Report on
Data Reconciliation of
Qwest's Performance Measures

Presented to:

The Regional Oversight Committee

By:

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I. Introduction

A. Objective

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 had expressed concerns about the accuracy of Qwest's reported performance results as they relate to the service that they were receiving. The ROC decided to conduct this data reconciliation work in order to test those concerns.

Liberty conducted multiple discussions with state commission personnel, Qwest, and CLECs in order to secure their comments on the scope and objectives for this test. Liberty 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 (Performance Indicator Definitions), Qwest's methods practices, or processes contained material error. Therefore, in the case of data discrepancies, Liberty required an affirmative showing of a 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.

Certain CLECs have claimed that Liberty's stated objective is wrong, protesting that the burden to prove the performance measures correct lies with Qwest, and that the CLECs did not need to prove Qwest wrong. These claims are misplaced. First, it was because of assertions by CLECs that Qwest was reporting inaccurately that this effort was authorized. More importantly, however, is the simple fact that 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. When Liberty found problems, it wasn't because a CLEC proved Qwest wrong, but rather that CLEC information pointed to differences in data that Liberty investigated and discovered problems with the way Qwest processed information. Some problems were discovered through examining information completely independent of data provided by CLECs, or through direct admissions by Qwest. Therefore, any arguments related to an improper study objective should be brushed aside.

B. Process and Data

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. However, and for the most part, CLECs did not identify "what it believes are discrepancies between performance results it has produced and the performance results that Qwest has produced." Nor did CLECs generally identify "the evidence that lead the CLEC to conclude that a discrepancy exists." CLECs provided some of its ordering information that was supposed to relate to the products and months that were in the scope of the study. Liberty requested additional information and clarifications from the CLECs. As expected, the overwhelming bulk of the information that Liberty used in the data reconciliation study came from Qwest. Liberty obtained information from Qwest through hundreds of data requests, the responses to which consisted of many thousands of pages and detailed data files. Only when

Qwest's basic information used to calculate the performance measure matched that provided by the CLEC did Liberty not seek additional backup source documentation from Qwest.

Three CLECs participated in the study, AT&T, WorldCom, and Covad. Qwest, the CLECs, and Liberty spent significant time and effort resolving the specific scope of the performance measures to be included in data reconciliation. 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.

Liberty found that, given the way CLECs captured data and accounted for information related to Qwest's wholesale performance measures, it is understandable why the CLECs thought Qwest was not reporting accurately. The CLECs likely recorded data that was relevant to performance measure results in ways that best suited their own operational and management needs. They were obviously not concerned with making those data coincide exactly with that reported by Qwest insofar as detailed concerns such as which records are included and excluded, what time-of-day clock to use, and the like. What information was then available to the CLECs showed results that were different than those that Qwest reported. In some cases, the CLECs did not have the systems required to track performance measure results at the level of detail required of Qwest. CLECs even had differing systems within their own company. For the most part, the CLECs did not have personnel who are very familiar with the details of how performance data are captured, manipulated, and ultimately reported by Qwest.

C. Scope

Qwest and the participating CLECs agreed that the scope of the reconciliation effort would use data from seven states: Arizona, Colorado, Nebraska, Washington, Oregon, Utah, and Minnesota. Liberty performed the reconciliation on a state-by-state basis and issued reports on the results as follows:

- Arizona – December 3, 2001
- Colorado – January 3, 2002
- Nebraska – January 28, 2002
- Washington – March 2, 2002
- Oregon – March 28, 2002

This report contains the specific findings from the reconciliation of data from Utah and Minnesota.

The performance measures included in the study were:

- PO-5 – Firm Order Confirmations (FOCs) On Time
- OP-3 – Installation Commitments Met
- OP-4 – Installation Interval

- OP-6 – Delayed Days
- OP-13 – Coordinated Cuts On Time – Unbundled Loop
- OP-15 – Interval for Pending Orders Delayed Past Due Date
- MR-6 – Mean Time to Restore

Products included in the study were line sharing, unbundled loops, and LIS trunks. The scope of the study did not include the entire matrix of the three CLECs and all measures, states, and products. For example, the scope for data from Utah included only AT&T's LIS trunks, and the scope for Covad included only line sharing and unbundled loops. Furthermore, the agreed upon work related to MR-6 was not a complete reconciliation, but rather an examination of particular trouble tickets for which AT&T's and Qwest's records matched. Nevertheless, the data reconciliation study involved consideration of several thousand records, i.e., orders, FOCs, trouble tickets, and hot-cut records.

The timeframe for the data that were reconciled was the first half of 2001. This is particularly noteworthy for certain of the OP measures because Qwest made significant changes to its methods for calculating OP-3, -4, -6, and -15 with the release of PID 4.0 in the second half of 2001. PID 3.0 governed the reporting of performance measures during the period of the reconciliation study.

D. Confidentiality

The scope of the data reconciliation study was generally known to members of the ROC-TAG. Therefore the particular products and states for which one of the CLECs requested reconciliation was not considered proprietary. Liberty's data requests and the responses to them were shared with both Qwest and the specific CLEC involved. In its reporting of findings, Liberty attempted to prepare reports in a way that would be informative to all parties without revealing confidential information. Liberty provided detailed spreadsheets of its analysis of individual records to Qwest and the affected CLEC.

II. Conclusions

A. Summary

As a result of its initial data reconciliation work, Liberty concluded that "the information provided by CLECs for the state of Arizona did not demonstrate that Qwest reports of its performance are materially inaccurate." While Liberty discovered and reported some errors, the amount and nature of the errors, with the exception of a couple of specific issues, did not exceed what Liberty considered to be expected levels.

In addition to the inadequacy of CLECs' records discussed above, Liberty determined several other reasons why CLECs may have suspected that Qwest's reporting was inaccurate. AT&T and Qwest used different definitions for service order completion on LIS trunks. While both parties' definitions were reasonable, Liberty concluded that Qwest's definition and use of a service order completion date could not be considered out of conformance with the PID. Qwest uses a reference date in its data processing to ensure that all appropriate orders are reported. The effect of this practice is that some orders may be actually completed in one month but reported in the completion totals for a later month. CLECs had no ready way to learn whether a particular order may be reported in a different month than that of the recorded completion date. Another example of differences between the CLECs and Qwest concerned situation in which the CLEC requested a revised due date. Since OP-3 required a comparison of the completion date to the original due date (in accordance with PID 3.0), Qwest did not report orders for which the CLEC changed that original due date. Finally, it became apparent that Qwest often used multiple trouble tickets to handle situations that AT&T reported with a single trouble report, and that AT&T did not account for no-access time in its consideration of the average time to repair a trouble.

Data from Colorado, Liberty's second state for the study, showed different results. Liberty reported several process errors and three issues related to human errors. Using hindsight, several reasons for these different results became apparent. First, Covad provided some useful information for Colorado but had not done so for Arizona. Some of the problems found in Colorado related to the line-sharing product and Covad was the only CLEC to request reconciliation of that product. Second, the scope of the reconciliation effort for AT&T was smaller in Colorado than it was in Arizona, and this permitted Liberty to examine a higher percentage of orders in greater depth than had been done earlier. Finally, all of the issues that caused significant differences between Qwest and the CLECs, such as the use of a reference date and the definition of service order completion had been examined for Arizona and did not require additional effort in the subsequent states.

Liberty's third report, which covered the reconciliation of data from Nebraska, reported on two additional problems that had been discovered. One was a process error unique to Qwest's eastern service order processor. The other involved human errors in recording information used to report the average time to close a trouble ticket. While some errors had been noted in this area in Arizona, the percentage in Nebraska was higher and caused Liberty to issue an Observation report to document the potential problem.

Data from the state of Washington showed more examples of the same type of problems that had already been reported. In addition, Liberty discovered and reported that Qwest had not been consistent in its treatment of LIS trunk orders that involved a re-termination from one switch to another. Liberty also increased the scope of an earlier observation (O1031) dealing with the assignment of jeopardy and miss codes because Qwest should have excluded some orders from OP-15 but did not.

Using data from Oregon and considering AT&T's unbundled loop orders, Liberty found problems with some of Qwest's performance reporting that had not been previously discovered. More specifically, in some instances Qwest improperly recorded the stop times for coordinated cuts, which are used to calculate OP-13. Qwest also improperly omitted some orders in calculating OP-15A. Finally, Liberty again added to the scope of Observation 1031 because it found that Qwest's order typists had entered the incorrect completion dates and assigned customer miss codes.

As discussed in section III of this report, Liberty's reconciliation work using data from Utah and Minnesota did not result in the identification of any new problems.

Given the objective of this study, Liberty's work focused on the identification of problems with Qwest's performance measure reporting. Consistent with procedures established for reporting such problems, Liberty issued 1 Exception report and 13 Observation reports, and followed through on these matters to a final resolution. All 14 of these matters have been closed as discussed in more detail in the following section.

Some of the problems identified by Liberty had already been known to, and corrected by, Qwest. For these cases, the data reconciliation effort served little more than to document the issues and the resolution and make them known to interested parties. In general, Qwest did not report on problems it had found and corrected. For other issues, Qwest had not been aware of the problem and had to take new actions to either correct them or to prevent their recurrence. For these matters, Liberty believes that the data reconciliation effort contributed to more accurate performance reporting by Qwest.

Several of the issues identified by Liberty concerned the line-sharing product. During the period of applicability of the data reconciliation work, line sharing was a relatively new product. In addition, because the service involves using a single installation for service by both Qwest and a CLEC, reporting of performance measures had some unique aspects that caused problems. Qwest apparently continues to have some difficulty in getting the line-sharing product reported correctly (refer to KPMG Exception 3120).

About half of the performance-measure-reporting problems that Liberty identified were process- or system-type matters. These issues have, in general, solutions available through computer programming or revised data collection methods. They are also relatively easy to confirm that the solutions are effective in preventing the problem in the future. The other half of the problems were associated with human errors. While human errors cannot be made to totally disappear, Liberty identified issues that either because of the number or nature of the examples found pointed to matters that could have a non-trivial effect on the reported performance results. The corrective actions related to these issues necessarily take the form of new job aids or tools, revised methods and checks, and additional or focused training. All that can be done to verify appropriate corrective action is to judge whether these tools, methods, and training are on point and should be effective. In some cases Liberty recommended that the human-error issues identified during the data reconciliation work could be used to identify areas for future monitoring or auditing of Qwest's performance measures. Liberty did not detect any evidence that Qwest was attempting to manipulate data in order to improve its reported performance. Moreover, none of the human-error issues combined with Qwest's corrective actions caused Liberty to believe that Qwest's current performance reporting could not be relied upon as a measure of Qwest's actual performance.

When all of the performance measures and their various forms of disaggregation are considered, Qwest is required to report on over 700 measures for the region, each state, and to individual CLECs. To accomplish this reporting, Qwest must acquire data from systems and processes that were designed to help operate and manage a telecommunications company, not report performance on one segment of the business (wholesale) and compare it to another (retail). As a result of its audit of Qwest's performance measures, Liberty identified many (about 70 Observation and Exception reports in total) issues and needs for corrections and improvements. The data reconciliation work permitted Liberty to examine Qwest's performance reporting from the initial data input stage and at a very detailed level into certain of Qwest's processes. This work resulted in the identification of additional problems (another 14 Observation and Exception reports). Liberty is satisfied that these two work efforts have contributed significantly to more accurate and reliable reporting of performance by Qwest. Liberty also knows that, with the complexity involved in the required performance reporting, there may be undetected errors in Qwest's processes, and of course human error cannot be totally eliminated in such a complex process. However, Liberty found that Qwest has reasonable processes in place to self-check its performance reporting and to correct problems found. And, on the basis of its audit and data reconciliation work that has spanned nearly two years, and on the resolution and corrections of the matters addressed in the 84 Observation and Exception reports that it has issued, Liberty believes that Qwest's performance reporting accurately and reliably report Qwest's actual performance.

B. Exception and Observation Reports

This section provides a summary of each of the problem reports that Liberty issued during the course of its data reconciliation work.

Exception 1046

Exception 1046 stated that, during the period being covered by Liberty's data reconciliation, Qwest's systems sometimes truncated the third digit of an order's missed function code while it was being transferred from the Integrated Data Repository pending data source to the Detailed Data Set used by RRS to calculate OP-15 performance measure results. The Wholesale Regulatory Reporting program looks up the code in a miss code table to determine how the order should be handled. If it fails to find the code, it defaults the miss to Qwest. Thus, 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 stated that it had already identified the problem and that the programming code had been corrected in the August 2001 release of performance results. Qwest also stated that the problem affected all results produced for OP-15A and OP-15B on all designed service products for the period of January through July 2001.

Liberty issued data requests for the old and new programming code for OP-15, as well as for Qwest's documentation of how it identified the problem, developed revised business requirements, and solved the problem. Liberty reviewed the revised code for OP-15, conducted a telephone interview, and concluded that the code was no longer truncating the missed function code. Liberty also reviewed the PEND data files for the months of September through December 2001, the period after the fix was reportedly in place. Liberty confirmed that these files contained all three characters of the missed function code, *i.e*., there was no truncation. Liberty then used the files to determine how many orders should have been included in the OP-15 measure results for these months and confirmed that the published performance reports included the same number of orders. Liberty considers this exception to be closed.

Observation 1026

Observation 1026 identified retail orders that were being included in performance reports as wholesale orders. Qwest indicated that the process of provisioning a line-sharing order involves Qwest issuing a separate retail and wholesale order. The wholesale order was being correctly included in the RRS calculations. However, because there was no retail line sharing, the second order was being defaulted into the wholesale category, resulting in a double count. Qwest implemented a code change to look for orders that contain billing USOCs with retail activity and then exclude such orders from the measure. Qwest indicated that this action prevents the reporting of retail orders as line-sharing activity. The code changes were implemented effective with the November 2001 release of performance results. Qwest indicated that the December 2001 release corrected the results for all months in 2001.

Qwest provided data files that contained the orders identified by Liberty that were affected by this observation. Liberty has reviewed these files and found that the appropriate changes had been made for orders from July onward. Also, during its re-audit of the PID 4.0 OP measures, Liberty reviewed the code that is used to identify orders with retail activity. Liberty conducted an interview with Qwest on this matter and received responses to related data requests.

Liberty found that for months before July 2001, Qwest's revised code could not correct the problem. Qwest acknowledged this in a supplemental data request response.

Observation 1027

Observation 1027 identified various orders that were included and counted in more than one month. Qwest acknowledged the problem and indicated that it occurred when an order was completed in one month and then passed through completions again in a second month. If an order was passed through with a completed status (CP) in one month and goes through a second completion as a billing post (PP) in another month then it was double counted. Qwest implemented new code that reviews the record for the previous seven months and, if the record has been previously counted, it is omitted from the current month's calculations.

Liberty conducted an interview with Qwest on this matter and received responses to related data requests. Liberty reviewed the data files and the revised code provided by Qwest to confirm that the problem has been resolved. Liberty considers this observation to be closed.

Observation 1028

Observation 1028 reported that there was a significant error rate (about 15 percent) in the mean-time-to-repair (MTTR), or repair duration, used by Qwest in calculating its MR-6 measure for AT&T in Nebraska. In its earlier reconciliation work, Liberty found that Qwest's overall error rate of about 3 percent in Arizona, when viewed alone, was within the range of a reasonable human error rate. However, when Arizona and Nebraska results were combined, the error rate was 6.5 percent, which in Liberty's opinion could be problematic.

To obtain additional data on the nature and frequency of errors, Liberty conducted an analysis of AT&T trouble tickets in Oregon. Liberty found an error rate of 6.5 percent, the same as the combined results from Arizona and Nebraska. Liberty also requested information on Qwest's compliance review and coaching programs to ascertain whether such programs could be effective. Materials provided by Qwest included checklists of areas to be examined during the semi-annual reviews, with areas to record expectations, findings, and recommendations. These checklists encompassed a broad range of areas, including such topics as handoff of tickets to the central office, proper billing and rebate coding, sufficiency of work force, and valid no access time used on tickets. Qwest also provided ticket review worksheets and process guides on various aspects of trouble ticket administration.

Liberty's general assessment of the material was that the compliance reviews and coaching programs did not appear to be of the scope and focus that would minimize significantly the kind of errors found during data reconciliation. During its analysis, Liberty had found that the errors in MTTR were generally due to improper handling of "no access" time and improper ticket restoring and closing procedures. These errors were made by both customer technicians and by "scrubbers," the administrative technicians responsible for verifying and reconciling ticket histories. Qwest's compliance reviews and coaching programs were simply not geared to focus on these troublesome areas.

Qwest subsequently provided Liberty with additional information describing recent training programs and review efforts geared towards improving the handling of trouble tickets. A focused training process was completed in January 2002. All Design Service Center Directors, Administrative Technicians, and Customer Communication Technicians received additional training and documentation on guidelines for handling no access time and for providing information to customers as part of the ticket restoration process. In addition to the sampling and coaching programs that had been in place, Qwest implemented an audit process where each Design Service Center manager is now responsible for verifying repair process adherence.

While Liberty expects that the renewed focus on methods and procedures should work to reduce the error rate in MTTR, it cannot substantiate those effects. Liberty therefore recommends that the error rate be the subject of any future monitoring work. Liberty is satisfied that Qwest has taken positive steps to reduce the level of errors found during the data reconciliation work, and considers this observation closed.

Observation 1029

Observation 1029 noted the exclusion of certain CLEC line-sharing orders because the CLEC was unknown. Qwest acknowledged that it was unable to report the majority of line-sharing orders in the months of July and going forward for certain CLECs. Qwest indicated that its order writing process did not capture the data used to identify CLECs, and thus Qwest was not able to report line-sharing results for the majority of the orders at the CLEC-specific level for this time period. Beginning with the December 2001 data and going forward, a new detail field was added to PANS that addressed this problem.

Liberty has conducted an interview with Qwest on this matter and received responses to its data requests. The data responses included revised computer code, updated July RSOR data files with a solution in place, identification of other measures affected by this problem, and information on the development of the new data field. Liberty compared the original test July RSOR file sample with the corrected July RSOR data file sample and was able to confirm that the improperly excluded orders were included in the new July RSOR data set. Liberty considers this observation to be closed.

Observation 1030

Observation 1030 noted that Qwest failed to report a number of Covad's Firm Order Commitment *(FOC)* records because the state code was not automatically logged for those transactions. Qwest acknowledged that there was a problem. However, Qwest stated that only a small percentage of the transactions were not recorded. Qwest indicated that the issue was caused by a code break in EDI 6.0 related to unbundled loop processing. Qwest also indicated that affected customers were moved off EDI 6.0 in August and September and EDI 6.0 was retired in December 2001, so the problem with EDI 6.0 has been addressed with the new technology. For those records that are not properly logged with the new technology, Qwest will run an *ad hoc* report to identify them and will manually populate the state code.

Liberty conducted interviews with Qwest personnel and issued a number of data requests concerning this issue. Qwest acknowledged that "code break" affected the results for the entire period. From January through April 2001 there were 28 records that were excluded from PO-5C results. According to Qwest, PO-5A and PO-5B were not affected. Qwest also provided the number of records excluded from PO-2 (3 out of 99,487 records), PO-3 (246 out of 44,969), and PO-4 (808 out of 150,776 records) in July. In each case the resulting percentage was less than or approximately equal to .005 percent.

On the basis of Liberty's review of this matter, including Qwest's proposed solution to identifying records that did not contain a state code, Liberty considers this observation closed.

Observation 1031

Observation 1031 initially reported that the Service Order Miss Code *(SOMC)* in the RSOR data for some orders was incorrect, leading to errors in performance measurement reporting. Liberty noted several different types of anomalies regarding the information in WFAC, the SOMC, and how they are used in performance measure reporting.

Qwest initially responded to this observation on January 24, 2002. Qwest stated that it had clarified the Missed Function Code (MFC) coding process documentation, conducted a review with the Network Organization to ensure that employees correctly complete the MFC field, and individually reviewed SOMC coding with each ISC representative responsible for the coding errors identified.

Qwest conducted an additional assessment of the underlying causes of these human error problems and the means by which they should be corrected, and provided a supplemental response to this observation on March 21, 2002. In its supplemental response, Qwest stated that it found no issues that it believed were *1031 issues* with either Covad or WorldCom orders. Qwest also stated that, for all *1031 issue* orders it identified, the order was first held for facility reasons without populating WFAC with the associated jeopardy code (which should have been done according to Qwest procedures). If such an order was subsequently jeopardized to the CLEC and that jeopardy code was populated in WFAC, then the Service Delivery Coordinator might be unaware of the Qwest facility jeopardy and populate the SOMC with a customer miss. This in turn would result in the order being inappropriately excluded from the performance measures.

Liberty requested information to learn exactly how Qwest had conducted the analysis from which it concluded that all *1031 issues* were related to orders held for facilities. Qwest stated that it had assessed every LIS trunk and UBL order which a CLEC had submitted for data reconciliation and which Qwest had excluded as a customer miss. Qwest stated that, for each such order, it reviewed the WFAC log to determine if the customer jeopardy was justified and it also reviewed the TIRKS record to see if there had been a facility miss. EXACT screens were reviewed in those cases when it was necessary to determine if a customer jeopardy was due to a customer supplementing an order in such a way that a due date change was required. In every case, Qwest found that either the customer jeopardy was appropriate or there was also a facility miss in TIRKS. Liberty agrees that this was the appropriate analysis to perform.

Liberty did further work to confirm that the miscoding was always associated with a facility miss. Liberty identified numerous AT&T LIS trunk orders from Arizona that appeared to have been inappropriately jeopardized to AT&T without being related to a facility miss. Liberty then discussed each of these orders with Qwest in a teleconference, and Qwest demonstrated that the customer jeopardy was actually correct in every case.

Qwest stated that it retrained the affected employees on February 12, 2002 to ensure that they populate TIRKS with all Qwest-caused facility delays and that those delays are correctly transferred to WFAC. The retraining began with a conference call that included trainers and the directors of the five design centers. Two documents were used in the training. One was a brief document entitled *Escalation Management Jeopardy Posting Job Aid* that has a simple if-then format, and the other was a much longer document entitled *Jeopardy Code Job Aid*. Liberty reviewed these two documents and found that they adequately addressed the coding issue. These same two documents were then used by each director to train the employees in each center. In addition, personnel in the Delayed Order Group (which is responsible for initially recording any facility misses in TIRKS) were trained at the same time. A subsequent "coach's call" allowed employees to ask questions and get any required clarification. Qwest has also stated that its twice yearly audits of each center include reviewing MFC accuracy, and that each center also holds regular "miss meetings" to determine if misses have been accurately recorded.

Qwest also stated that it revised its code so that the MFC in WFAC will be used for OP-3, OP-4, and OP-6 instead of the SOMC for all designed services (which include LIS trunks), thus removing one step where errors could occur. Liberty reviewed both the old and the new code to ensure that the change had been made.

Finally, Qwest stated that it assessed the magnitude of the *1031 issue*, and that the issue has had minimal impact, *i.e.*, Qwest stated that its "historical results are accurate and reliable." Qwest stated that it analyzed orders from December 2001 and January 2002 and found that this issue affected 0.002 percent of the CLECs' analog loop orders, 0.18 percent of the 2-wire non-loaded loop orders, and none of the interconnection trunks that CLECs ordered in those two months. Qwest stated that it also analyzed Feature Group D trunks and found this issue affected 0.1 percent of the Feature Group D orders in those two months.

In addition to the problem discussed above, Liberty has addressed three additional issues in this observation. First, Liberty had found that Qwest included several AT&T Washington LIS trunk orders in the reporting of OP-15 even though AT&T had caused the delay and the orders should therefore have been excluded. This matter was investigated as part of this Observation because it initially appeared to be a miscoding problem. In response to data request 85-007, Qwest provided information clearly confirming that the orders had been improperly included, but not because of miscoding. Rather, they had been included because of a programming problem previously identified by Liberty in Exception 1046. That exception has already been closed.

For a large number of Covad's unbundled loop orders, Liberty found that while Qwest's treatment of the orders was correct, Qwest's processes or procedures differed from what Liberty had observed in other states and also differed from what had previously been described to Liberty. Specifically, Qwest had indicated that the SOMC field was only populated in cases where the due date had been missed. For the Washington data, however, Liberty found customer-caused miss codes entered in the SOMC field for orders in which the due date had been met. Because this also related to coding, Liberty investigated this second matter as part of Observation 1031.

In response to a data request, Qwest stated: "Qwest considers the Customer Caused Miss Codes only if the due date is missed. If the due dates are met, no attention is paid to the customer caused miss code and therefore the order could be still included in the OP-4 measure even if it had a customer caused miss notification identified with it. Qwest has reviewed all COVAD WA OP-4 data sets submitted to Liberty and have determined that all 99 of the entries have an Order Completion (SOCD) that is earlier than or equal to the Order Due Date (SODD) for May, June and July 2001." Liberty has reviewed Qwest's procedures and programming code and agrees that Qwest is correct, i.e., the RSOR process is such that if Qwest meets its commitment date, then the SOMC field is not used.

Qwest has been populating the SOMC field even when a due date is not missed because of its legacy system requirements. The Western region RSOLAR system and the Eastern region SOLAR system both require a miss code whenever the completion date does not equal the due date. The Central region SOPAD system does not require an SOMC in such cases, but it will accept one. Although this situation does not cause misreporting of performance results, Qwest has decided to implement a process of using an SOMC of "Z35" to satisfy legacy system edit requirements, rather than a customer miss code.

During its data reconciliation work for Oregon UBL orders, Liberty found a third issue, that Qwest's order typist had entered an incorrect completion date and that this affected the results for OP-3 and -4. In all cases, the typist entered exactly one day later than was correct. In one-third of such cases, the typist also entered a customer-caused miss code, which resulted in the orders being improperly excluded from the measure. The WFAC documents contained the correct completion date, and Qwest speculated that the typist may have entered the current (today's) date instead of that contained within WFAC. It could not be determined exactly why a customer miss was entered for some of these orders. Qwest provided to Liberty its revised Service Order Completion Process training and job aid materials that very clearly indicated the source that should be used for completion dates, missed codes, and jeopardy codes.

Liberty now considers this observation to be closed.

Observation 1032

Observation 1032 noted that Qwest included some orders in OP-4 that should have been excluded because the requested provisioning interval was greater than the then-current standard installation interval. Qwest's response indicated that out of a very large number of orders, Liberty found only a few PONS for which this had occurred. Originally Liberty thought the percentage of orders affected was more significant. But after additional analysis and correction of errors, Liberty found that, in the sample of UBL orders for Colorado and Washington combined, about 4 percent of the orders for which Qwest and the CLEC disagreed had this problem. When the agreed upon orders are also counted, the percentage is even lower.

Qwest's responded to the observation by indicating that the orders should have been excluded but were not because of human error when the order was processed. Qwest personnel had failed to populate the "L" (for longer than standard interval) field on the service order. Qwest indicated that it had improved its documentation in an effort to prevent this problem from recurring. Liberty reviewed the improved documentation and concluded that it adequately described the process and should help to avoid this kind of error in the future.

On the basis of Liberty's additional analysis of Colorado and Washington orders showing a lower percentage than had been thought to be the case, and the evaluation of the steps and improved tools implemented by Qwest to minimize the likelihood of the error, Liberty has concluded that this observation should be closed.

Observation 1033

Observation 1033 stated that there were instances where Qwest personnel determined the order application date/time incorrectly for OP-4 LIS trunk performance measurement reporting purposes. In some instances, Qwest failed to change the application day to the next day, even though the ASR was received after 3:00 p.m. MT. 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 in the definition section of the PID.

In addition, Liberty determined that several Covad UBL orders in Arizona received after 7 p.m. were dated the same day, rather than the next day in accordance with the PID. This resulted from Liberty's review of the data Covad provided too late for inclusion in the Arizona report.

In the responses to data requests, Liberty received the documentation used by Qwest to train personnel in properly determining the application date, and the Qwest application date methods and procedures. Liberty reviewed those documents and found that they clearly described the application date and how it should be determined, included examples, and were all internally consistent. Liberty considers this observation to be closed.

Observation 1034

Observation 1034 identified various line-sharing orders that were incorrectly excluded as loops with non-standard intervals of 72 hours. Liberty identified the problem in the Covad's Colorado May PO-5 performance report and did not find this problem occurring in the months of June and July. Qwest in its response concurred with Liberty that a number of line-sharing orders for May had been excluded from the performance report because the orders had been assigned a non-standard FOC interval of 72 hours. Qwest indicated that the problem was human error and that the exclusions of the line-sharing orders were improper. Qwest stated that their processes currently dictate that the 72-hour interval should be manually selected only on specific unbundled loop products where the CLEC has a special non-standard FOC agreement. Qwest contends that this process should and did address the concerns raised in the observation.

Qwest identified for Covad's May performance report 23 line sharing orders in Arizona, 29 line sharing orders in Colorado, and 91 line sharing orders in Washington excluded because of the assignment of a non-standard interval. Qwest provided ad hoc files for each month from May through December 2001. Liberty has reviewed each month and agrees that Qwest has identified the magnitude of the problem in Arizona, Colorado, and Washington. Furthermore, Liberty confirmed that the sharing non-standard interval assignment did not occur during the months from June through December 2001.

In an interview, Qwest gave a plausible explanation for why this problem only occurred during the month of May 2001. Since Liberty has confirmed that the problem has not appeared after that month, this observation is considered closed.

Observation 1035

Observation 1035 reported that there were errors in the OP-3 and OP-4 measures prior to June 2001 because Qwest included cancelled orders in the measures. According to Qwest, the problem affected only orders coming through SOLAR, the service order processor for the five eastern states (Iowa, Minnesota, Nebraska, North Dakota, and South Dakota). Qwest has indicated that the problem was resolved as of May 12, 2001, but all results prior to June 2001 for the five states were affected. Liberty saw no evidence of the problem in Arizona or Colorado, and has found no reason to conclude that the problem affected anything other than these five states.

Qwest indicated that the cause of the problem was a software error that resulted in not all cancelled orders being assigned a completion date of 11/11/1111 (and thus properly excluded from the measures). According to Qwest, any order that had multiple activities in one day, including cancellation would not go through the portion of the programming logic that assigned the 11/11/1111 date. Any order with only cancellation activity in a given day would have been handled correctly.

The programming fix put in place as of May 12, 2001 has corrected the problem of cancelled orders being included in OP-3 and OP4, and results beginning with June 2001 should not be affected. Liberty therefore considers this observation closed.

Observation 1036

When Qwest plans to undertake a switch conversion, it notifies its customers, who then submit disconnect and re-termination orders to move their LIS trunks from the old Qwest switch to the new one. Coordination between the parties is required to ensure that service is not adversely affected during the conversion process.

In Washington, Liberty identified several LIS trunk re-termination orders that AT&T had included in the OP and PO-5 performance measures, but Qwest had not. Qwest did not include them in PO-5 because Qwest considers re-termination orders to be projects, and projects are excluded from the PO-5 measure.

However, orders deemed to be projects are not excluded from the OP-3, OP-4, OP-6, and OP-15 measures. Qwest sometimes excluded these re-termination orders from these OP measures and sometimes it included them. For example, Liberty identified several Colorado AT&T LIS trunk re-termination orders that Qwest did include in the OP measures. In addition, Washington re-termination orders were improperly coded C40 due to human error.

PID version 3.0 specifies that only inward orders are to be included in OP-3, OP-4, OP-6, and OP-15. Qwest stated in its response to this observation that it does not view re-termination orders as having inward activity, and it therefore believes that these types of orders should be excluded from the OP measures. It also agreed that, historically, it had treated these orders inconsistently, sometimes including them in the measures and sometimes excluding them. AT&T stated that it accepts Qwest's explanation of why re-termination orders should be excluded from the performance measures, although it expressed concern that Qwest's performance on these orders will not be measured. Accordingly, the parties now agree that re-termination orders should not be included in performance reporting.

In its response to this observation, Qwest also stated that it was making a programming code change that would fix the re-termination order problem retroactive to December 2001 data. Qwest provided Liberty with the revised programming code for the OP measures as a supplement to its observation response. Liberty reviewed it and confirmed that Qwest had created a new exclusion that removes central office conversion orders from that measure.

Qwest stated that it retrained all Customer Communication Technicians – Implementer in the Des Moines Design Service Center (DSC) on February 12, 2002. The Des Moines DSC handles all switch conversion interconnection trunks. Liberty reviewed the training materials and confirmed that they clearly require that the jeopardy code of H41 be used for switch conversions and not the jeopardy code of C40. Liberty now considers this observation to be closed.

Observation 1037

Observation 1037 noted that Qwest had not correctly recorded the coordinated hot cut stop time used for OP-13A. Liberty discovered this issue during its data reconciliation work using Oregon data. In some instances during April and May 2001, testers were not reporting stop time as the time when physical work and Qwest testing were completed (consistent with PID version 3.0) but rather as the time the CLEC called back to confirm that the order was completed. As a result, the hot cut interval was longer than it should have been. In some cases, this difference caused Qwest to consider the hot cut commitments as "missed" when they were not. Reported performance results for April and May were therefore incorrect.

Qwest informed Liberty that these errors coincided with its moving the coordinated cut service center from Des Moines to Omaha. Qwest told Liberty that it had training efforts on-going during these months, had identified the issue during the April and May timeframe, and had retrained its testers. According to Qwest, errors of this type were eliminated by June. Qwest subsequently provided OP-13A files for July and August 2001. Liberty reviewed these data and found no indication that testers were still making these errors. In addition, Liberty investigated other hot cut data from the July file that had recorded times different from the norm. Liberty found only one instance in which a recording error had been made – a delay time had been recorded incorrectly by 15 minutes.

Liberty had also discovered that, during the month of June 2001, many testers had begun to record the time spent waiting for a call back from the CLEC as "delay time." Qwest had appropriately subtracted any delay time from the calculated interval used to derive the measure, consistent with the PID. Therefore, the duration of the coordinated cut was accurate in these cases, but the actual stop time recorded was not consistent with the PID definition.

Qwest reported that it had updated its job aids and retrained its testers on the correct treatment of stop times as of April 5, 2002. Liberty believes Qwest has taken positive steps to improve the consistency of its recorded data with the PID. Again, however, this inconsistency did not affect results.

On the basis of its review of OP-13 data from the months of June, July, and August 2001, Liberty considers this observation closed.

Observation 1038

Observation 1038 noted that there were orders omitted from OP-15A unbundled loop results for April 2001. Liberty discovered this matter during its reconciliation work using data from Oregon. Qwest indicated that because it re-ran the April results at a later date than normal, not all pending orders were captured. The programming code did not account for a later-than-normal running of results by not searching in all locations for orders that may have been pending as of the last day of the month. Qwest also indicated that it had previously identified this problem and had made a modification to its programming code in February 2002 such that OP-15A results starting with January 2002 were not affected. Qwest said that it also restated the results for December 2001. Results prior to December 2001 were affected but were not restated.

Qwest provided and Liberty reviewed the revised programming code. Liberty conducted an interview with Qwest’s programmers and others to review the code in detail. Orders are stored in both pending and completed files. The program now specifically captures all orders that were pending at the end of the month regardless of where the order is stored. Qwest also provided a revised data file for the April unbundled loops that Liberty used during reconciliation. It showed that the missing orders had been properly captured.

Liberty is satisfied that the programming code modification corrected the error noted in this observation, and considers this observation closed.

III. Specific Results from Utah and Minnesota Data

A. Covad

Liberty performed a reconciliation of Covad and Qwest data for OP-4 and PO-5. In all but a very few isolated cases, the problems with Qwest's reporting were the same problems that had been detected in the work from earlier states. These problems have been corrected and the associated Observation reports closed. The following paragraphs provide a summary of the results; detailed spreadsheets have been provided to Covad and Qwest.

Liberty reconciled a sample of 113 line-sharing orders for performance measure OP-4. For 19 orders, Qwest and Covad agreed. For 65 orders, Qwest was correct, not shown to be wrong, or the data were inconclusive. Qwest was wrong on 29 orders. Fourteen of these involved the retail/wholesale issue discussed in Observation 1026, 13 involved the matter of the CLEC being unknown discussed in Observation 1029, 1 order Qwest mistakenly cancelled, and 1 order Qwest's records had an incorrect due date that caused the order to be excluded.

Liberty reconciled a sample of 119 line-sharing orders for performance measure PO-5. For 28 orders, Qwest and Covad agreed. For 64 orders, Qwest was correct, not shown to be wrong, or the data were inconclusive. Qwest was wrong on 27 orders. For 14 orders the problem was the state code issue identified in Observation 1030. For 12 orders the problem was a mix-up of UBL and line-sharing orders (Observation 1034), and for one order Qwest appeared to incorrectly calculate the interval. Aside from this one outlier, these mistakes were problems that had already been identified, and resolved through Observations.

Liberty reconciled a sample of 137 UBL orders for performance measure OP-4. For 67 orders, Qwest and Covad agreed. For 57 orders, Qwest was correct, not shown to be wrong, or the data were inconclusive. Qwest was wrong on 13 orders. Nine of these involved the non-standard interval issue addressed in Observation 1032, one order involved the duplicate reporting discussed in Observation 1027, two orders were duplicate reporting from the same PON, and for one order, Qwest miscalculated the interval numerator by one day because of a computer system failure on the completion date.

B. AT&T

Liberty performed a reconciliation of AT&T LIS trunk orders for the states of Utah and Minnesota for OP-3, OP-4, OP-6, OP-15, and PO-5. As with the Covad reconciliation, the problems with Qwest's reporting were almost all the same as those identified in states reconciled earlier. The following paragraphs provide a summary of the results for both states combined; detailed spreadsheets have been provided to AT&T and Qwest.

For OP-3, Liberty reconciled 45 orders, for which the parties agreed on 19. Of the 26 orders where the parties disagreed, Qwest was incorrect on 5. Four of Qwest's errors related to Observation 1031, and the fifth was because of inadequate support for Qwest's information.

For OP-4, there were again 45 orders, with the parties agreeing on 13. Of the 32 orders where there was disagreement, Qwest was wrong on 7. Four of the errors related to Observation 1031, 2 related to Observation 1033, and the seventh was because of inadequate support.

There were 10 orders to reconcile for OP-6, with the parties agreeing on only 2. Where the parties disagreed, Qwest was wrong one time because of Observation 1031.

Only 6 orders required reconciliation for OP-15, and the parties agreed on 1. Of the 5 orders where there was disagreement, Qwest was incorrect on 4 because of Observation 1031.

Finally, there were a total of 36 orders in PO-5, with the parties agreeing on 27. Qwest was correct every time there was a disagreement.