CR Number: 5007

External Reference: WA, Proactive Data Quality focus group

Category: Proactive Data Quality Monitoring

Component: SAFER/MCMIS

Synopsis: T0031 Data Timeliness Monitoring

Status: Open

Disposition: [2007-07-26]. Open. Needs MCMIS team analysis.

Description: [2007-04-19] submitted by Bill Goforth, WA, 360-705-7365, gofortb@wsdot.wa.gov
discussed at CVISN ACCB meeting 2007-04-19

Greater visibility is needed to monitor data timeliness for the T0031 (carrier data) transactions.

There are on-going problems with timeliness of T0031 carrier updates from SAFER. Delays of 3 or more weeks have been seen in some cases. The extent of this issue is not clear and there appear to be a number of causes for T0031 data timeliness problems.

There are known problems with data timeliness in the following areas:
- receiving new carrier data
- MCS150 updates
- MCMIS status changes
- ISS scores and SAFERSTAT data changes
- MCSIP Level changes

The improvements proposed by this change request will greatly enhance visibility of the frequency and magnitude of T0031 (carrier) data quality and timeliness problems. They will also allow CVISN states to easily determine if their carrier data problems are a SAFER issue or a local CVIEW issue. This visibility will reduce support costs and help Volpe management and the CVISN states better manage their CVISN support resources.

This change request proposes the following improvements:

1. Establish performance objectives and create and monitoring processes to monitor the timeliness of T0031 data. Specifically this includes; clear performance objectives, measurement strategies, daily exception reports and monthly summary/trend reports to monitor processing delay times for MCSIP level, ISS score, MCMIS status, added carriers, and critical MCS150 changes required by PRISM (including carrier name and address changes).
The goal is to have processing delays be 24 hours or less on business days. With this goal in mind, measurement objectives and strategies are needed for each of the mentioned data elements that are realistic and reflect existing processing limitations. CVISN stakeholders need to agree on these measurement objectives. For example, a measurement objective for ISS score changes might be to have all A&I changes to be delivered in T0031 files within 6 business days (allowing for A&I data quality checking time) and all non-sufficient data ISS changes in SAFER delivered in T0031 files within 1 business day. The specifics regarding these objectives cannot be refined without practical input from the MCMIS and SAFER support teams.
A related secondary objective will be to log all incidents where a performance objective is not met so that it will be possible to track the frequency of a particular performance related problem.

2. Capture tracking data for all T0031 UD and BL download files and related subscription files. T0031 Tracking data will be stored in table form and consist of one row per update per carrier. Each row would contain the T0031 download file name and (at a minimum) the critical T0031 data elements consistent with item 3. below.
A web page will be provided to allow CVISN states to view the T0031 tracking data for a specific USDOT number.

3. Create a MCMIS control file. This file will be a tab separated variable text file (TSV file or equivalent) and will contain one record per carrier. The proposed control file will be created daily. The control file will consist of the following MCMIS data elements (associated SAFER data element names are used here for sake of clarity):
CARRIER_ID_NUMBER
CARRIER_NAME
TAX_ID_NUMBER
DATE_ADDED
MCMIS_STATUS
MCMIS_STATUS_DATE
MCSIP_LEVEL
MCSIP_LEVEL_DATE
MCMIS_TRANSACTION_DATE
MCS150_UPDATE_DATE
ISS_SCORE
ISS_SCORE_DATE
SAFESTAT_CATEGORY
SAFESTAT_DATE
SAFETY_RATING
RATING_DATE

Because this control file will be used to measure the effectiveness of the MCMIS/SAFER interface, it must be created independently of the MCMIS/SAFER interface.

Tests where the above data elements are dumped to a text file from the CVIEW CARRIER table indicate that the proposed control file will be 39 to 40 MB after being zipped. In these tests, it took less than 5 minutes to create this file. But this may not be reflective of the time taken to do this in MCMIS if there are multiple tables that contain this information.

It is hoped that there will be a minimum impact to MCMIS to create this control file. Testing will need to be performed by the MCMIS support team to determine the impact of creating this file. The proposed MCMIS control file is key to the success of this change request. The data in this control file will be used to:

1. Allow more proactive T0031 data quality management - Volpe and CVISN states will be able to proactively monitor data quality and take corrective action when necessary. In other words, data timeliness problems could be identified and fixed without CVISN states having to report the problems to Volpe Technical Support. This will save considerable time for technicians at Volpe and for technicians in the CVISN states.

2. Quickly isolate timeliness and missing data issues as either Volpe or a CVISN state (CVIEW) issue - Using the control file and the T0031 tracking data (2. above), it will be possible for a CVISN state or Volpe to quickly determine the extent of a timeliness problem and whether the problem was at Volpe or on the CVISN state side. If the carrier data in question has been output to a T0031 file, it will be possible to easily identify which T0031 file it is contained in by looking at the T0031 tracking data.

3. Monitoring of T0031 Timeliness trends - Using the control file and the T0031 tracking data (2. above), it will be possible to write simple SQL scripts to determine how many carrier updates failed to meet the 24 hour timeliness objective. Timeliness analysis will be performed separately for each of the above mentioned data elements. This will be done on a monthly basis and used as a high level management tool to determine the priority and extent of carrier data timeliness issues.

4. Check CVIEW Carrier data accuracy and avoid unnecessary T0031 baseline downloads - The control file will allow CVISN states to verify the accuracy and completeness of their local CVIEW carrier data and determine when it is necessary to perform a T0031 baseline download.

This allows CVISN states to do a better job of keeping their carrier data in synch with SAFER and avoid unnecessary T0031 baseline downloads.

5. Emergency fixes - The control file can be used by a CVISN state as an interim emergency workaround to update critical CVIEW carrier data while T0031 timeliness issues are being addressed. This would help to prevent crisis situations for Volpe and CVISN states when critical T0031 data is missing. It is recognized that there would be inherent data synchronization problems in using this file as a data source. Whether the advantages outweighed the risks is a question that a CVISN state would need to carefully consider before using the control file in this way.

[2007-05-18] At 2007-05-17 CVISN ACCB meeting, it was noted that this CR needs to go via FMCSA to MCMIS team for preliminary analysis and estimate.

Impact:
SAFER
MCMIS (minimal?)
States may choose to use or not

[2007-07-26] Discussed at ACCB meeting. IT Systems Change Request has been submitted. Telecon will be held in next two weeks.

Fix:

Comment:

Attachment names:

Responsibility:

Modified Time: 7/27/2007 4:13:37 PM

Modified By: Salazar Sandra B

Entered On: 4/19/2007 5:01:06 PM

Entered By: Salazar Sandra B

Severity: Medium

Priority: No

Type: Defect

Closed On: