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# Second Report on Qwest Performance Measure Data Reconciliation – Colorado

## I. Introduction

The Liberty Consulting Group (Liberty) conducted an audit of Qwest's performance measures for the ROC, and issued the final report from that audit on September 25, 2001. As an extension to the audit, and through its Change Request process, the ROC requested that Liberty conduct a "data validation to resolve any debates concerning the accuracy of performance data emanating from particular ROC PIDs." (ROC Change Request #20.) Certain CLECs have expressed concerns about the accuracy of Qwest's reported performance results as they relate to service that they have been receiving. The ROC decided to conduct this data reconciliation work in order to test those concerns. Liberty's performance measures audit applied to all of the ROC states with the exception of Arizona. Nevertheless, Liberty was requested to include Arizona in the scope of its data reconciliation work. The report that used Arizona data was issued on December 3, 2001. This report provides the results of Liberty's review of data from Colorado.

Liberty conducted multiple discussions with state commission personnel, Qwest, and the CLECs, in order to secure their comments on the scope and objectives for this test. Liberty has determined that the objective for the data reconciliation process solicited by the ROC should be to answer the following question:

> **Does any of the information provided by the participating CLECs demonstrate inaccuracy in Qwest's reporting of performance results under the measures defined in the PID?**

The question presented is an important, but narrow one. It allowed the exclusion of activities that would have substantially expanded the scope of this test. For example, Liberty was not required to determine whether CLECs could reproduce Qwest's performance results with their own information, or what changes would be required to allow such recreation. There were also situations in which Liberty found that Qwest and a CLEC interpreted requirements differently or had different understandings of how interactions with Qwest or the information resulting from them should be treated. In those cases, Liberty did not seek to determine who was right and who was wrong, or who reflected the better practice. Instead, Liberty's goal was to determine whether, in consideration of the requirements of the PID, Qwest's methods practices, or processes contained material error. Therefore, in the case of data discrepancies, Liberty required an affirmative showing of Qwest error or omission before issuing an exception or observation. However, in order to make clear the details of its examination, Liberty has reported the cases where it found the information provided by the parties to be inconclusive. In the course of its data reconciliation work, if Liberty found something wrong with the way Qwest reported performance results, regardless of the information provided by the CLEC, Liberty reported that problem.

In its comments on CR #20, AT&T described what it thought should be the process for what has been referred to as "data reconciliation," as follows:

*1. The CLEC identifies what it believes are discrepancies between performance results it has produced and the performance results that Qwest has produced. The CLEC should identify the particular performance measurement in question and the evidence that lead the CLEC to conclude that a discrepancy exists.*

*2. The auditor takes the CLECs information and confirms the existence of the discrepancy.*

*3. After confirming the discrepancy, the auditor determines and identifies the source of the discrepancy.*

*4. If the source of the discrepancy is the CLEC, the auditor will share its findings at a high level with the TAG. The specific details of the discrepancy shall be shared by the auditor privately with the specific CLEC.*

*5. If the source of a discrepancy is Qwest and that discrepancy points to some problem with Qwest's raw data, the auditor shall create an Exception/Observation per the Exception and Observation process used in the ROC OSS test. In the Exception/Observation, the auditor will make recommendations as to whether the identified deficiency is likely to affect multiple services and/or multiple CLECs. The auditor will also identify what it believes is the period of time that Qwest may have been producing questionable performance results.*

*6. After the Exception/Observation has been created, it should follow the normal process for closure as would any other Exception or Observation.*

In general, the process described by AT&T reflected how the data reconciliation effort proceeded.

Three CLECs, Covad, WorldCom, and AT&T, chose to participate in data reconciliation. The participating CLECs had identified numerous discrepancies. In connection with this report, Liberty has separately supplied specific information about the CLECs' sources of discrepancies, as well as proprietary information concerning specific records and volumes. Liberty sought to prepare this report to inform the interested participants about the test and its results, without revealing confidential information. For example, the report generally refers to percentages of total orders instead of the actual number of orders. The specific performance measures and products that the participating CLECs wanted included in the data reconciliation, being widely known, were therefore not considered proprietary.

As a result of its data reconciliation work for the state of Colorado, Liberty has or will be issuing several Observation Reports, each of which is discussed below.

Qwest, the CLECs, and Liberty spent significant time and effort resolving the specific scope of the performance measures to be included in data reconciliation. It took considerable added effort to digest and process the information provided by CLECs and match it with data provided by Qwest. Liberty began this data reconciliation test with a significantly greater familiarity with the structure and nature of the Qwest data, with which Liberty worked extensively during earlier audit activities. Gaining a similar kind of familiarity with CLEC data structure and content formed a more significant than expected part of this test. During the course of its data reconciliation test work, Liberty was able to match a significant portion of the apparently contradictory data presented by CLECs and Qwest. This success in data matching was important, but the discrepancies remained very large even after it was completed.

# II. Overall Summary of Findings

This report presents more detailed, non-confidential results in later sections that are organized by CLEC. This section provides Liberty's overall conclusions, which have been formed on the basis of the reconciliation of Colorado data.

Several process errors significantly affected Qwest's reported performance results. These problems are documented in Observation reports 1026, 1027, 1029, and 1030. Qwest reported retail line-sharing orders as wholesale orders, orders were repeated in consecutive months because of different completion codes, orders were not reported because the CLEC designation was "unknown," and records were excluded because of no state code. Qwest has indicated that it has either corrected or is investigating these matters.

While the problems discussed in the four Observation reports listed above caused reported results to not reflect actual performance, they are the type of problem that can rather easily be fixed, and at least in some cases, performance results can be re-calculated. Of more concern to Liberty because it may not be so easily corrected is the number of apparent human errors that occurred in the processing of AT&T LIS trunk orders. This matter has been reported in Observation 1031. In addition, human errors were apparently the cause of some Covad UBL orders not being excluded from OP-4 in cases where the requested interval was longer than the standard (Observation 1032), and application dates and times were incorrectly determined by Qwest personnel on AT&T LIS trunk orders (Observation 1033).

As a result of its data reconciliation work for Arizona data, Liberty found that Qwest made some errors that affected performance results. However, those errors were generally either (a) of the kind and at levels to be expected at the front end of the performance measurement process, where people must manually enter vast amounts of information, or (b) appeared to be honest errors in judgment. The amount of these errors in relation to the total amount of information required for the performance measures did not exceed what Liberty considers to be expected levels, even under a carefully operated set of measurement activities. The Arizona work also noted a programming problem associated with measure OP-15 (Exception 1046) and a failure to report a group of Firm Order Confirmations in June 2001.

For the Colorado data, there were three primary factors that drove to different conclusions. First, Covad provided support information for the performance measures that were to be reconciled. Second, the scope of the AT&T reconciliation was smaller and so Liberty was able to investigate a higher percentage of orders in more depth than had been accomplished for the Arizona data. Finally, Liberty did not need to spend effort on issues that had been investigated in Arizona and in learning about how data were stored and processed. Qwest has indicated that there should not be differences among the states in its region as to how data are collected and processed for reporting performance measures. Therefore, Liberty views the results of its data reconciliation work to be cumulative and that overall conclusions should be made after its work for the states of Washington and Nebraska is complete.

# III. Results of Data Reconciliation – AT&T

## A. Issues

The scope of the data reconciliation work for AT&T and Colorado was:

- The denominator of PO-5D for Local Interconnection Service (LIS) trunks.
- The numerator and denominator of OP-3, OP-4, OP-6, and OP-15 for LIS trunks.

The reconciliation period was from January 2001 through June 2001. Qwest stated, however, that it did not report CLEC-specific state results for LIS trunks for OP-15 for January or February; therefore, Liberty could not reconcile data for those months. In addition, Qwest was unable to provide the data necessary to reconcile OP-15 for LIS trunks for May; therefore, data for that month could not be reconciled.

### Human Error

Liberty noticed several types of human error that caused inaccuracies in Qwest's performance measure reporting. Liberty discovered instances where the Missed Function Code *(MFC)* applied by Qwest to an order in WFAC was inappropriate, *e.g.*, when Qwest applied a C01 jeopardy in cases when the jeopardy should have been to Qwest. The MFC is entered by Qwest personnel who are supposed to choose the code that represents the reason for a miss. It is used by other Qwest personnel as one factor in determining the Service Order Miss Code *(SOMC)* in RSOR. If the SOMC is to the customer, then the order was excluded from OP-3, OP-4, and OP-6 during the period being reconciled by Liberty. Numerous orders were, in fact, inappropriately excluded from these measures because of this type of human error. This issue is the subject of Liberty's Observation report 1031.

In addition, Liberty noted instances where Qwest's completion date was 01/01/01, which meant that the completion date was blank or invalid and the order was legitimately excluded from the measure. In other cases, the application date to entry date interval was greater than 31 days, and the order was legitimately excluded from the measure. However, the underlying cause of invalid completion dates and excessive intervals is also human error on the part of Qwest personnel.

### Application Date/Time

Liberty noticed instances in which Qwest personnel determined AT&T's order application date/time incorrectly. This application date/time is used in OP-4 calculations. The PID requires that LIS trunk applications received after 3 p.m. MT are to be counted as received the next day. In some instances, Qwest failed to follow this rule. In other cases, it appears that Qwest used the wrong application date because of uncertainty as to whether the application was "complete and accurate" as is required by the definition section in the PID. This issue is the subject of Liberty's Observation report 1033.

In a 12/28/01 e-mail from Qwest, Liberty learned that Qwest apparently does not always have a record of the application times for LIS trunks. It is the responsibility of the Qwest Wholesale Service Coordinator *(WSC)* to determine the correct application date by looking at the application time and following the process for writing service orders. This process includes recording the application date as the next day when the application time is after 3 p.m. MT on a LIS trunk order. This is consistent with the definition section at the end of the PID. The only times that are logged by Qwest, however, appear to be the time when the WSC enters the application date into the EXACT system and the time the most recent application/supplement was received from AT&T. These times need not be the same time as the application time. Thus, Qwest cannot always support the application times it used in developing the performance results for OP-4.

### Service Order Completion Date

For LIS trunks, Liberty found that Qwest and AT&T have different operational definitions of when an order is considered to be completed. In most instances, AT&T views the order as completed earlier than Qwest does. AT&T believes the order is completed when a first test is done, but Qwest does not consider it completed until an additional test is completed as well. For many orders a due date is established, *i.e.*, the date by which both parties expect to complete the order. When a test is successfully completed on that due date, AT&T considers the order completed. AT&T therefore includes the order in the relevant performance measures as completed on the date of that test. However, Qwest believes another test is necessary, *i.e.*, a test for which AT&T is often not ready on the due date. Accordingly, Qwest classifies the order completion as having been missed for customer reasons, and therefore excludes it from many measure results. This disagreement about the meaning of order completion accounts some of the discrepancies between the parties. For example, it accounts for seven of the discrepancies between the parties for LIS trunks for OP-4 for the months of January to June in Colorado.

Both AT&T and Qwest have reasonable justifications for their definitions of order completion. Their difference is an operational one, which cannot be resolved in either party's favor by referring to the language of the PID. Liberty did not consider this test as including a Liberty determination of which company applied the better or most correct operational interpretation. Rather, Liberty sought to determine whether Qwest's approach was out of conformity with the PID. Liberty concluded that Qwest's definition and use of a service order completion date could not be judged to be out of conformance with the PID.

### Data Processing Error

Liberty's analysis of LIS trunks disclosed that many orders being reported in OP-15 did not appear to be Qwest "misses," even according to Qwest's own data. The cause of the problem was a data transfer error. The Detailed Data Set that Qwest uses for the OP-15 measure incorporates data from the Integrated Data Repository *(IDR)* Pending data source. One extremely important piece of this data is the miss code, which determines whether the order will be included in OP-15, and whether it will be included in OP-15A or OP-15B. LIS trunks constitute a designed service; therefore, they have three-digit miss codes. Misses for customer reasons begin with the letter "C." For example, C01 is the miss code for the category of "Customer Not Ready." During the data transfer step, the third digit of the miss code was often (although not always) being truncated. The Wholesale Regulatory Reporting program looks up the code in a miss code table in order to determine how the order should be handled. If it fails to find the code, it establishes Qwest as the default cause of the miss. Therefore, all of the LIS trunk orders showing two digit miss codes were being reported as Qwest misses, even though not all of them were. Qwest has stated that it knew about the problem, and has already fixed it, but the performance reports for the months being reconciled, and the data provided by Qwest that generated them, contained this error. Liberty issued an Exception Report 1046 addressing this issue. The problem occurred in four of the LIS trunk service orders.

This problem could exist (for the period being reconciled) for designed services other than LIS Trunks. Accordingly, an investigation would be appropriate to determine exactly the full range of products affected, and the months involved.

#### Use of Reference Date

Several performance measures use the number of orders completed in the reporting period as the denominator. Qwest's service order database does not contain a real-time picture of service order activity. Liberty's review during the performance measures audit showed that records are updated close to the time of the activity involved, such as completion; however, there is usually a lag of a couple of days. If the performance measures used only the report month, Qwest could miss a substantial amount of activity. Qwest solved this potential problem by calculating measures for records in which the database reference date is the reporting month. This method helps ensure that all records are reported, but may cause orders that are completed in one month to be reported in a later calendar month. Liberty does not consider this problem to be a material one, because:

- Every order is eventually accounted for
- The process is well-defined and applied consistently
- The overall impact (including an order in a future month's performance report) is minimal.

However, a CLEC would not know the reference date; it would only know the actual date of completion. The reference date matter accounted for about 15 percent of the LIS Trunk discrepancies for OP-3 for the months of January to June 2001. This reference date issue affects all products.

#### Lengthy Completion Intervals

In response to data request 30-2, Qwest told Liberty that it is unable to include in its performance reporting any service orders that are not completed within eight months. This problem accounted for six percent of the discrepancies in both OP-3 and OP-4 for LIS trunks for the months of January to June in Colorado.

## B. Reconciliation Results

For the measure OP-3, Qwest and AT&T agreed on 47 percent of the orders. For the orders that the companies disagreed on, Liberty found that:

- 21 percent were likely caused by Qwest's errors in assigning jeopardy codes and customer-miss exclusions. In addition, another 9 percent of the orders contained a 01/01/01 completion date, which meant that Qwest's program properly excluded the orders but that there was likely human error in failing to enter a correct completion date. (Observation 1031.)
- 6 percent were not counted by Qwest because the order took more than eight months to complete.
- For 61 percent, Qwest's treatment was correct, or Qwest followed its procedures for not counting orders with a customer miss. In a quarter of these cases, the discrepancy was caused by Qwest using the reference date to report order completion. In 40 percent of these cases, the discrepancy was caused by disagreement as to when a LIS trunk order completes.
- 12 percent of the discrepancies contained conflicting information that Liberty was unable to resolve.

For measure OP-4, the base results are the same as those presented above for OP-3. In addition, however, the companies disagreed on most of the interval numerator values in cases where they agreed that the order should be included. For many of the numerator discrepancies, Liberty was not given information that resolved the conflict. In some cases, Liberty determined that Qwest correctly determined the numerator for OP-4 and AT&T did not. One-third of the numerator discrepancies were caused by errors in Qwest's application date. (Observation 1033.)

For measure OP-6, Liberty found that there was no actual disagreement in 37 percent of the orders, Qwest was incorrect on 27 percent of the orders for the same reasons given in the OP-3 analysis, Qwest was correct in 18 percent of the discrepancies, and 18 percent remained in conflict.

For the few orders that could be analyzed for measure OP-15, Liberty found that there was no actual disagreement in 24 percent of the records, Qwest was incorrect on 29 percent of the records, Qwest was correct on 29 percent of the records, and 18 percent remained in conflict. All but one of the Qwest errors related to the data processing problem that was the subject of Exception 1046. The other case was one in which Qwest's documentation did not support its position that an order was pending for Qwest reasons.

For PO-5, Qwest and AT&T agreed on 86 percent of the orders. Qwest was in error on 25 percent of the discrepancies, Qwest was correct on 25 percent, and 50 percent of the discrepancies could not be resolved with the available information.

# IV. Results of Data Reconciliation – WorldCom

Liberty's scope of work associated with WorldCom (WCom) and Colorado included OP-3, Installation Commitments Met, and OP-4, Installation Interval, for LIS trunks and 2-wire unbundled analog loops. The time period under consideration was January through May 2001. The data provided by WCom did not contain sufficient information to calculate the OP-4 numerator, which is the actual installation interval. The UBL denominator for OP-4 excludes orders with customer-requested due dates that are greater than the standard interval. WCom could only determine these excluded orders on a limited basis. Therefore, Liberty sought to determine whether WCom's information on the total order counts showed any problems with the numbers reported by Qwest for OP-3 and OP-4.

For LIS trunks, Liberty found that Qwest and WCom agreed on the treatment of 7 percent of the orders. After receiving additional information from WCom, the companies agreed on another 9 percent of the orders. In 24 percent of the orders, Qwest excluded the record because of a customer miss. WCom information either confirmed the customer miss or did not provide any information to make Liberty think that Qwest was incorrect in making such an assignment. However, Liberty did not have the information that would have been required to find the same type of human error problems noted above in the AT&T section of this report. Often jobs have more than one service order with one being the actual installation and another being an administrative record. Qwest excluded such records that have no inward activity and WCom often included that order. This situation accounted for 24 percent on the total records. Sometimes Qwest will report an order that was completed in one month in the next month's results because of the database reference date. (Refer to the discussion in the AT&T section above.) This accounted for 7 percent of the total records. Finally, there were orders could not be reconciled because WCom lacked either a PON or a Qwest service order number, and Qwest was unable to trace the other information that WCom provided to an actual order. Initially, this accounted for 29 percent of the orders. Later, Qwest was able to find that several of these orders had been completed at various dates in the year 2000, not in the 2001 months that were under examination. This brought the total down to 21 percent, and, while still a significant percentage, should not be a major concern given the quality of the CLEC-provided information.

For unbundled loops, the companies initially agreed on 31 percent of the orders. After additional information was obtained from WorldCom, the orders for which the parties agreed increased to 62 percent. Qwest excluded the remaining orders for customer-caused miss reasons or had dates outside the period of the reconciliation. The information available from WCom did not dispute Qwest's information.

On December 19, 2001, Liberty sent detailed and proprietary worksheets to WCom and Qwest on the analysis of OP-3/4.

# V. Results of Data Reconciliation – Covad

## A. Issues

The agreed upon scope of the data reconciliation for Covad was a 25 percent sample of OP-4 (installation interval) for line-sharing and unbundled loops and of PO-5 (Firm Order Confirmations on time). Liberty chose the sample and received Covad's agreement of the method of drawing the sample. The time period for the review was the months of May, June, and July 2001.

Liberty found several problems with Qwest's performance reporting for Covad. First, Qwest reported some retail orders as wholesale. For line sharing, Qwest may generate two orders, one for the CLEC data side and another to account for Qwest's voice service. At least some of the orders of the second type were incorrectly reported as wholesale orders associated with the CLEC. Liberty documented this problem in Observation 1026. In response to the Observation, Qwest said that it had implemented a code change that looks orders that contain billing USOCs for line sharing and reviews all line-level USOCs to identify those with retail activity and excludes them from the results. Qwest said that this change would prevent future reporting of the retail orders as line sharing activity and effectively reduce volumes previously shown. For July 2001, Liberty found that this problem affected 5 percent of the sampled number of discrepant records that Liberty reviewed. Qwest indicated that the revised code would be executed on historical data starting from January 2001 and be reported with performance results that include December 2001.

Liberty also found that Qwest reported some of the same items in two consecutive months. This problem was documented in Observation 1027 and for Covad affected both UBL and line-sharing orders. While Liberty has not received Qwest's formal response to the Observation, Qwest has indicated that this problem was known and has been corrected. Qwest indicated that the problem had to do with different completion status codes given to some orders and that the effect was minimal. However, for the UBL records, this problem accounted for 22 percent of the sampled number of discrepant records that Liberty reviewed.

Liberty found that some line-sharing orders were not reported by Qwest because the CLEC was designated as unknown. This problem was documented in Observation 1029. Qwest's records confirmed the application and completion dates on these orders with the data provided by Covad. However, Qwest could not report the orders because the CLEC designation was not assigned correctly. This problem affected 70 percent of the orders that Liberty reviewed and that were in the category of included by Covad but not by Qwest in the reporting of July line-sharing results for OP-4.

Covad's information provided to Liberty for data reconciliation included many orders that Qwest did not report for PO-5. Investigation of these orders revealed that Qwest's program had excluded them because of an invalid or missing state code. There was nothing apparently wrong with Covad's orders. This problem accounted for about two-thirds of the items that Liberty reviewed and that were the category of included by Covad but not by Qwest in the reporting of July PO-5 results. This matter was documented in Observation 1030.

Qwest included some unbundled loop orders that should have been excluded because the requested provisioning interval was greater than the then current standard installation interval. This problem, which appears to be one involving human error, was documented in Observation 1032.

## B. Results

Liberty prepared spreadsheets showing the results of its analysis of the Covad service orders for May, June, and July 2001. These documents contain information that is proprietary to Covad; therefore, Liberty made a limited distribution of them.

For OP-4 and unbundled loops, the companies agreed on only 16 percent of the orders. For another 8 percent of the orders, the companies agreed on inclusion in the denominator of the measure but disagreed on the interval for the numerator. Liberty sampled the 84 percent of the orders for which there was disagreement and found for those discrepancies that:

- Qwest was incorrect on 31 percent of the discrepancies. Most of these (22 percent) were reported incorrectly for the second time by Qwest (Observation 1027). Qwest also included orders (about 6 percent) that should have been excluded because the requested interval was longer than the standard (Observation 1032).
- For 61 percent of the discrepancies, Qwest correctly reported performance and Covad's information supported the way in which Qwest treated the orders. For example, in several cases Covad did not take into account the 4th of July holiday when counting interval days. In other cases, Liberty found nothing wrong with Qwest's reporting and Covad's information did not show otherwise. In some of the records, there turned out to be no real discrepancy other than Covad included the order in the wrong month.
- For 8 percent of the records, the information was either conflicting or Liberty was unable to determine which company was correct.

For OP-4 and line-sharing orders in June and July, the companies agreed on only about 14 percent of the orders. For another 30 percent of the orders, the companies agreed on inclusion in the denominator of the measure but disagreed on the interval for the numerator. Liberty sampled the 86 percent of the orders for June and July and for which there was disagreement and found for those discrepancies that:

- Qwest was incorrect in 26 percent of the records. Retail line-sharing orders reported incorrectly by Qwest (Observation 1026). Qwest incorrectly reported orders in two separate months (Observation 1027). Qwest excluded orders because the CLEC designation was "unknown" (Observation 1029).
- In 55 percent of the records, Qwest was correct or Covad did not provide any information to show otherwise.

- In 19 percent of the records there was conflicting information that Liberty was unable to resolve. Many of these were cases in which the parties disagreed by one day on either the application or completion dates.

For PO-5, the companies agreed on only about 10 percent of the orders. Liberty sampled the 90 percent of the orders for which there was disagreement. For June and July, Liberty found for those discrepancies that:

- Qwest was incorrect in 38 percent of the records. Most all of these were excluded by Qwest because of the problem with the state code (Observation 1030). There were some (PO-5C) fax orders that were not included in the data provided to Liberty, although Qwest claimed that these orders were accounted for.
- Qwest was correct or Covad did not provide any information to show otherwise for 44 percent of the records.
- 18 percent showed conflicting information that Liberty was unable to resolve.