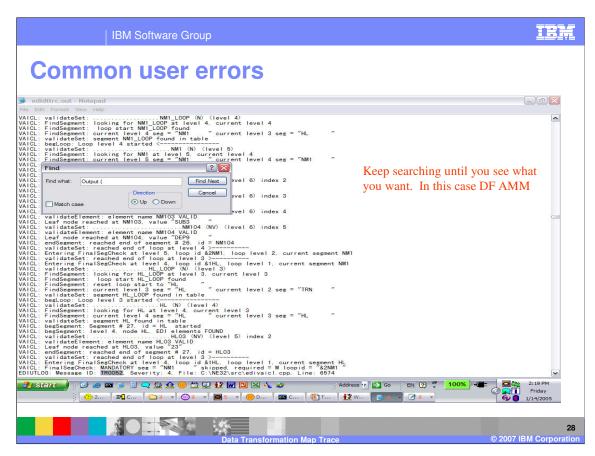
The parsers may not always be able to identify data errors so also look for strange error messages from other processing nodes. For example: Validation and the TR messages.



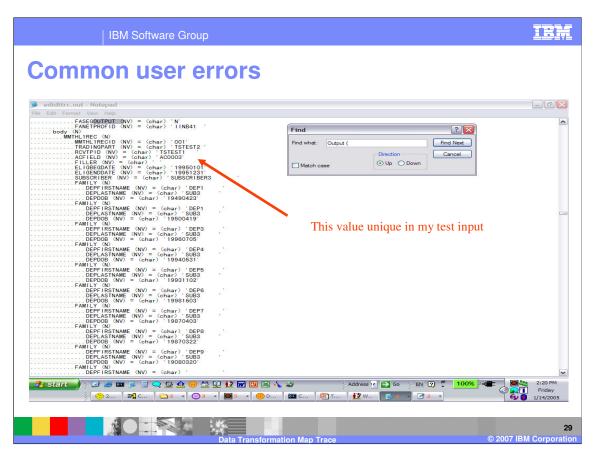
Check the input data with a Hex editor. In this example the input data contains a hex 0d, 0a which indicates carriage return/line feed between each record.



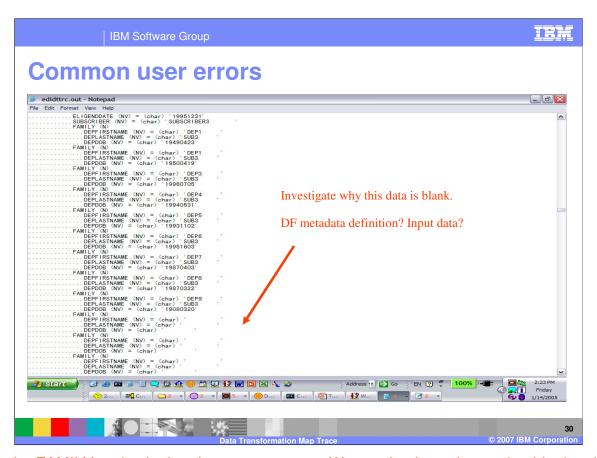
Lets take a look at the trace. Sometimes Notepad is better for searching the trace. Search down for the TR0052 error message.



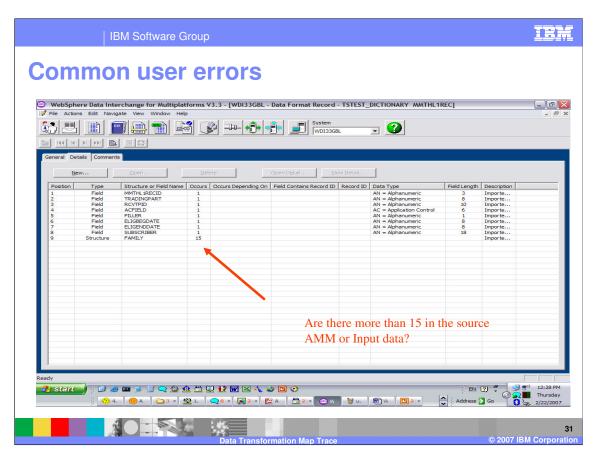
Now we have found the TR0052 message we can search up for the value "Output (". In this case we are looking for the data format abstract message.



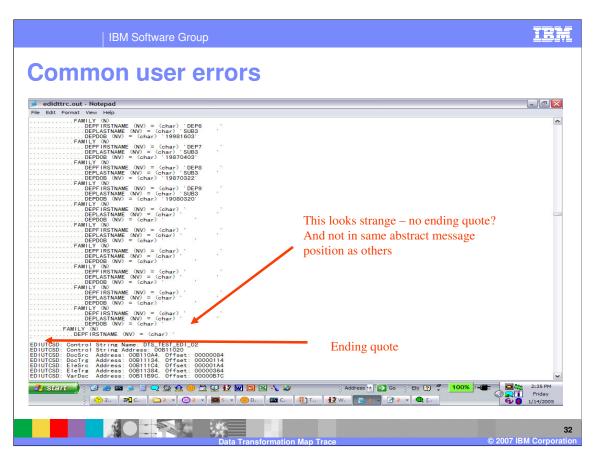
This is the Source message after the parse.



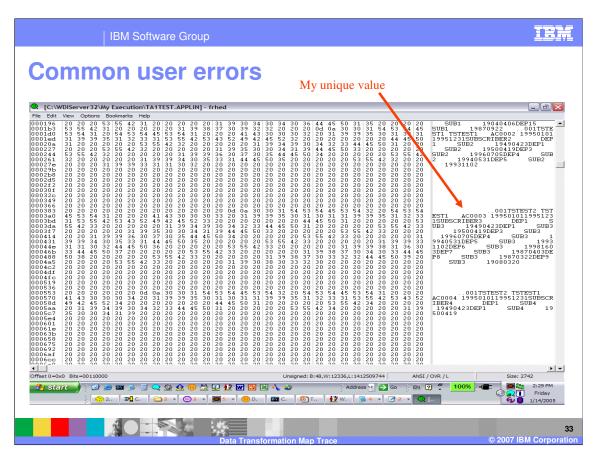
Notice the FAMILY nodes in the abstract message. We need to investigate why this data is blank. Is it the data format definition or are the values in the input data blank?



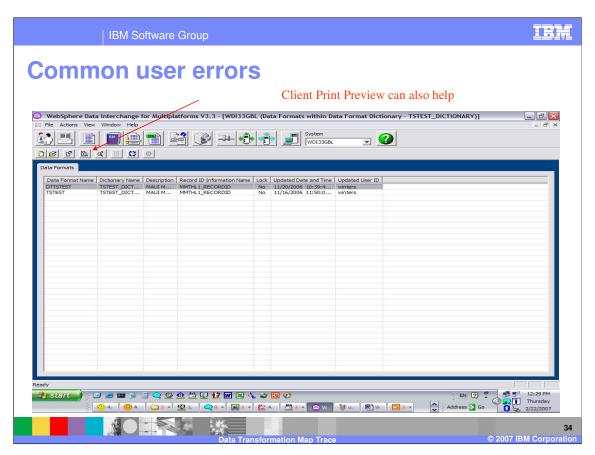
This is the data format metadata definition. The FAMILY structure has a repeat count of 15. We need to check the source abstract message and the input data to see if there are more than 15 occurrences.



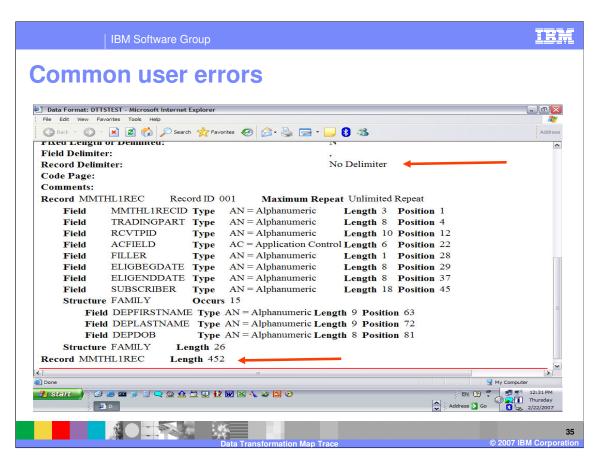
Looking at the trace again, notice the indentation for the FAMILY nodes. The last one looks strange. It is not indented the same as the others which means it was placed as a child of a different node. It is in a different hierarchical position. The value also looks strange the ending quote is on the next line.



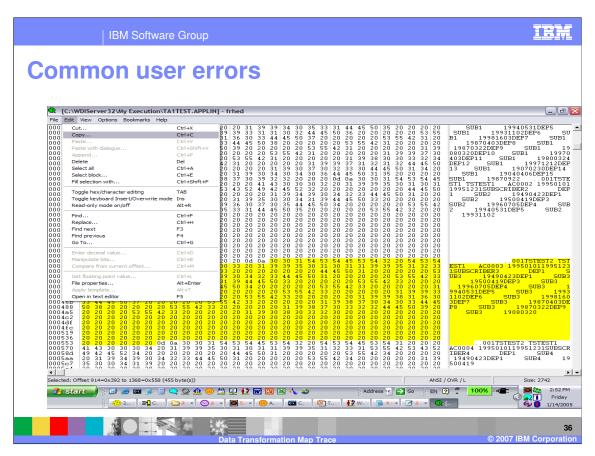
If there is something you can search on that is unique to your input, this can be also be used to identify the specific problem.



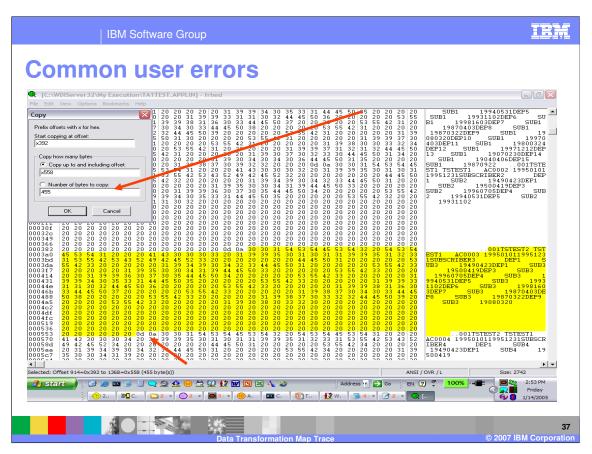
Using the WDI Client Print Preview can also be helpful especially with the data format metadata.



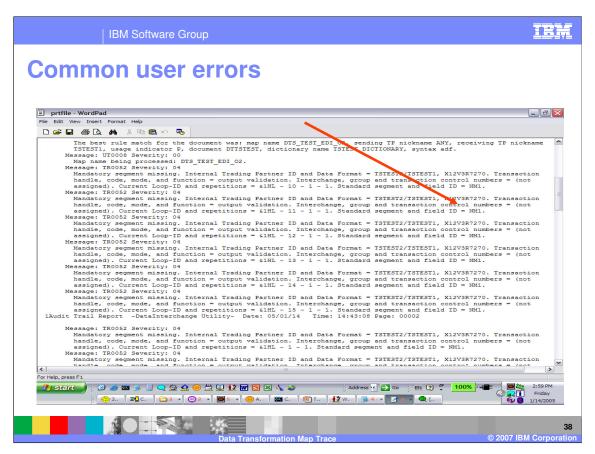
In the print preview you can check the length of the input record. Also note the Record Delimiter. The record length is 452 and there is no record delimiter.



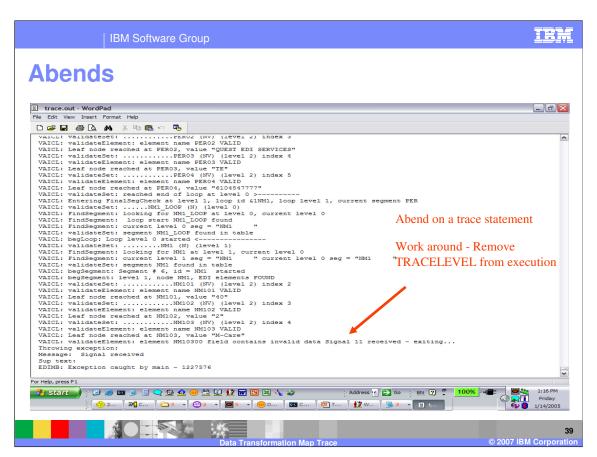
Now we need to return to the input file. With this hex editor, I can go to my record and select it for copy.



The copy will show me the number of Bytes. This shows the record length is 455 which does not match the data format definition. There is also a record delimiter and the data format says there is no record delimiter. We need to update the data format definition.



This is the next execution after the data format definition was corrected. We now have a TR0052 message on a different segment. The cycle begins again to determine where the problem is located.



With abends you can possibly find a work around. If you go to the end of the trace you can try to determine what processing step was executing. With this particular abend the actual trace statement caused the abend and by turning the trace off the abend was avoided.



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

 AlX
 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.

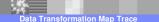
The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

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.



4

© 2007 IBM Corporation