Exhibit
68-70

As stated earlier, as part of the merger, USWC was renamed QC. None of the USWC or QC assets were transferred to any QC affiliate(s). All the USWC assets remained under the ownership of the same entity that owned them before the merger. Pre-merger, the entity was USWC; after the merger, that entity is QC. In other words, none of QC's affiliates own any of the assets that were owned by USWC before the merger.

No affiliate of QC has stepped into the shoes of or replaced the pre-merger USWC, nor has any QC affiliate acquired substantial assets of USWC or continued USWC's ILEC business without interruption or substantial change. No QC affiliate has acquired local exchange or exchange access services or facilities form USWC or QC. No QC affiliate has acquired from USWC or QC network elements that must be provided on an unbundled basis pursuant to section 251(c)(3). The only Qwest entity that has done any of these things in South Dakota is QC.

QC's affiliates and their predecessors have always engaged in independent lines of business that do not overlap with QC or its predecessor, USWC, at all. QC has not sought to avoid its section 251(c) obligations by moving local network facilities or elements from QC to its affiliates and having the affiliates lease them back to QC or provide the services themselves.

Contrary to AT&T's assertion, QC has no duty to unbundle any dark fiber owned by its affiliates. To trigger such an obligation would require a legal determination that QCC is a successor or assign of USWC. There is absolutely no factual basis for finding that QCC is a successor or assign of USWC. Rather, as stated above, the only entity that is a successor of USWC is QC. No Qwest entity other than QC provides local exchange service in South Dakota. Finally, this issue is moot in South Dakota because neither QCC nor any other affiliate has dark fiber in it this state.

This issue has been raised by AT&T in other jurisdictions. In the Multi-State 271 proceeding, the Facilitator addressed this issue and found that AT&T's argument with respect to alleged unbundling obligations of QC affiliates, including QCC, has no basis.[1] Additionally, this issue has been decided in Qwest's favor in every one of Qwest's states to date.

[1] Multi-State 271, 3d Report – Emerging Services, June 11, 2001, p. 54. Attachment 29 to Qwest's Petition filed October 23, 2001

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF SOUTH DAKOTA

In the Matter of the Investigation into Qwest Corporation's Compliance with Section 271(c) of the Telecommunications Act of 1996	)))))	Docket No. TC01-165

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge, information, and belief.

Executed this 28th day of March, 2002.

Mary Ferguson Lafave
Mary Ferguson Lafave

STATE OF COLORADO)
)ss.
COUNTY OF DENVER)

Subscribed and sworn before me this 28th day of March, 2002.

Marjorie Odbratch
Notary Public
My Commission Expires
March 6, 2005

BEFORE THE
PUBLIC UTILITIES COMMISSION
STATE OF SOUTH DAKOTA

IN THE MATTER OF THE INVESTIGATION INTO QWEST CORPORATION'S COMPLIANCE WITH SECTION 271 (C) OF THE TELECOMMUNICATIONS ACT OF 1996	))))	DOCKET TC 01-165

PRE-FILED TESTIMONY AND DATA RECONCILIATION REPORTS

OF ROBERT L. STRIGHT OF THE LIBERTY CONSULTING GROUP

ON BEHALF OF

QWEST CORPORATION

April 2, 2002

Q. PLEASE STATE YOUR FULL NAME, EMPLOYER, AND BUSINESS ADDRESS.

A. My name is Robert L. Stright. I am a principal and founder of The Liberty Consulting Group. My business address is 65 Main Street, Quentin, PA, 17083.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS.

A. I have had lead roles for Liberty in telecommunications consulting engagements conducted for many state public utility commissions including Delaware, Maryland, Pennsylvania, New Jersey, New York, Oklahoma, and Virginia. These assignments have involved rate cases, management audits, financial evaluations, performance metrics, affiliate transactions, interconnection arbitrations, and consulting to commissioners and administrative law judges. I have also consulted in the energy industry. A resume that includes some of my consulting experiences is attached as Exhibit RLS-1.

Q. DID THE REGIONAL OVERSIGHT COMMITTEE RETAIN LIBERTY TO PERFORM WORK AS PART OF ITS OSS TEST?

A. Yes. Initially, the Regional Oversight Committee (ROC) retained Liberty to conduct an audit of Qwest's wholesale performance measures as part of the OSS test. I served as the project manager for that assignment. The scope of Liberty's audit is set forth in the final audit report. The audit had three primary elements: an examination of the business processes related to the performance measures, tracking data through the process to performance results reporting, and independently calculating performance results.

Liberty issued a final audit report on Qwest's performance measures in September 2001. However, several performance measures were changed or added during and after Liberty's audit. The ROC requested Liberty to audit those changed and new measures. Liberty's work in that area is ongoing.

Q. DID LIBERTY REACH ANY CONCLUSIONS IN ITS PERFORMANCE MEASUERMENT AUDIT?

A. Yes. While we included several recommendations for improvement and ongoing monitoring of performance measures, Liberty concluded that the audited performance measures accurately and reliably report Qwest actual performance.

Q. DID THE ROC THEN ASK LIBERTY TO CONDUCT DATA RECONCILIATION WORK AS AN EXTENSION OF THE PERFORMANCE MEASUREMNT AUDIT?

A. Yes. In August 2001, the ROC asked Liberty to conduct data reconciliation as an extension of the performance measures audit. Liberty is performing "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. Three CLECs – AT&T, WorldCom, and Covad Communications – participated in the data reconciliation to help determine whether the data Qwest inputs into its systems are accurate and reliable. The data reconciliation process was designed to determine whether any of the information provided by CLECs demonstrated inaccuracy in Qwest's reported performance results as these measures were defined in the PID. The ROC requested that Liberty use the Observation and Exception process for indicating any concerns with Qwest's data.

Q. PLEASE DESCRIBE THE DATA RECONCILIATION WORK THAT LIBERTY HAS COMPLETED TO DATE.

A. Liberty issued its first data reconciliation report, which used data from Arizona, on December 3, 2001. The second report on data from Colorado was issued on January 3, 2002.. Liberty issued the third report, which provided the results of the review of data from Nebraska on January 28. On February 2, 2002, Liberty issued an update to the Colorado report, which provided the status of observations and the exception issued as a result of all of the data reconciliation work. On March 1, 2002, Liberty issued a report on the results of its reconciliation of data from the state of Washington. Finally, on March 28, 2002, Liberty issued a report on the results of its reconciliation of data from the state of Oregon. While reconciliation work is ongoing in the states of Utah and Minnesota, I expect that the data reconciliation work completed by Liberty to date is representative of what Liberty will find in these remaining states. The reports that Liberty has issued are attached to this testimony as Exhibits RLS-2 through RLS-7.

Q. HAS LIBERTY REACHED ANY CONCLUSIONS AS A RESULT OF ITS DATA RECONCILIATION.

A. Liberty's data reconciliation work is not complete. However, and for the most part, the same issues are the cause of any problems with Qwest's performance reporting. Liberty identified two new issues in its most recent review of data from Oregon. Liberty is investigating those matters, but it appears that both were limited to a specific time interval during the first half of 2001. In all, the issues that Liberty discovered were documented in 1 Exception report, 13 Observation reports, and various findings where Liberty found Qwest's data collection practices appropriate. Liberty has since closed the Exception and ten of the Observations. Liberty continues to evaluate the three open Observations.

Liberty has evaluated several thousand orders and trouble tickets on an item-by-item basis. With one exception, and considering all of Liberty's work in both auditing and reconciling Qwest's performance measures and data, I believe a commission may rely on Qwest's performance results as representative of the level of performance that Qwest delivers in the marketplace to CLECs.

The condition placed on the above statement is that Liberty has found errors and inconsistencies in the way Qwest has treated service orders with respect to customer-caused problems in meeting due dates and causing delays. This matter is the subject of Liberty's Observation 1031. Qwest has provided information to show that it has improved its procedures and processes to minimize the likelihood of these types of errors. Qwest recently provided more information that Liberty is evaluating.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

Robert L. Stright

Selected Consulting Experiences

Project manager and lead consultant the audit of wholesale performance measures for the Regional Oversight Committee *(ROC)*, 13 of the 14 states served by Qwest.

Lead consultant for Liberty's assignment to provide advice to a member of the Pennsylvania Public Utility Commission in the global telecommunications-settlement proceeding that is concerned with many issues associated with local competition.

Project manager for Liberty's evaluation of the financial integrity of Verizon – New Jersey for the NJ Board of Public Utilities.

Engagement Director for Liberty's investigation of the reliability of Commonwealth Edison's transmission and distribution systems for the Illinois Commerce Commission.

Project Manager for Liberty's assessment for the Virginia State Corporation Commission of prices for Bell Atlantic-Virginia's unbundled-network elements.

Assisted the Staff of the Virginia State Corporation Commission in the arbitration proceeding for local-telephone competition involving GTE and new entrants Sprint, MCI, AT&T, and Cox Communications.

Project Manager for Liberty's assistance to the New Jersey Board of Public Utilities related to arbitrations TCG, MCI, AT&T, and Bell Atlantic.

Project Manager for Liberty's assessment of pricing of Southwestern Bell Telephone's unbundled-network elements, performed for the Oklahoma Corporation Commission.

Lead Consultant providing technical support in Liberty's Telecommunications Act arbitration assignments in Mississippi and Idaho.

Lead Consultant for Liberty's review of the affiliate relations of Bell Atlantic - Pennsylvania and Bell Atlantic - District of Columbia for their respective public-service commissions.

Lead consultant in Liberty's audits of the affiliate interests of C&P Telephone of Maryland for the Maryland Public Service Commission (MPSC) and of New York Telephone Company (NYT) for the New York Public Service Commission (NYPSC).

Project Manager for Liberty's work for Boston Edison and BEC Energy dealing with a regulatory proceeding initiated by an information-services competitor and the structuring of the newly-formed holding company.

Consultant for the review of affiliate transactions of Public Service Company of New Hampshire in a management audit conducted for the New Hampshire Public Utilities Commission.

Led task areas in Liberty's review of affiliate transactions of Public Service Electric & Gas Company, for the New Jersey Board of Regulatory Commissioners.

Lead Consultant in Liberty's management audit of Arkansas Western Gas Company (AWG) for the Arkansas Public Service Commission, AWG, and the Office of the Attorney General of the State of Arkansas.

Lead Consultant in Liberty's audit of Baltimore Gas & Electric Company's management of the productive capacity of the Calvert Cliffs power plant for the MPSC. Results provided in testimony in a special proceeding before the MPSC.

Project Manager on Liberty's evaluation of an extended outage and utility-management performance at the South Texas Project nuclear plant (STP) on behalf of Houston Light & Power Company and Baker & Botts.

Education
M.B.A., Finance/Operations Research, University of Maryland
B.S., Science Engineering, Northwestern University

Registration
Professional Engineer, Virginia

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF SOUTH DAKOTA

In the Matter of the Investigation into Qwest Corporation's Compliance with Section 271(c) of the Telecommunications Act of 1996	)))))	**Docket No. TC01-165**

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge, information, and belief.

Executed this 1st day of April, 2002.

STATE OF PENNSYLVANIA)
)ss.
COUNTY OF LEBANON)

Subscribed and sworn before me this 1st day of ~~March~~ April, 2002.

Notary Public

Notarial Seal
Marcia A. Kreiser, Notary Public
Cornwall Boro, Lebanon County
My Commission Expires Jan. 25, 2006
Member, Pennsylvania Association of Notaries

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Report on Qwest Performance Measure Data Reconciliation for Arizona

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. This report provides the results of Liberty's review of Arizona data.

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 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.*

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. However, some CLECs did not produce sufficient evidence to demonstrate that claimed discrepancies actually existed. 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 an indirect result of its data reconciliation work for the state of Arizona, Liberty will be issuing one Exception Report on performance measure OP-15. The discovery of the problem described below and in the forthcoming Exception Report did not result from information provided by CLECs, but rather was the result of Liberty's review of Qwest's information during data reconciliation.

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.

This first report by Liberty on data reconciliation addresses only Arizona data. A test of data from other states is within the current scope of the work. Liberty considers important aspects of the results of Liberty's review for Arizona to apply to other states. Liberty provides recommendations in this report about how data reconciliation testing might best proceed in other states, given such applicability.

On November 19, 2001, Liberty issued a status report to each of the CLECs and Qwest on the Arizona data reconciliation. Liberty reviewed and considered comments on the limited analysis results that were included in those status reports in reaching the results presented in this report.

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 completing the first of the states included in the current scope of the reconciliation effort.

Given the way that CLECs captured data and accounted for information related to Qwest's wholesale performance measures, concerns about the accuracy of Qwest reporting are understandable.

It is understandable that CLECs record data relevant to performance measure results in ways that best suit their own operational and management needs and their information system capabilities. They have not had substantial reason to ensure that their recording and processing of data coincide exactly with that reported by Qwest, although the potential for adoption of the QPAP in the future will make commonality much more important. Detailed data matching concerns, such as which records are included and excluded, what time-of-day clock to use, and the like, simply have not been matters of immediate concern heretofore.

In some cases the CLECs do not have the systems required to track performance measure results at the level of detail required of Qwest, which must take measurements in strict accord with the requirements of the PID's approximately 700 sub-measures. Some CLECs even use multiple and different data management systems to support their own internal operations. For the most part, Liberty found that the participating CLECs' personnel are not familiar with all of the details of how performance data are captured, processed, and ultimately reported by Qwest.

The information provided by CLECs for the state of Arizona did not demonstrate that Qwest reports of its performance are materially inaccurate.

In the course of its data reconciliation work to date, Liberty found that Qwest did make 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. Moreover, there was no evidence that Qwest purposely took steps to make its performance figures appear better than it actually was. With the exception of a programming problem associated with measure OP-15 and a failure to report a group of Firm Order Confirmations in June 2001, the errors were not systemic, nor did they apply to a significant percentage of the performance measure results.

The results of Liberty's Arizona data reconciliation work should influence decisions about the scope and methods of the remaining data reconciliation work.

Liberty has identified what it considers to be generically applicable reasons for large portions of the discrepancies between Qwest and CLEC performance data. Future data reconciliation work would be expedited if it does not have to examine for other states what Liberty expects to be very substantial amounts of data whose discrepancies have the same underlying causes. The dedication of resources and the level of detail of information that is required on the part of CLECs to participate meaningfully in data reconciliation is certainly much better understood now that the Arizona work has been undertaken. CLECs need to determine whether they can commit the resources and produce the information required for the scope of work planned. Finally, there may be differences in the ways that Qwest performs in various parts of its region. Future reconciliation work should attempt to focus on those performance aspects that could result in differences from the Arizona findings.

III. Results of Data Reconciliation – AT&T

A. Introduction

After some discussion between the parties, it was ultimately determined that the following performance measures were to be reconciled:

- The denominator of PO-5A, B, and C combined for unbundled loops (UBL).
- The denominator of PO-5D for Local Interconnection Service (LIS) trunks.
- The numerator and denominator of OP-3D and E combined for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-4D and E combined for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-6A and OP-6B for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-13A and OP-13B for unbundled loops.
- The numerator and denominator of OP-15A and OP-15B for LIS Trunks.

For unbundled loops, the period to be reconciled is April 2001 through June 2001.

The LIS Trunks 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.

In addition, Liberty was to compare the unbundled loop trouble tickets provided by AT&T with the trouble tickets provided by Qwest. Where Liberty had data about a trouble ticket from both parties, Liberty was to compare the repair intervals reported by the two parties. In addition, Liberty was to analyze situations identified by AT&T where AT&T found one trouble ticket, but where more than one Qwest trouble ticket applied.

Liberty received data both from Qwest and from AT&T. Liberty initially received from Qwest: (a) data files containing information on the records actually used in the measurement, and (b) those records that Qwest had excluded. Qwest provided one file for each state/product/measure combination. These data allowed Liberty to determine the records that Qwest believed should be included in each measure. Liberty could also replicate the numerators and denominators in Qwest's reported performance results.

AT&T initially provided for each state files by product containing the records it believed were relevant. AT&T also provided hardcopies of the source documents for its records (*i.e.*, UBL service orders, LIS trunk service orders, and trouble tickets). Liberty needed to know those records that AT&T believed should be included in the numerators and denominators of each measure so that Liberty could reconcile the sets of data from the two parties. Liberty therefore requested that AT&T provide this information. AT&T did so, and provided the actual data files used to calculate the performance measure results it believed to be correct.

After the scope of the reconciliation was agreed upon and after Liberty received comparable data from both parties, Liberty began its analysis by matching the parties' data files. Liberty identified records where the parties agreed (so that no reconciliation was necessary), cases where one party included a record but the other party did not, and records where both parties included the record in the denominator, but disagreed about the numerator.

Liberty then analyzed the discrepant records. If Liberty could reach a decision about how the record should be treated by using the available information, Liberty did so. If more information was required, Liberty submitted data requests to one or both parties (as agreed among the parties, Liberty copied each party on the data requests submitted to the other). Liberty was sometimes able to use the information in the analyses provided by Qwest in lieu of sending data requests to Qwest.

For each record analyzed, Liberty reached one of six conclusions, as follows:

1. Qwest and AT&T agreed on the treatment of the record
2. Qwest incorrectly included, excluded, or otherwise treated the record in the measure
3. Qwest's reporting of the record was correct
4. AT&T did not provide any information to demonstrate that Qwest's treatment of the record was incorrect
5. There was no actual discrepancy between the parties, (*e.g.*, cases where some analysis is required to demonstrate that there is no discrepancy)
6. The information available on the record was inconclusive or conflicting in a way that prevented reconciliation.

B. Reconciliation Issues

There was little apparent agreement between the companies at the initial stages of the reconciliation. For example, for LIS Trunks, AT&T and Qwest agreed on both the numerator and denominator for OP-3 for only 9 percent of the orders under consideration. OP-4, which has an interval numerator rather than a miss/met numerator like OP-3, showed even less agreement (6 percent). After some investigation and analysis, Liberty found, by determining that some records fell into category #5 above, that there was only a slightly higher level of agreement. However, Liberty determined that only a few issues that accounted for much of the discrepancy.

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 for significant numbers of discrepancies between the parties. For example, it accounts for a third of the LIS trunk denominator discrepancies between the parties for OP-3 for the months of January to June.

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.

The parties' differing interpretations of the term *completion date* appears to be limited to LIS trunk orders. Liberty did not find that this difference affected results for loops. However, it is possible that a similar difference could cause differing results for other products.

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 will issue an Exception Report addressing this issue. The problem occurred in about half 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 11 percent of the LIS Trunk discrepancies and for nearly 6 percent of the discrepancies between AT&T and Qwest for OP-3, unbundled loops, for April 2001.

This reference date issue affects all products.

Changed Due Dates

Qwest and AT&T have differing views on how a service order for unbundled loops should be treated in performance measures in those cases where AT&T has changed the due date on the order. In every case where AT&T changed the due date after the order reached a certain stage in the process, Qwest treated the order as ineligible for inclusion in the OP measures. AT&T, on the other hand, only excluded an order if it changed the due date on the due date itself; it regarded these orders to be the ones whose due dates were missed due to for AT&T-caused reasons. If AT&T changed the due date at any earlier time, it did not exclude the order (at least for a reason related to the changed due date). This difference accounted for about a quarter of the OP-3 unbundled loop discrepancies and for a smaller percentage of the LIS Trunk discrepancies between Qwest and AT&T.

This issue is not applicable under the current Qwest method for calculating performance measures. Version 4.0 of the ROC PID changed the method of accounting for customer-requested changes in the due date. Qwest now reports those orders against an "Applicable Due Date," instead of the original due date. In earlier versions of the PID, Qwest measured against the original due date and it judged as ineligible orders for which the customer requested a later due date. The earlier PID did not explicitly allow this exclusion; its language said "customer requested a later due date when the technician arrived to do the work." Qwest interpreted the exclusion more liberally than this phrasing would allow. While it may seem unrealistic to hold

Qwest to an original due date in every case that its customer requested a later one, Qwest was in violation of the precise language that had been contained in the PID.

Missed Due Dates

Qwest and AT&T have differing views on which orders should be excluded from OP-3, OP-4, and OP-6 on the grounds of customer-caused missed due dates. Qwest excludes every order that has a missed due date for any customer (i.e., AT&T) reason. AT&T states that it attempts to exclude only those orders that have missed due dates for the specific reasons stated in the PID. Unlike the changed due date issue discussed above, this distinction did not constitute a major source of the discrepancies between the parties.

Firm Order Confirmations (FOCs)

Several issues caused a vast difference between what Qwest reported and what AT&T thought should be reported. First, AT&T counted multiple FOCs for PONs that included several orders and only one FOC. Second, AT&T did not capture FOCs for disconnect orders, cancelled orders, and change orders. Finally, for the month of June 2001, Qwest failed to report the first order of FOCs that contained multiple orders. Qwest had already reported this problem in its October 5, 2001, summary of notes to the regional results report. Liberty is still considering whether that notification was sufficient.

These matters accounted for practically all of the discrepancies between AT&T and Qwest in the PO-5 denominator for unbundled loops. Qwest's and AT&T's initial submittal showed that only 11 percent of their records matched. Qwest's reporting problem in June caused 5 percent of the total records and 11 percent of the records for June to be in error. It was not clear which company was in error for 8 percent of the records.

Liberty found vastly higher matching of records in the case of LIS Trunks. Qwest and AT&T at the outset agreed on the denominator in 70 percent of the cases. About 36 percent of the apparent discrepancies were ultimately not real discrepancies at all. Liberty found that Qwest had incorrectly reported on less than 3 percent of the records.

Hot Cuts

OP-13A measures the percentage of loop hot cuts completed on time. This measure reflected considerable agreement between Qwest and AT&T, but even in this case, only 73 percent of the records initially agreed. Another 8 percent of those that did not match initially were found to be duplicates. Of the discrepancies that existed, Liberty found that 6 percent fell into the "inconclusive" category. These cases were instances where Qwest and AT&T disagreed on whether the cut was completed on time. The recorded start and stop times for the two companies varied. The place of most disagreement was the recorded start times for the cut, but even there most of the cases varied by less than one hour. There was no evident procedural or systemic reason that would support a conclusion that either company was routinely recording times earlier or later than the other was. In summary, while reported times varied, the information provided by AT&T did not show that Qwest was making any attempt to shorten the cut interval for the purpose of improving reported hot cut performance. In several cases, Qwest's reported interval was greater than the one recorded by AT&T. It appeared that AT&T might have considered the cut to be a "miss" if the total elapsed time was greater than one hour. However, the PID actually allows two hours for cuts involving 16 or fewer lines. Liberty requested more detailed log information to support its recorded times in selected cases. Qwest did not provide a response in time for inclusion in this report.

C. Reconciliation Results

Liberty has prepared spreadsheets showing the results of its analysis of the AT&T data. These documents contain information that is proprietary to AT&T; therefore, Liberty has made a very limited distribution of the spreadsheets. The following paragraphs provide a summary description of the results shown in greater detail in the spreadsheets.

For LIS Trunks and OP-3, Liberty found that Qwest and AT&T agreed on the treatment of 9 percent of the orders, that Qwest clearly treated the order correctly in 73 percent of the orders, that AT&T's information did not show that Qwest was incorrect in 12 percent of the orders, and that 6 percent of the orders demonstrated inconclusive results. For OP-4, the percentages were the same, except that the parties agreed on only 6 percent and the number of inconclusive orders was 9 percent.

For unbundled loops and OP-3, Qwest and AT&T agreed on the treatment of 64 percent of the orders. Liberty concluded that Qwest was in error on 1 percent of the total, that in 19 percent of the total Qwest was either clearly correct or AT&T's information did not show Qwest to be incorrect, that 11 percent of the orders fell into a category of not actually being a discrepancy, and that the results for 5 percent of the orders were inconclusive.

Qwest Errors

In addition to the programming problem for OP-15 and the June 2001 incomplete reporting of FOCs for PO-5, the clear errors made by Qwest were minimal. Liberty found a small number of service orders for which Qwest incorrectly classified a customer-caused miss. It may be that some of the items that Liberty classified as inconclusive could have the same type of problem, as many of the items carried a Qwest-designated customer miss code.

D. Trouble Tickets

Liberty's work scope included a review of AT&T's and Qwest's Arizona trouble ticket data for unbundled loop products for the April to June 2001 period. Liberty conducted this review to determine whether Qwest had correctly reported its performance measures, particularly MR-6 – *Mean Time to Repair (MTTR)*. Liberty received summary information in spreadsheet form from both parties, as well as a hard copy of many of the AT&T and Qwest trouble tickets.[1]

[1] In its spreadsheets, Qwest provided data including, among other things, trouble ticket number, product code, repair duration, and received date; there were no clear dates or start/stop times provided. AT&T provided, for each of its own trouble tickets, the corresponding Qwest trouble ticket number(s), the open and restore date and time of the Qwest tickets, and a short description of the problem and treatment by Qwest.

Liberty identified several issues in its preliminary analysis:

- There was a large discrepancy in the population of "relevant" trouble tickets provided by each party.
- In many cases, AT&T had logged more than one Qwest trouble ticket number in connection with a single AT&T repair request.
- In no case did the MTTR or repair duration recorded by each party match.

There was a significant disparity in the population of relevant Qwest trouble ticket numbers that each party provided. Approximately 60 percent of the Qwest ticket numbers in each party's data set matched; the balance did not appear in the other party's data. Liberty confined its analysis to those Qwest trouble ticket numbers found in both data sets.[2]

Roughly 15 percent of AT&T repair orders had multiple, *i.e.*, between two and six, Qwest ticket numbers associated with them. Two main reasons explain why Qwest assigned more than one ticket number to an AT&T repair order:

- The AT&T repair order included two or more different circuits, which were subsequently assigned separate Qwest trouble ticket numbers.
- There was more than one repair performed on the given circuits, and these repairs were performed on different days. Qwest typically opened and closed the original tickets and opened new ones for the later repairs.

The primary reasons for opening multiple Qwest trouble tickets on an AT&T service request arise from procedural differences between the parties. CLECs are permitted to bundle repair requests, provided that the repairs are for the same customer and location. Qwest, on the other hand, splits the repairs into separate trouble tickets in order to allow proper calculation of billing adjustments for individual circuits. While individual trouble tickets on a given problem may be opened and closed by Qwest, AT&T may have reasons (*e.g.*, recurring, intermittent service problems) to keep a trouble ticket with its own customer open. Should AT&T wish to pursue a matter on an open AT&T ticket, Qwest would have to open new tickets. From AT&T's perspective, there would thus be more than one Qwest ticket number for an AT&T ticket.

Liberty developed a summary chart itemizing the reason for multiple Qwest tickets, and submitted it to AT&T for comments. AT&T ultimately agreed with Liberty's analysis in one-third of the cases. For the others, AT&T questioned how specific situations were treated in the performance measures. Specific situations raised by AT&T included:

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[2] Liberty did not attempt to isolate the reasons for the discrepancy, but during the course of its analysis identified some possible explanations. Liberty found that some of the ticket numbers provided by AT&T were for dates outside the April to June 2001 period, and some appeared to contain typographical errors (since Qwest was able to locate relevant tickets with similar numbers).

- When a trouble ticket is opened and closed but the AT&T customer remains down and another trouble ticket is required to restore service (*i.e.*, more than one Qwest trouble ticket is required to solve an AT&T customer's problem)
- When a reported trouble contains two circuits, each having different problems
- When a trouble is repaired incorrectly or incompletely
- When the wrong circuit is either repaired or reported (*i.e.*, a records error by either party)
- When a trouble ticket is opened to test a repair just made
- When a trouble ticket is closed incorrectly to "no trouble found" (NTF)
- Subsequent or "tracking" tickets.

Liberty examined each of the trouble tickets in question, and subsequently reviewed them with Qwest in detail. Qwest uses guidelines set forth in its business requirements documents to guide the opening and restoring of trouble tickets. Specifically:

- Multiple circuits on one CLEC repair request are split to separate Qwest tickets.
- A ticket is closed upon consent of the CLEC; if the problem remains after a ticket is restored, then a new ticket must be opened.[3]
- All trouble tickets are included in the population of relevant trouble tickets used to calculate performance measures, except those with trouble codes related to customer or carrier equipment and information tickets, (CPE, IEC, and INFO, which explains why some tickets appeared in AT&T's data but not in Qwest's data, because Qwest provided only tickets used to derive the reported measures).
- "No access" time is subtracted out of MTTR under the PID.
- Subsequent tickets are not included in the measure under the PID.
- Trouble reports on products under "retail tariffs"[4] are included in retail performance measures, rather than in the wholesale measures.

The PID does not require distinct measurements to reflect the "quality" of a repair. The fact that a repair may have been made incorrectly, or that multiple attempts were required before the repair was completed is irrelevant; each repair that does not involve a CPE, IEC or INFO (which

[3] According to Qwest, it gets approval from the CLEC before closing a ticket and records the name of the person giving such approval. If the CLEC requests that Qwest hold a ticket open and there is no further action 24 hours later, Qwest closes the ticket back to the restore time.

[4] Qwest indicated that some AT&T customers' products are under the wholesale tariff and some are not; only those under the wholesale tariff are included in the wholesale measures.

includes "test assist") trouble is included in the MR-6 measure.[5] When the wrong circuit is reported or repaired, regardless of which party made the error, the ticket is typically closed to CPE or INFO, and subsequently excluded from the performance measures.

Trouble tickets restored with a trouble code of NTF (no trouble found) are included in the performance measures, as the PID requires. Liberty found, however, that there was some judgment being applied in the assignment of trouble codes. "No trouble found" was closed to NTF in some cases and to CPE in other cases. According to its guidelines, if Qwest tested and found no circuit problem, then it would close the ticket to NTF. However, if additional available information indicated that the trouble was on the CLEC's side (*e.g.*, the customer identifying the wrong circuit or that the trouble was actually on the customer's side), then Qwest would close the ticket to CPE.[6] In the former case, the ticket would be included in the measure; in the latter case, it would not.

Liberty found that, for each of the trouble tickets in question, Qwest handled its trouble tickets consistently with its stated procedures and with the PID. Liberty did, however, find human errors in the coding for roughly 4 percent of the tickets. Specifically, tickets that apparently involved repair work were closed to CPE or INFO, and incorrectly excluded from the measure. Liberty believes that the magnitude of these errors was not sufficient to affect materially the Qwest-reported results. Liberty has concluded that Qwest had handled the repair tickets correctly during the time period, and found no reason to conclude that it had reported its performance incorrectly.

The MTTR reported by AT&T on a given Qwest trouble ticket never matched the duration for the ticket reported by Qwest. For 59 percent of the tickets, the durations differed by more than 1 hour; for 30 percent, the durations differed by more than 12 hours. In a few cases, Qwest had actually recorded a longer MTTR than did AT&T, but in the majority of cases, the time recorded by AT&T was significantly longer than that recorded by Qwest.

Liberty submitted a data request to Qwest asking it to provide: (a) explanations for the difference in duration for a 10 percent sample of trouble tickets, and (b) copies of some of the individual tickets. Liberty found that:

- The disparity in durations ranged from 3 minutes to over 9 days.
- There was an apparent 3-hour difference between the system clock used by Qwest and that of AT&T (Liberty therefore assumed this difference to be a constant throughout its analysis).
- In 77 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open time for the ticket.

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[5] The differences would instead manifest themselves in the relative performance of each company. For example, if AT&T kept its own trouble ticket number open while Qwest opened and closed tickets more than once, AT&T's MTTR would be longer than Qwest's, but Qwest's repeat trouble rate would be higher.

[6] According to Qwest, at one time all of these tickets were restored as NTF, but this policy changed 2-3 years ago, and they began making this distinction between NTF and CPE.

- In only 23 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open and restore time for the ticket.
- In 77 percent of the cases, Qwest had at some point during the repair "no access" time that AT&T did not remove from its MTTR.

Liberty was not able to fully explain the differences in open or restore times. According to Qwest, the times associated with a given ticket are assigned by its system automatically. AT&T's log entries are reportedly made manually. Liberty reviewed AT&T's log entries, and found that AT&T did not always record precisely the times associated with the Qwest tickets; rather its focus appeared to be geared more to recording interactions with its own customers. Absent other evidence, therefore, Liberty has concluded that there is not a basis for concluding that Qwest's start and restore times were inaccurate.

Much of the discrepancy in MTTR between the parties can be explained the fact that AT&T did not subtract "no access" time from the ticket durations provided to Liberty. The differences in restore time noted above arise from the fact that AT&T did not restate tickets back to the appropriate time to account for this "stop clock" time. The fact that AT&T did not typically capture accurate "clock stop" information on its log entries, meant that Liberty could not validate the length of the "no access" times reported by Qwest. Absent other evidence, Liberty has concluded that there is not a basis for concluding that Qwest's no access time, and therefore MTTR, are inaccurate. During its review of Qwest's tickets, Liberty did, however, find a mistake. Qwest improperly subtracted "clock stop" time when it was unwarranted. Liberty found few errors of this type; they were not frequent enough or significant enough in magnitude to affect materially Qwest-reported results.

IV. Results of Data Reconciliation – Covad and WorldCom

A. Covad

Covad initially requested an audit of the disaggregated line sharing and unbundled 2-wire non-loaded loop numerators and denominators for OP-4, OP-5, MR-3, MR-5, MR-6, and PO-5 for the months of May, June, and July 2001. After its own analysis, Qwest indicated that OP-5 was not auditable because the data used to calculate it originated from too many sources to permit a record-by-record reconciliation. Qwest and Covad could not produce data with a common field, which would be necessary to permit reconciliation of the maintenance and repair measures.

Liberty reconciled OP-4 to the extent possible, given the information provided by Covad and Qwest. Liberty classified the orders according to whether Qwest and COVAD agreed on the numerator, denominator, and inclusion in the measure. Liberty then requested information from both parties. Qwest provided Local Service Requests (*LSR*), Work Force Administration Control (*WFAC*) records, and a discussion of specific orders that were included by Covad, but not by Qwest. Covad provided an updated database that included a number of orders that had been excluded for various reasons by Qwest, but did not include any documentation of Covad's position on any of the orders. Liberty reviewed the data filings, then performed additional analysis and presented a supplemental data request to the two parties. Again, Qwest provided LSRs and WFAC documentation on orders it had excluded, and, with only limited exceptions, Qwest provided all the information requested for OP-4. Covad did not respond. On November 29, 2001, Covad indicated that it had additional documentation related to the Arizona reconciliation. Liberty did not have time to secure and use that information in time to include its effect in this report.

For the period from May through July 2001, Covad and Qwest agreed on 42 percent of the total OP-4 denominator orders. They agreed on the numerator in many fewer cases.

Qwest provided documentation for all its OP-4 line sharing orders that were in conflict with those included in Covad's numerator. The documentation consisted primarily of LSRs that provided the application date, completion date, and reference date. Liberty compared the values from these documents with values included in the comparable field in the data files supplied by Qwest. Liberty did not find any inconsistencies between the LSR documents and data files. Covad did not provide support for its data files. Liberty conducted the same type of analysis on 2-wire NL UBL orders with similar results. Liberty did not find inconsistencies between the LSR documents and Qwest data files.

Liberty also requested that Covad provide information on Qwest's PONs that were not matched by Covad. Covad indicated that it was unable to provide the information. Covad did provide an expanded data set that may have addressed some of the problems, but did not provide headers for the data set. Liberty was unable to use it. Liberty treated orders where Qwest was able to identify a PON as appropriate for inclusion in the performance report. Qwest was unable to provide PONs for some orders included in performance reports for the three-month period. Liberty treated these orders as inconclusive in its analysis.

Liberty requested documentation from Qwest for the orders that Covad included in the line sharing performance, but that Qwest did not include. Qwest responded with data for some instances, but stated there were some orders for which Qwest could not provide information. Liberty also treated these orders as inconclusive.

In summary, for OP-4, Qwest and Covad matched on 42 percent of the line sharing and 2-wire NL UBL orders. There was substantial disagreement between Covad and Qwest on the numerator for the line sharing orders. Qwest provided LSR documentation to support its position. Covad did not provide documentation for its position. For the period examined, Liberty found that 34 percent of the orders demonstrated inconclusive results, primarily because neither party could provide any support. Liberty's review of the Covad data and of the Qwest data and supporting documentation did not reveal any problems with the accuracy of Qwest's performance reporting.

For PO-5, Liberty again matched and classified the extent of agreement between the parties, and requested support for areas of disagreement. Qwest provided a file analyzing the Covad orders that were not included in Qwest's files. The file identified the reason for excluding each order. Qwest also offered to provide additional documentation, provided that Covad provide documentation of its data file. Since it was the best and only information available, Liberty used the Qwest analysis to evaluate Covad's May and June data. It showed that many of the records should not have been included for Arizona or for the months within the test period.

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

B. WorldCom

Liberty's scope of work associated with WorldCom (WCom) and Arizona 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.

WCom did not provide data at the level of detail measured by OP-3 and OP-4 in certain cases. Therefore, Liberty's reconciliation had to be adjusted accordingly. For example, WCom did not disaggregate its OP-3D and OP-3E, and OP-4D and OP-4E, data by zone; therefore, the reconciliation addressed results for these sub-measures on a combined basis. In addition, 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.

Liberty's reconsolidation process confirmed the existence and generally appropriate use of Qwest's systems to produce accurate OP-3 and OP-4 measurements for WCom. Liberty found a small number of Qwest errors in the data inputs to these systems. These errors affected less than 2 percent of the total orders considered.

The initial reconciliation focused on the fact that Qwest reports at a service-order level, while WCom develops data at a purchase order level. A purchase order, or PON, might result in multiple service orders; therefore, Liberty had to establish the PON/SO relationship. Liberty found a number of differences between the WCom and Qwest classification and counting of orders. For example, WCom uses the month of actual order completion for reporting, while Qwest uses the reference date of an order, which means that some orders completed at the end of a month may be reported by Qwest in the following month or later. (See discussion in the AT&T section of this report.) The other significant difference in order counting was the fact that Qwest did not count orders classified as a customer-caused miss of the due date.

Liberty verified that Qwest's reported performance for WCom was correct strictly on the basis of Qwest's own data. Then, after the service order reconsolidation, Liberty determined that the orders reported by Qwest and WCom matched in 42 percent of the cases for LIS Trunks and in 75 percent of the cases for UBLs.

For the apparent discrepancies on LIS Trunk orders, Liberty found that in 47 percent of the total, either Qwest's and WCom's records affirmatively showed that Qwest was correct or that there was no information to prove that Qwest was incorrect. In 6 percent of the total, the results of the record analysis were inconclusive, and in less than 5 percent of the total, Liberty found that Qwest was incorrect. Qwest's errors were of two types: (a) that an order should have been ruled ineligible using Qwest's rules for a customer-caused miss, or (b) that the commitment date did not appear to be met as reported by Qwest.

For the apparent discrepancies on UBL orders, Liberty found that in 22 percent of the total, either Qwest's and WCom's records affirmatively showed that Qwest was correct or that there was no information to prove that Qwest was incorrect. In 2 percent of the total, the results of the record analysis were inconclusive, and in less than 2 percent of the total, Liberty found that Qwest was incorrect. Qwest's errors involved either lack of support for a customer-caused miss classification or some other reason for excluding the order. Most of the errors occurred in January 2001.

Liberty has prepared spreadsheets showing the results of its analysis of the WCom service orders. These documents contain information that is proprietary to WCom; therefore, Liberty made a very limited distribution of them.

V. Future Qwest Data Reconciliation

CLEC claims that Qwest's performance measures were inaccurate had a foundation in the data available to them. The basis for those claims was a set of results that differed from those reported by Qwest by a very large amount. Liberty's data reconciliation work in Arizona showed that a small number of reasons explained a relatively large percentage of the differences. CLECs may not agree with Qwest on matters such as the definition of service order completion, Qwest's practice of making records ineligible because of customer changes to due dates, or closing trouble tickets simply because the wrong circuit had been identified. Nevertheless, these kinds of issues are the main reasons why results were so disparate. While debate on such matters may continue, the value to be gained from future reconciliation work would be substantially more time- and resource-consuming in the event that it must deal with each of the many records that would be ultimately explained by one of these issues.

The dedication of resources and the level of detail of information that is required on the part of CLECs in order to meaningfully participate in data reconciliation should be better understood as a result of the work done for Arizona. Even if the number of records that are subject to reconciliation is limited in future reconciliation work, the CLECs and Qwest now know the level of detail and nature of the records that are necessary to support positions on the treatment of a record for the purposes of a performance measure. If any party cannot make the requisite commitment, any attempt to reconcile records will have limited value.

There may be differences in the ways that Qwest performs in various parts of its region, and future reconciliation work should attempt to focus on those performance aspects that could result in differences from the Arizona findings. For example, service orders could be treated differently by different service order processing centers, or systems in some parts of Qwest's region could be closing trouble tickets with different codes or upon different circumstances than exist other parts. Liberty has requested that Qwest make an assessment of possible reasons why there could be differences among the states. The response to that request was not received by the time this report was written.

Liberty concluded on the basis of the work done in Arizona that the information provided by CLECs did not demonstrate material inaccuracies in how Qwest reported its performance. However, Liberty also believes that there is value to some level of data reconciliation in other parts of Qwest's region. To gain that value, the focus should be on a more detailed review of selected or sampled records rather than attempting to explain the reasons why, for example, one party's denominator of a particular measure and product is different than the other's. If the goal is to provide additional assurance that Qwest's performance measures are accurate, then more focused work on questions like the assignment of customer jeopardy to service orders or no-trouble-found close-outs of trouble tickets could prove beneficial. If, however, the goal is to explain generally why CLECs' results are so much different from those reported by Qwest, then Liberty considers the results found in Arizona to be largely responsive in meeting that goal.

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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 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.

[illegible] 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 analyses 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 1036). Qwest incorrectly reported orders in two separate months (Observation 1037). Qwest excluded orders because the CLEC designation was "unknown" (Observation 1038).
- 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.

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Third Report on Qwest Performance
Measure Data Reconciliation - Nebraska

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.

The data reconciliation process was designed to determine whether any of the information provided by CLECs demonstrated inaccuracy in Qwest's reported performance results as these measures were defined in the PID. The detailed process has been discussed in prior reports and has not been repeated here.

Liberty issued its first data reconciliation report, which used data from Arizona, on December 3, 2001. The second report on data from Colorado was issued on January 3, 2002. This report provides the results of Liberty's review of data from Nebraska. In addition, this report provides the status of observations and the exception issued as a result of all of the data reconciliation work.

In the course of its initial data reconciliation work in Arizona, Liberty found that Qwest did make 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 considered to be expected levels, even under a carefully controlled set of measurement activities. Moreover, there was no evidence that Qwest purposely took steps to make its performance figures appear better than they actually were. With the exception of a programming problem associated with measure OP-15 (Exception 1046) and a failure to report a group of Firm Order Confirmations in June 2001, the errors were not systemic, nor did they apply to a significant percentage of the performance measure results.

Contrary to its conclusions in Arizona, Liberty found that several process errors significantly affected Qwest's reported performance results for Colorado. As documented in Observation reports 1026, 1027, 1029, and 1030, Qwest had: (a) reported retail line-sharing orders as wholesale orders, (2) repeated orders in consecutive months' measures because of different completion codes, (3) not reported orders because the CLEC designation was "unknown," and (4) excluded records because of a missing state code. Liberty also found that performance measures had been affected by human errors. For example, human errors (1) occurred in the processing of AT&T LIS trunk orders (Observation 1031), (2) caused some Covad UBL orders to not being excluded from OP-4 in cases where the requested interval was longer than the standard (Observation 1032), (3) caused line-sharing orders to be classified as UBLs causing an incorrect reporting of PO-5 (Observation 1034), and (4) occurred in determining the application dates and times on certain orders (Observation 1033).

Using data from Nebraska, Liberty found an additional process-type problem. As documented in Observation 1035, Qwest's system allowed cancelled orders to be incorrectly included in the OP-3 and OP-4 measures as completed (and on time) orders. The error occurred only for orders through the SOLAR system serving the 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 also found that human errors affected performance measure results using the Nebraska data. Qwest had an error rate in calculating mean-time-to-repair (MTTR) for MR-6 of roughly 15 percent. This was reported in Observation 1028.

As first mentioned in Liberty's report on Arizona, Qwest had a programming anomaly that affected results for PO-5 results the month of June 2001, whereby orders for multiple loops were excluded from the measure. The same programming problem existed for Nebraska, whereby both orders for multiple loops and those orders that had a duplicate entry in Qwest's system were excluded. Qwest corrected the programming problem such that results for July 2001 and forward are no longer affected. Qwest had already reported this problem in its October 5, 2001, summary of notes to the regional results report.

III. Results of Data Reconciliation – AT&T

A. Introduction

After some discussion between the parties, it was ultimately determined that the following performance measures were to be reconciled:

- The denominator of PO-5A, B, and C combined for unbundled loops (UBL).
- The denominator of PO-5D for Local Interconnection Service (LIS) trunks.
- The numerator and denominator of OP-3D and E combined for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-4D and E combined for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-6A and OP-6B for unbundled loops and for LIS Trunks.
- The numerator and denominator of OP-13A and OP-13B for unbundled loops.
- The numerator and denominator of OP-15A and OP-15B for unbundled loops and for LIS Trunks.

For unbundled loops, the period to be reconciled is April 2001 through June 2001. The LIS Trunks 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.

Liberty compared the unbundled loop trouble tickets provided by AT&T with the trouble tickets provided by Qwest. Where Liberty had data about a trouble ticket from both parties, Liberty compared the repair intervals reported by the two parties. Liberty also analyzed situations identified by AT&T where AT&T found one trouble ticket, but where more than one Qwest trouble ticket applied.

B. Reconciliation Results

Unbundled Loops

For the measure OP-3, Qwest and AT&T ultimately agreed on 89 percent of the orders. For the 11 percent of total orders that the companies disagreed on, Liberty found that:

- In roughly 3 percent, Qwest incorrectly included cancelled orders in its measure. These errors were the subject of Observation 1035. As noted in the Observation, Qwest made a programming change effective May 12, 2001 that now precludes cancelled orders from being included.

- In 1 percent, Qwest had counted the same order in two months; this double counting error was the subject of Observation 1027.
- In 7 percent, Qwest did not include orders in the measure that AT&T believed should be included. These were cases in which the CLEC supplemented the order and moved the due date past the original due date. This matter was discussed in the Arizona report, wherein Liberty concluded that it was appropriate for Qwest to exclude such orders. It should be noted, however, that there was an instance in which both AT&T and Qwest included such an order in the measure, and thus the parties agreed, but Qwest later clarified that it had mistakenly included the order.

For measure OP-4, the same issues arose as those presented above for OP-3. In addition, however, Qwest incorrectly excluded roughly 3 percent of the orders that should have been included in the measure because of human error in coding the order. Specifically, the orders had been coded as being longer than the standard interval, when in fact they were not. This issue concerning miscoding of the order interval was addressed in Observation 1032.

For measure OP-6, the orders the companies disagreed on were limited to those where AT&T supplemented the order and moved it beyond the original due date. These discrepancies accounted for roughly 33 percent of the total orders examined and Liberty found that Qwest handled these orders correctly. The parties had no disagreement on the OP-13 and OP-15 measures.

For PO-5, Qwest and AT&T agreed on 90 percent of the orders. All of the discrepancies were due to Qwest errors. Roughly 2 percent of the orders included Qwest's errors due to the fact that it had included orders where no FOC was issued on the initial LSR but one was issued for the cancellation. The remaining 8 percent of the orders had errors because of a programming problem that existed during the month of June. Orders that were either for multiple loops or were duplicated in the Qwest system were left out entirely. Qwest has since corrected this programming error, effective with July 2001 results. According to Qwest, the error was the result of programming changes made to move to PID 4.0.

LIS Trunks

Working together, Qwest and AT&T were able to reduce the number of Nebraska LIS trunk orders requiring reconciliation to one. For that order, Qwest stated that it was inappropriately excluded from the measures because of human error (Observation 1031). Because only one LIS trunk order required reconciliation, Liberty is not including any LIS trunk spreadsheets with this report.

C. Trouble Tickets

Liberty's work scope included a review of AT&T's and Qwest's Nebraska trouble ticket data for unbundled loop products for the April to June 2001 period. Liberty conducted this review to determine whether Qwest had correctly reported its performance measures, particularly MR-6 –

Mean Time to Repair *(MTTR)*. Liberty received summary information in spreadsheet form from both parties, as well as a hard copy of many of the AT&T and Qwest trouble tickets.[1]

Liberty identified several issues in its preliminary analysis:

- There was a large discrepancy in the population of trouble tickets provided by each party.
- In many cases, AT&T had logged more than one Qwest trouble ticket number in connection with a single AT&T repair request.
- In 50 percent of the tickets in common, the MTTR or repair duration recorded by each party did not match.

There was a significant disparity in the population of relevant Qwest trouble ticket numbers that each party provided. All but one of the Qwest trouble tickets appeared in the AT&T data (AT&T could not locate this ticket), but one-third of the tickets in the AT&T data did not appear in the Qwest data. Qwest stated that all these tickets (except for one that it could not find) were "retail"[2] tickets, and were not included in the measure.[3] Liberty found that Qwest had treated these tickets consistent with its procedures and consistent with the PID.

Roughly 15 percent of AT&T repair orders had multiple, *i.e.*, two, Qwest ticket numbers associated with them. Qwest had assigned more than one ticket number to an AT&T repair order for two reasons:

- The AT&T repair order included two or more different circuits, and Qwest assigned the circuits separate Qwest trouble ticket numbers.
- There was more than one repair performed on the given circuit, and these repairs were performed on different days or at different times. Qwest typically opened and closed the original tickets and opened new ones for the later repairs.

Liberty developed a summary chart itemizing the reason for multiple Qwest tickets, and submitted it to AT&T for comments. Liberty found that, for each of the trouble tickets in question, Qwest handled its trouble tickets consistently with its stated procedures and with the PID. AT&T accepted Liberty's analysis in all of the cases. All of these tickets were included in the MR-6 measure by both parties.

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[1] In its spreadsheets, Qwest provided data including, among other things, trouble ticket number, product code, repair duration, and received date; there were no clear dates or start/stop times provided. AT&T provided, for each of its own trouble tickets, the corresponding Qwest trouble ticket number(s), the open and restore date and time of the Qwest tickets, and a short description of the problem and treatment by Qwest.

[2] Qwest indicated that some AT&T customers' products are under the wholesale tariff and some are not; only those under the wholesale tariff are included in the wholesale measures.

[3] AT&T provided data on some tickets outside the relevant time period, which Liberty excluded from the analysis. The trouble ticket number that Qwest could not find was likely a typo, since the number was not in the same form as all of the other tickets.

For 50 percent of the individual Qwest trouble tickets that the two parties had in common, the MTTR reported by each party did not match.[4] Of these, the durations differed by more than 1 hour for 60 percent and by more than 12 hours for 40 percent. At times, Qwest had recorded a longer MTTR than did AT&T, but in the majority of cases, the time recorded by AT&T was significantly longer than that recorded by Qwest.

Liberty held discussions with AT&T and Qwest to determine the reasons for these differences in duration. During the course of the discussions, both parties revised their data or reinterpreted the information on their ticket logs. Liberty found that:

- There was a 1-hour difference between the system clock used by Qwest and that of AT&T (this difference would not affect net duration, however).
- In 70 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open time for the ticket.
- In 30 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open and restore time for the ticket.
- In 20 percent of the cases, there was "no access" time that AT&T did not remove from duration.

The net results of the duration reconciliation were as follows:

- In 60 percent of the cases, the parties ultimately concurred that Qwest had properly handled the ticket duration.
- In 10 percent of the cases, the discrepancies could not be explained.
- In 30 percent of the cases, Qwest had made administrative errors or did not follow its own procedures, which led to durations that were significantly different from those recorded by AT&T.
- The adjustments to MTTR for the Qwest tickets in error ranged from approximately 20 hours shorter to roughly 9 hours longer.

The population of tickets analyzed above constituted half of those used by Qwest to derive its MR-6 measure. Assuming the error rate in the other half is zero (since the parties agreed), then Qwest had significant errors in 15 percent of the total ticket durations used to calculate the measure. Although the sample analyzed by Liberty was small compared to Qwest's entire trouble ticket population, the human error rate was higher than Liberty believes is acceptable for a process of this type. Liberty issued an Observation report (#1028) on this subject.

Qwest's response to Liberty's Observation maintained that the mistakes identified by Liberty were isolated human errors and not typical, and that no corrective action was required. Qwest added that it conducted semi-annual reviews at its service centers, routinely finding error rates of 1 percent or less; Qwest center managers also reportedly conducted random checks and provided coaching to technicians whenever discrepancies were found.

[4] Liberty considered instances where the parties disagreed by 20 minutes or less to be "matches."

typical, rather than isolated instances, particularly when coupled with the results of Liberty's Arizona trouble ticket audit. In Arizona, Liberty found: (1) an error rate of roughly 2 percent in Qwest's MTTR, and (2) an error rate of roughly 3 percent in coding, which resulted in orders being excluded from the measure. 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 are combined, the MTTR error rate was 6.5 percent, which in Liberty's opinion is problematic.

Additional investigation was warranted to determine whether Qwest's proclaimed 1 percent error rate is accurate. Liberty has therefore begun an analysis of AT&T trouble tickets in Oregon to obtain additional data on the nature and frequency of errors. Liberty has also requested additional information on Qwest's compliance review and coaching programs to ascertain whether such programs have been effective; this information has not yet been provided.

IV. Status of Observations and Exceptions

The preceding discussion covered matters that explained the differences between the performance measure results obtained by AT&T and by Qwest for data from the state of Nebraska. In its prior data reconciliation work using data from Arizona and Colorado, Liberty identified several problems with Qwest's performance measures that were reported in the form of an Exception and several Observations. In addition, Covad provided some order information associated with Arizona that was received too late to incorporate in the Arizona report. The following sections provide the status of those issues.

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.

In its response to the exception, Qwest stated that it had already identified the problem and that the 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 (set 45) 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. Based on Qwest's responses, Liberty issued follow-on data requests (set 59), but has not yet received a response. Liberty has also not yet received a response to one of the earlier data requests (45-1). When those responses are received, Liberty will review them and determine whether the exception can 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. Liberty conducted an interview with Qwest on this matter and recently received responses to related data requests. Liberty expects to complete its review and close this observation within the next couple of days.

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 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 has implemented new code that reviews the record for the previous seven months and if the record has been previously counted then it is omitted from the current month's calculations.

AT&T filed comments on this observation noting that measures other than OP-3 and OP-4 could be affected. AT&T also questioned why this problem was apparent when earlier, in a response to the problem identified in Arizona, Qwest indicated that prior results would be re-generated with the fix in place. Qwest stated that corrected data could not be made available for the reconciliation because the problem was not yet resolved at the time Liberty was given the reconciliation data. Qwest also stated that the problem affected OP-3, OP-4, OP-5, OP-6, OP-15, PO-8 and PO-9, and all disaggregated products.

Liberty conducted an interview with Qwest on this matter and recently received responses to related data requests. Liberty is now reviewing the RSOR data files provided by Qwest to confirm that the problem has been resolved. Liberty expects to complete its review and close this observation within the next couple of days.

Observation 1028

Observation 1028 reported that there was a significant error rate in the mean-time-to-repair (MTTR), or repair durations, used by Qwest in calculating its MR-6 measure for AT&T in Nebraska. The status of this Observation is discussed above in the Nebraska-specific section of this report.

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 provided by PANS that addressed this problem. Qwest indicated for the period from July through November 2001, a "work around" solution had been implemented.

AT&T filed comments on this observation noting that measures other than OP-4 could be affected. AT&T also requested that Qwest identify the specific performance measures for which CLEC-specific reporting was not available as a result of the problem identified in this

Observation. Qwest stated that the affected measures are OP-3, OP-4, OP-5, OP-6, OP-15, PO-8 and PO-9 for line sharing only.

Liberty believes that Qwest's solutions (interim and permanent) will permit it to properly identify CLECs and related orders for the periods identified and will provide proper reporting. Liberty reviewed the changes to the field details that provide the required information. Liberty is satisfied with the interim solution but has not completed its review of the new data field used in the permanent fix.

Observation 1030

Observation 1030 noted that Qwest failed to report a number of Covad Firm Order Commitment (FOC) records because the state code was not auto-logged for those transactions. Qwest acknowledged that there was a problem. However, Qwest stated 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 indicated that customers were moved off EDI 6.0 in August and September and EDI 6.0 was retired in December 2001, so the problem for the most part had been addressed with the new technology. For those records that are not auto-logged with the new technology, Qwest will run an ad hoc report to identify them and will manually populate the state code.

AT&T commented that since PO-2, PO-3A-1, PO-3B-1, PO-3C, and PO-4C all require state codes that it was highly likely that these results were inaccurate. AT&T also expressed concern with when the "break" occurred and whether, in months prior to July, the CLECs using EDI 6.0 had inaccurate performance results for PO-5 because of this problem. Finally, AT&T requested that Qwest's process ensure that all transactions affected by the omission of the state code were recorded.

Liberty agrees with AT&T that the results of other measures may be affected by this problem. However, Liberty had no specific knowledge of such an effect. Moreover, Liberty had concerns with Qwest's *de minimus* argument because a significant percentage of Covad orders sampled were affected by having no state code. Qwest indicated that the problem affects PO-2, PO-3, PO-4, and PO-5. Qwest also said that it primarily affects UBLs, but also impacts line sharing. Qwest claims that the problem affects less than 1 percent of orders during the period from January through May 2001.

Qwest stated that it has implemented a manual process to fix the problem, and that this correction would work for all measures. Liberty needs more information on the percentage of all relevant orders submitted via EDI that had the problem, and expects to be able to close this observation after reviewing that information.

Observation 1031

Observation 1031 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 responded to this Observation on January 24, 2002. Qwest stated that it had re-evaluated every AT&T LIS trunk and unbundled loop order for the reconciliation period from the states of Arizona and Nebraska and found that zero of the 33 LIS trunk orders evaluated by Liberty in Arizona were miscoded as customer caused misses and that 1 of 827 unbundled loop orders evaluated by Liberty in Arizona were miscoded as customer caused misses. Qwest also stated that, in evaluating the data from the three states collectively (Arizona, Colorado and Nebraska), it found that 1 of 890 (0.11 percent) unbundled loop orders, and 6 of 98 (6.12 percent) interconnection trunk orders were miscoded as customer caused misses. Qwest stated that it had clarified the 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 representatives responsible for the coding errors identified.

Liberty has not completed its review of Qwest's recently received response to Observation 1031. Liberty will review the attachments Qwest provided with its observation response and evaluate the manner in which Qwest improved its procedures and retrained its ISC representatives. Liberty will also complete its own evaluation of the LIS trunk orders from Arizona to validate Qwest's statement that none of them had been miscoded.

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 a few PONS for which this had occurred. In fact, however, Liberty performed an analysis on only a sample of the orders and found that this improper exclusion affected over 8 percent of the sample.

Liberty is now beginning its analysis of data from the state of Washington. Liberty is finding that this problem occurs in both UBL and Line Share orders. Although Liberty's analyses are preliminary, to date Liberty has found this problem in 7 percent of the UBL orders, and in 11 percent of the line-sharing orders, assessed to date.

Qwest indicated that it had improved its documentation in an effort to prevent this problem from recurring. Liberty requested a copy of the improved documentation. Liberty also requested that Qwest address what measures, products, time frames, and which CLECs, were affected by this type of error. Qwest has not yet replied to data request (set 54), which asks for a detailed explanation of Qwest's solution to the problem and support for the error rate Qwest reported as resulting from this problem.

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 or not 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 its response to the observation, Qwest stated that the net effect of its errors was minimal, *i.e.*, a one day difference during the period being reconciled. Liberty believes it is pure coincidence, and irrelevant, that Qwest's errors may net out to a small number for the period. The important fact is that Qwest committed human errors in a third of the LIS trunk orders for which the parties agreed on the denominator but not the numerator.

AT&T filed comments on this observation, questioning whether other performance measures and other products could be affected by the problem, whether there could be both systems errors and human errors involved, and whether prior results could be re-stated.

Liberty is waiting for the responses to several questions (set 53) to Qwest regarding this issue and needs more information on Qwest's ability to rehabilitate historical performance data and on which performance measures have been affected by this problem.

Observation 1034

Observation 1034 reported that Qwest failed to report many Firm Order Confirmations for Covad because it incorrectly identified line-sharing orders as unbundled loops with a non-standard interval of 72 hours. Qwest does not report records in cases where the interval is non-standard. Covad currently has a special contract with Qwest that requires delivery of UBLs within 72 hours, a non-standard interval. Line-sharing orders have a standard interval of 24 hours. Line-sharing orders that are misidentified as UBLs are therefore excluded from the measure.

Liberty has submitted data requests to Qwest regarding the time period involved with this problem and the changed its processes to correct the problem.

Observation 1035

Observation 1035 reported that there were errors in the OP-3 and OP-4 measures for states in the eastern region prior to June 2001 because Qwest included cancelled orders in the measures. This Observation is discussed above in the Nebraska-specific section of this report.

Data Reconciliation Update

On January 3, 2002, Liberty issued its second report on data reconciliation. That report discussed the results of reconciling data from CLECs and Qwest for the state of Colorado. As a result of the work reflected in that report, and on reconciliation efforts that used data from Arizona and Nebraska, Liberty issued one exception and ten observation reports. This report provides a summary and the status of each of the exception and observation reports. It also describes one correction and updates the status of an open issue from the Colorado report.

In summary, Liberty has identified and reported on several problems with Qwest's performance measure reporting. One-half of these issues appear to require programming changes that Qwest has indicated it has already made. The other half of these issues involves human error. Qwest has indicated that it has conducted training or taken other steps to improve human performance. Liberty has closed five of the eleven reports.

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 work orders showing two-digit miss codes were being reported as Qwest misses, even though not all of them were.

In its response to the exception, 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 affecting July measures 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. Liberty considers this observation to be closed. To ensure that the record is clear, Qwest should supplement its observation response to clarify that only results from July 2001 and forward are free of this problem.

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.

AT&T filed comments on this observation noting that measures other than OP-3 and OP-4 could be affected. AT&T also questioned why this problem was apparent when earlier, in a response to the problem identified in Arizona, Qwest indicated that prior results would be re-generated with the fix in place. Qwest stated that corrected data could not be made available for the reconciliation because the problem was not yet resolved at the time Liberty was given the reconciliation data. Qwest also stated that the problem affected OP-3, OP-4, OP-5, OP-6, OP-15, PO-8 and PO-9, and all disaggregated products. Qwest provided documentation showing that the same issue that had been identified in the Arizona test had been closed.

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. Liberty has therefore begun an analysis of AT&T trouble tickets in Oregon to obtain additional data on the nature and frequency of errors. Liberty has also requested information on Qwest's compliance review and coaching programs to ascertain whether such programs should be effective. This observation cannot be closed until Qwest provides the required information and Liberty has completed its analysis.

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. Qwest indicated for the period from July through November 2001, a "work around" solution had been implemented.

AT&T filed comments on this observation noting that measures other than OP-4 could be affected. AT&T also requested that Qwest identify the specific performance measures for which CLEC-specific reporting was not available as a result of the problem identified in this observation. Qwest stated that measures OP-3, OP-4, OP-5, OP-6, OP-15, PO-8 and PO-9 were affected, but for line sharing results only. Qwest also indicated that the problem did not affect the M&R measures because the relevant information was retrieved from other sources.

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 the "work around" 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

Docket No. TC01-165
Qwest Corporation
Exhibits of Robert L. Stright
Exhibit RLS-DATA RECON-5
Page 4of 8, April 2, 2002

Observation 1030 noted that Qwest failed to report a number of Covad 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 indicated that customers were moved off EDI 6.0 in August and September and EDI 6.0 was retired in December 2001, so the problem for the most part had been addressed with the new technology. For those records that are not auto-logged with the new technology, Qwest will run an ad hoc report to identify them and will manually populate the state code.

AT&T commented that, since PO-2, PO-3A-1, PO-3B-1, PO-3C, and PO-4C all require state codes, it was highly likely that these results were inaccurate. AT&T also expressed concern with when the "break" occurred and whether, in months prior to July, the CLECs using EDI 6.0 had inaccurate performance results for PO-5 because of this problem. Finally, AT&T requested that Qwest's process ensure that all transactions affected by the omission of the state code were recorded.

Liberty had concerns with Qwest's *de minimus* argument because a significant percentage of Covad orders sampled were affected by having no state code, while Qwest claims that the problem affects less than 1 percent of orders. Qwest also indicated that the problem affects PO-2, PO-3, PO-4, and PO-5, and that it primarily affects unbundled loops, but also affects line sharing.

Liberty has requested additional information on the number and percentage of other performance measures affected by the code problem and the percentage of EDI 6.0 transactions. Liberty expects to be able to close this observation after reviewing that information.

Observation 1031

Observation 1031 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 responded to this observation on January 24, 2002. Qwest stated that it had re-evaluated every AT&T LIS trunk and unbundled loop order for the reconciliation period from the states of Arizona and Nebraska and found that no LIS trunk orders evaluated by Liberty in Arizona were miscoded as customer caused misses and that only one of many unbundled loop orders evaluated by Liberty in Arizona were miscoded as customer caused misses. Qwest also stated that, in evaluating the data from the three states collectively (Arizona, Colorado and Nebraska), it found that 0.11 percent of the unbundled loop orders, and 6.12 percent of the interconnection trunk orders were miscoded as customer-caused misses. Qwest stated that it had clarified the 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 representatives responsible for the coding errors identified.

Liberty discovered that it had mis-categorized one order and thus overstated the effect of this problem in the Colorado report. The correction is described in detail at the end of this report.

Liberty has not completed its review of Qwest's response to Observation 1031. Liberty has reviewed the attachments Qwest provided with its observation response and evaluated the manner in which Qwest improved its procedures and retrained its ISC representatives. Liberty will also complete its own evaluation of the LIS trunk orders from Arizona to validate Qwest's statement that none of them had been miscoded. Liberty submitted follow-up data requests on January 29, 2002, and Liberty expects to be able to close this observation after receiving and reviewing that information.

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. In fact, however, Liberty performed an analysis on only a sample of the orders and found that this improper exclusion affected over 8 percent of the sample. Liberty is now beginning its analysis of data from the state of Washington and continues to observe this problem.

Qwest indicated that it had improved its documentation in an effort to prevent this problem from recurring. Liberty requested a copy of the improved documentation. Liberty also requested that Qwest address what measures, products, time frames, and which CLECs, were affected by this type of error. Qwest has not yet replied to Liberty's data requests, which asked for a detailed explanation of Qwest's solution to the problem and support for the error rate Qwest reported as resulting from this problem. This observation cannot be closed until Qwest provides the required information and Liberty has completed its analysis.

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 or not 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 its response to the observation, Qwest stated that the net effect of its errors was minimal, i.e., a one day difference during the period being reconciled. Liberty believes it is pure coincidence, and irrelevant, that Qwest's errors may net out to a small number for the period. The important fact is that Qwest committed human errors in a third of the LIS trunk orders for which the parties agreed on the denominator but not the numerator.

AT&T filed comments on this observation, questioning whether other performance measures and other products could be affected by the problem, whether there could be both systems errors and human errors involved, and whether prior results could be re-stated.

Liberty is waiting for the responses to several data requests to Qwest regarding this issue. This observation cannot be closed until Qwest provides the required information and Liberty has completed its analysis.

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 hours 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 does agree 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 the SOLAR system, which processed service orders 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. Although Liberty saw no evidence of the problem in

Arizona or Colorado, Liberty has not yet concluded that the problem was limited to these five states.

Qwest recently provided a response that indicated only about 2 percent of the eastern region orders were affected by this problem and that the problem did not occur after May 12, 2001. Liberty is now reviewing the information provided by Qwest.

Other Issues

Lengthy Completion Intervals

To capture the data required for completed service orders, Qwest extracts information for the current and the prior seven months. Qwest performed a test showing that this method captured 99.9 percent of the completed orders. During the data reconciliation for Colorado, Liberty found two LIS trunk orders that were not reported because they were over eight months old. Liberty was concerned that Qwest's test may not have been valid for orders that are typically more complex than average, such as those for LIS trunks. Liberty requested that Qwest conduct another test limited to LIS trunk orders to determine the percentage captured during the eight-month interval. Qwest has not yet responded to Liberty's request.

Report Correction

Liberty recently discovered that it had mis-categorized one of the LIS trunk orders about which the parties disagreed in Colorado. Liberty had categorized it as a Qwest error in assigning jeopardy codes and customer-miss exclusions, but it should have been categorized as a Qwest error because Qwest did not support the due date it believed to be correct. After issuance of the Colorado report, Qwest did provide support for the due date, and the information about this order should now be considered inconclusive because AT&T provided support for a different due date. Accordingly, the beginning of the reconciliation section of the AT&T part of the Colorado report should read:

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:

- *18 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.*
- *15 percent of the discrepancies contained conflicting information that Liberty was unable to resolve.*

Table of Contents

I. Introduction

The Liberty Consulting Group *(Liberty)* is performing for the ROC 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. The data reconciliation process was designed to determine whether any of the information provided by CLECs demonstrated inaccuracies in Qwest's reported performance results as these measures were defined in the PID. The detailed process has been discussed in prior reports and has not been repeated here. Liberty issued its first data reconciliation report, which used data from Arizona, on December 3, 2001. The second report on data from Colorado was issued on January 3, 2002, and on January 28, Liberty issued the third report, which provided the results of the review of data from Nebraska. On February 2, 2002, Liberty issued an update to the Colorado report, which provided the status of observations and the exception issued as a result of all of the data reconciliation work.

The scope of the data reconciliation work using information from the state of Washington included: (1) AT&T's LIS trunk orders, and performance measures PO-5, OP-3, OP-4, OP-5, and OP-15, and (2) Covad's line-sharing and unbundled loop orders, and performance measures PO-5 and OP-4.

This report provides a summary of the results of the reconciliation of data from Washington. Detailed, confidential spreadsheets will be sent to Qwest and individually to AT&T and Covad. The report also updates the status of the observation reports issued as a result of earlier data reconciliation work.

II. Overall Summary of Findings

For Covad orders in Washington, Liberty found a significant number of problems with Qwest's performance measure reporting. However, these were all the same problems that had been identified in earlier data reconciliation work and documented in observation reports. There were only a very small number of records for which Liberty concluded that Qwest's treatment for performance measures were incorrect and that did not fall under one of the previously identified issues.

For a large number of Covad's unbundled loop orders, Liberty found that while Qwest's treatment of the order for OP-4 was correct, Qwest's processes or procedures differed from those used in other states and differed from that previously described to Liberty. More specifically, Qwest had indicated that the service order miss code (SOMC) field was only populated in cases where the due date had been missed. For the Washington data, however and unlike other states, Liberty found customer-caused miss codes entered for orders in which the due date had been met. Liberty is investigating this matter as part of the resolution of Observation [illegible].

For AT&T, Liberty also found significant problems with some of Qwest's performance reporting. In the case of AT&T, however, Liberty identified two causes of some of these problems that had not previously been found. In some instances, Qwest improperly excluded from the OP measures re-termination orders (orders to move a LIS trunk from an old Qwest switch to its replacement). This matter has been documented in Observation [illegible]. In several other cases, Liberty found that Qwest included orders in OP-15 when it should not have because AT&T had caused a delay. Pending orders delayed due to customer reasons are to be excluded from OP-15. This matter will be investigated as part of open Observation [illegible]. The remainder of the problems related to issues already identified in earlier data reconciliation reports.

III. Results of Data Reconciliation – Covad

Liberty examined a large (well over 300) sample of Covad line-sharing orders for reconciliation to OP-4, installation interval. Qwest and Covad agreed on the numerator and denominator for 24 percent of the orders. For 53 percent of the orders examined, Liberty concluded that Qwest properly treated the order in the performance measure, that Covad's information did not show that there was anything wrong with Qwest's treatment, or that the information from Qwest and Covad conflicted so as to prevent reconciliation.

Liberty found that Qwest was incorrect on 23 percent of the line-sharing orders. With one exception, these consisted of retail orders reported under wholesale results (Observation 1028), orders reported complete a second time in a different month (Observation 1027), and orders not reported because the CLEC designation was "unknown" (Observation 1029). These three observations have been closed. The one Qwest error that did not fall under these previously defined issues was one in which there were several applications and rejections followed by a customer cancellation before the service had been installed.

Liberty also examined a large (nearly 200) sample of Covad unbundled loop order for reconciliation to OP-4. For 57 percent of the sample, Qwest and Covad agreed on the numerator and denominator. For 39 percent of the orders examined, Liberty concluded that Qwest properly treated the order in the performance measure, that Covad's information did not show that there was anything wrong with Qwest's treatment, or that the information from Qwest and Covad conflicted so as to prevent reconciliation.

Liberty found that Qwest was incorrect on 4 percent of the unbundled loop orders. These errors consisted of previously defined matters such as those documented in closed observations 1027, 1032, and 1033. Liberty found one order for which Qwest incorrectly included a duplicate order for the same purchase order.

Finally, Liberty examined a large (nearly 300) sample of line-sharing orders for reconciliation to PO-5, timeliness of Firm Order Confirmations. Qwest and Covad agreed on the numerator and denominator for 21 percent of the records. For 51 percent of the records, Liberty concluded that either Qwest was correct, Covad did not show that Qwest was incorrect, or that the records were inconsistent and no conclusion could be reached.

Liberty concluded that Qwest was incorrect on 28 percent of the PO-5 records. Most of these (23 percent of the total) were cases in which Qwest's records did not include the state code (Observation 1030). Liberty closed this observation as documented in the last section of this report. During the month of May only, Qwest incorrectly treated a few (about 4 percent of the total) orders because it classified the order as having a non-standard interval (Observation 1031). This observation has also been closed. The other 1 percent of the records that Liberty concluded as Qwest being incorrect involved orders in which Covad's records supported its position and Qwest's did not.

IV. Results of Data Reconciliation – AT&T

Liberty found that Qwest was correct, or not shown to be wrong, on 78 percent of the orders in OP-3. For 12 percent of the orders, Qwest was incorrect because of the re-termination issue that is discussed below under Observation 1036. Problems with jeopardy coding (discussed in Observation 1031) accounted for 8 percent of the orders, and the remaining 2 percent due to Qwest having inadequate support for its position. The results for OP-4 generally followed those for OP-3.

For OP-6, Qwest was correct, or not shown to be wrong, on 42 percent of the orders. The re-termination issue (Observation 1036) accounted for 50 percent of the orders and improper jeopardy coding (Observation 1031) accounted for 8 percent.

For OP-15, Liberty found that Qwest was correct on 8 percent of the orders, the re-termination issue (Observation 1036) accounted for 33 percent of the orders, and, for 59 percent, Qwest included orders for which AT&T caused the delay (Observation 1031).

Finally, for PO-5, Liberty did not find any problems with Qwest's treatment of the records.

V. Status of Observations and Exceptions

Exception 1046

Exception 1046 reported a programming problem that affected OP-15 and changed certain products. Liberty previously closed this exception report.

Observation 1026

Observation 1026 identified retail orders that were being included in performance reports as wholesale orders. Liberty found that performance measures from July 2001 and forward were free of this problem and previously closed this observation report.

Observation 1027

Observation 1027 identified various orders that were included and counted in more than one month. Previously Liberty reported that it had reviewed the data files and the revised code provided by Qwest, confirmed that the problem had been resolved, and considered the observation to be closed.

Observation 1028

Observation 1028 reported that there was a significant error rate (about 13 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 had 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, efficiency 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 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 further 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 at this time. 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. Liberty evaluated Qwest's solution to the problem, confirmed that the improperly excluded orders were included, and, as previously reported, considered the 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 these 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.

AT&T commented that, since PO-2, PO-3A-1, PO-3B-1, PO-3C-1 and PO-4C all require state codes, it was highly likely that these performance results were inaccurate. AT&T also expressed concern with the time the "break" occurred and whether, in months prior to July 2001, CLECs using EDI 6.0 had inaccurate performance results for PO-5 because of this problem. Finally, AT&T requested that Qwest's process ensure that all transactions affected by the omission of the state code were recorded for accuracy purposes.

Liberty had concerns with Qwest's *de minimus* argument because a significant percentage of the Covad orders sampled were affected by the failure to record state code, while Qwest claims that the problem affects less than 1 percent of orders. Qwest stated that the problem affects PO-2, PO-3, PO-4, and PO-5, and that it primarily affects unbundled loops, but also affects line sharing.

Liberty conducted interviews with Qwest personnel and issued a number of data requests concerning this issue. Qwest responded and addressed the concerns of AT&T and Liberty. 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 impacted. Also provided by Qwest was 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. Qwest indicated that of the 90,777 transactions in November, 43,164 records or 47.6 percent were EDI 6.0 transactions.

Qwest agreed that the "code break" could have disproportionately affected some CLECs performance. According to Qwest, Covad during this period was a large user of unbundled loops and that would explain the disproportionate impact on them. As to AT&T's concern with the impact of the "code break" on other PIDS, Qwest stated that its solution would address the problems for PO-2, PO-3, PO-4, and PO-5.

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 and Qwest's response to AT&T's concerns, Liberty considers this observation closed.

Observation 1031

Observation 1031 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 responded to this observation on January 24, 2002. Qwest stated that it had re-evaluated every AT&T LIS trunk and unbundled loop order for the reconciliation period from the states of Arizona and Nebraska and found that no LIS trunk orders evaluated by Liberty in Arizona were miscoded as customer caused misses and that only one of many unbundled loop orders evaluated by Liberty in Arizona were miscoded as customer caused misses. Qwest also stated that, in evaluating the data from the three states collectively (Arizona, Colorado and Nebraska), it found that 0.11 percent of the unbundled loop orders, and 6.12 percent of the interconnection trunk orders were miscoded as customer-caused misses. Qwest stated that it had clarified the MTC coding process documentation, conducted a review with the Network Organization to ensure that each ISC representatives responsible for the coding errors identified.

Liberty has reviewed the attachments Qwest provided with its observation response and evaluated the manner in which Qwest improved its procedures and retrained its ISC representatives. Liberty conducted its own evaluation of the LIS trunk orders from Arizona to validate Qwest's statement that none of them had been miscoded. Liberty's results differed from those obtained by Qwest. Liberty reviewed 23 Arizona LIS trunk orders that Qwest showed as having been excluded for customer misses. Liberty found that 4 of the orders had been jeopardized by Qwest well after the original due date, with no support in their WFAC logs showing that AT&T had caused a miss of that due date. Liberty also found that Qwest had excluded 3 other orders as customer misses, even though the orders had also been jeopardized to Qwest, thus violating Qwest's own *Jeopardy Coding Job Aid* procedures. In addition, Liberty found that there was no support at all in the WFAC logs for the jeopardies applied to 2 other orders, and that the SOMC field was blank in one additional order that had been excluded as a customer miss.

For Washington LIS trunk orders, Qwest included several in the reporting of OP-15 for which AT&T had caused the delay. This matter will be investigated as part of this Observation report.

For a large number of Covad's unbundled loop orders, Liberty found that while Qwest's treatment of the order for OP-4 was correct, Qwest's processes or procedures differed from those used in other states and differed from that previously described to Liberty. More specifically, Qwest had indicated that the service order miss code (SOMC) field was only populated in cases where the due date had been missed. For the Washington data, however and unlike other states, Liberty found customer-caused miss codes entered for orders in which the due date had been met. Liberty is investigating this matter as part of the resolution of Observation 1031.

Qwest has stated that it is conducting a further assessment of the underlying causes of these problems and the means by which they will be corrected, and that it will provide documentation of its conclusions to Liberty. Accordingly, this observation remains open.

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 believed 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.

Liberty also investigated whether other measures, products, and CLECs could have been affected, and determined that only OP-4 for designed services but any CLEC could have seen the problem.

The nature of this problem falls into the general category of human errors documented in KPMG's Observation 3086. However, 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 or not 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 its response to the observation, Qwest stated that the net effect of its errors was minimal, i.e., a one day difference during the period being reconciled. Liberty believes it is pure coincidence, and irrelevant, that Qwest's errors may net out to a small number for the period. The important fact is that Qwest committed human errors in a third of the LIS trunk orders for which the parties agreed on the denominator but not the numerator. Qwest's response also stated that it planned to "*Improve the quality control process by increasing the quantity of ASRs sampled in the quality review process from 20 to 30 ASRs per SDC per month.*" Liberty wanted to see the results of the quality review process. However, in response to data request 55-3, Qwest stated that the quality control reviews did not begin until July 2001, that quality control reports are only kept for 30 days (unless a problem is identified), and that no quality control reviews were available at this time.

AT&T filed comments on this observation, questioning whether other performance measures and other products could be affected by the problem, whether there could be both systems errors and human errors involved, and whether prior results could be re-stated. In response to data request 65-2, Qwest stated that it does not plan to correct historical results because the errors were minimal, it is a Qwest policy not to alter closed records, and altering records in PAMS but not the original records would create inconsistencies. In response to data request 65-3, Qwest stated that the only performance measures that could be impacted by the application date problem are PO-

5D and OP-4. Finally, in response to data request 65-4, Qwest stated that, for a three-week period it had audited, 98.1 percent of unbundled loop orders had the correct application date.

In the responses to data requests 53-1, 53-2, and 65-1, 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, but recommends that Qwest retain its quality control reports for a period of at least a year and that application date error rates be closely monitored and tracked over time.

Observation 1034

Observation 1034 identified various line-sharing orders that were incorrectly excluded as loops with non-standard intervals of 72 hours. Liberty confirmed that the problem has not appeared after May 2001, and, as previously reported, considered this observation to be 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 was limited to anything other than these five states.

An order coming through SOLAR is initially assigned a completion date equal to the due date (since the field cannot be blank). Previously, this completion date would be passed to the RSOR database by the RSOR EFMT (Eastern format) batch programs and would remain in place unless changed. Qwest subsequently implemented a real time connection between SOLAR and RSOR with new RSOR ERTP (Eastern real time process) programs, replacing the EFMT interface programs and eliminating the problem. While SOLAR still assigns a completion date equal to the due date, this date is no longer passed to the RSOR database. The RSOR database does not receive the completion date from SOLAR until the order is actually completed. Orders that are cancelled in SOLAR are assigned a completion date of 11/11/1111 by RSOR, and thus excluded from the measures.

Qwest maintained that only about 2 percent of the eastern region orders were affected by this problem, and that the problem did not occur after May 12, 2001. Liberty subsequently issued data requests to clarify, among other things: (a) why the 11/11/1111 completion date was assigned in some but not all cases prior to May 12, 2001, and (b) what safeguards were in place to ensure that the completion dates for non-cancelled orders were accurate, *i.e.*, whether they were changed if the order was not completed on time.

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 EPMT programming logic that assigned the 11/11/1111 date. Any order with only cancellation activity in a given day would have been handled correctly. Since the interface has been rewritten, the logic error no longer exists.

Liberty also asked Qwest to explain more fully the statistics on the nature of the problem that it provided in response to the observation. According to Qwest, original data on orders are stored in RSOR for only 60 days. Qwest therefore had to reconstruct data from the Integrated Data Repository (IDR), and subsequently provided a summary of this data representing all products to Liberty. Qwest's analysis indicated, for the January to April 2001 period, that 2.1 to 2.9 percent of total retail orders for all products and 3.0 to 4.2 percent of total wholesale orders for all products were cancelled orders without the 11/11/1111 completion date in place. (Liberty's analysis showed that these percentages would be very slightly higher if the effects of cancelled orders that properly contained the 11/11/1111 date were considered.) In other words, these orders were included in both the denominator and numerator of OP-3 and OP-4, making Qwest's performance appear better than it was for both CLECs and Qwest retail.

In its comments on this observation, AT&T raised the issue of whether the completion dates on orders that were not cancelled could be inaccurate. Specifically, if completion dates were automatically assigned by SOLAR and passed to RSOR prior to May 2001, it may be possible that completion dates for missed commitments could be inaccurate if they were not changed from being equal to the due dates. Qwest was unable to reconstruct the data to validate whether non-cancelled orders had accurate completion dates. It appeared that there were no safeguards in place to ensure that accurate completion dates were entered into the system to override the one automatically assigned by SOLAR. To the extent that orders were closed manually (as opposed to be being auto-completed, such that the completion date would be automatically updated), it is possible that some orders did have completion dates that were not accurate. With the live feed between SOLAR and RSOR now in place, completion dates are no longer prematurely recorded in RSOR. It is no longer possible for inaccurate completion dates to be automatically carried forward; it is, however, still theoretically possible for manually-closed orders to have completion dates that were not entered 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 (Re-termination)

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 excluded these same re-termination orders from those OP measures because human error caused the orders to be improperly coded C40, which resulted in their exclusion as customer misses (this issue was discussed in an interview with Qwest on 2/28/02). These orders showed inward activity, and they should have been included in the OP measures. In fact, Liberty identified several Colorado AT&T LIS trunk orders that appear to be re-termination orders and that Qwest did include in the OP measures (e.g., DENP0103676 and DENP0103679).

Other Issues

Lengthy Completion Intervals

To capture the data required for completed service orders, Qwest extracts information for the current and the prior seven months. Qwest performed a test showing that this method captured 99.9 percent of the completed orders. During the data reconciliation for Colorado, Liberty found two LIS trunk orders that were not reported because they were over eight months old. Liberty was concerned that Qwest's test may not have been valid for orders that are typically more complex than average, such as those for LIS trunks. Liberty requested that Qwest conduct another test limited to LIS trunk orders to determine the percentage captured during the eight-month interval.

Liberty and Qwest agreed that Qwest would perform an analysis for the months of June, September and December 2001. For each month, Liberty wanted to know the number of LIS trunk orders that had completed during that month, but that had not been included in the performance measures because they had taken longer than eight months to complete. Initially, Qwest was unable to do exactly that. Rather, they were able to analyze the set of orders that had a LIS trunk class of service from the USOC table. Thus, Qwest analyzed a larger group of orders than would appear in the performance reports (which only include orders with LIS product codes). Qwest determined that, from this larger set of orders, 4 orders completing in June took longer than 8 months to complete, 1 order completing in September took longer than 8 months to complete, and one order completing in December took longer than 8 months to complete.

Liberty asked Qwest to further investigate these 6 orders, and Liberty learned the results of Qwest's analysis during an interview held on 2/20/02. Of the four orders completing in June, two would have been reported in the performance reports except for the 8-month exclusion. (The other two orders were for a change of circuit ID which would have been excluded for no inward activity, and a retail order for a disconnect.) For the month of June 2001, there were [illegible] LIS trunk orders included in the Qwest regional performance report for OP-3D and OP-3E combined (*i.e.*, this is the sum of the two denominators). Accordingly, for the month of June 2001, 0.8 percent (which is 2/254) of LIS trunk orders were omitted from the OP-3 LIS trunk regional performance results because they completed in more than 8 months.

The one LIS trunk order that took longer than 8 months to complete in September 2001 was also a retail order for a disconnect. Thus, 0.0 percent of the 219 LIS trunk orders were omitted from the OP-3 performance results for September because they completed in more than 8 months.

Finally, the one LIS trunk order that took longer than 8 months to complete in December 2001 would have been reported in the performance reports except for the 8-month exclusion. Accordingly, for December 2001, 0.4 percent of the 275 LIS trunk orders were omitted from the OP-3 performance results for December because they completed in more than 8 months.

Overall, for the 3 months analyzed, 0.4 percent (which is 3/748) of the LIS trunk orders were omitted because they completed in more than 8 months. This low percent appears to Liberty to support Qwest's view that the 8-month constraint does not significantly distort the performance measure results.

Cross-Boundary Orders

During its analysis of Washington LIS trunk orders, Liberty noticed that AT&T included numerous orders that Qwest did not. These orders are "cross boundary" in the sense that they are for interconnection trunks that originate from an AT&T switch in Oregon and terminate in a Qwest switch in Washington. In response to data request 71-002, Qwest stated that, for purposes of OP-3, OP-4, OP-6, and OP-15, it classifies orders in a state depending on the area code of the main telephone number. These cross boundary orders have an area code in Oregon, so Qwest classifies them in that state for those OP measures. Qwest also stated that, for purposes of PO-5, it classifies orders in a state depending on the customer facility location. Because of this, these cross boundary orders are classified in Washington for PO-5 reporting. For performance reporting, the result is that the cross boundary orders are reported in one state for the OP measures and in another state for the PO-5 measure.

The PID does not provide guidance about the state in which these cross boundary orders should be reported. Although it would be ideal to include each order (for all measures) in only one state report, Qwest applies its procedures uniformly throughout the region, there is no double counting of orders in the measures, and Liberty finds no clear basis for requiring that these procedures be changed.

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Fifth Report on Qwest Performance Measure Data Reconciliation - Oregon

I. Introduction

The Liberty Consulting Group (Liberty) is performing for the ROC a "data validation to resolve any debates concerning the accuracy of performance data emanating from particular ROC PIDs." (ROC Change Request #28.) 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. The data reconciliation process was designed to determine whether any of the information provided by CLECs demonstrated inaccuracies in Qwest's reported performance results as those measures were defined in the PID. The detailed process has been discussed in prior reports and has not been repeated here. Liberty issued its first data reconciliation report, which used data from Arizona, on December 3, 2001. The second report on data from Colorado was issued on January 3, 2002, and on January 28, Liberty issued the third report, which provided the results of the review of data from Nebraska. On February 1, 2002, Liberty issued an update to the Colorado report, which provided the status of observations and the exceptions issued as a result of all of the data reconciliation work. Liberty's report on the state of Washington was issued March 1, 2002.

The scope of the data reconciliation work using information from the state of Oregon included AT&T's unbundled loop and LIS trunk orders, and performance measures PO-5, OP-3, OP-4, OP-6, OP-13, and OP-15. Liberty also reviewed Qwest and AT&T trouble ticket data used in reporting MR-6. This report provides a summary of the results of the reconciliation of data from Oregon. Detailed, confidential spreadsheets will be sent to Qwest and to AT&T. The report also updates the status of the exception and observation reports issued as a result of the data reconciliation work done to date.

II. Overall Summary of Findings

The following is a summary of the problems that Liberty found in Qwest's performance measure reporting.

For AT&T's unbundled loop orders, Liberty found some 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. This matter has been documented in Observation 1037. In another case, Qwest improperly omitted some orders in calculating OP-15A; this issue has been documented in Observation 1038. Liberty also found that Qwest order typists had entered the incorrect completion dates for orders, which affected results for OP-3, OP-4 and OP-6; this matter will be investigated as part of open Observation 1032. The remainder of the problems related to issues already identified in earlier data reconciliation reports.

For LIS trunk orders, the most of the problems that Liberty discovered were related to human errors and the subject of open Observation 1031.

- For 2 percent, Qwest had reported the order in a different month than logged by AT&T on the basis of the reference data. Liberty previously concluded that Qwest's treatment was proper.
- For 3 percent, Qwest did not include orders in the measure that AT&T believed should be included. These were cases in which the CLEC supplemented the order before the original due date to move the due date past the original due date. This matter was discussed in the Arizona report, wherein Liberty concluded that it was appropriate for Qwest to exclude such orders.

For the remaining 6 percent of the orders, Qwest had made errors:

- For roughly 4 percent of the cases, Qwest acknowledged that its order typist had entered the incorrect completion date. 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 excluded from the measure. This issue has been added to Observation 1031.
- For 2 percent, Qwest counted the same order in two months; this double counting error was the subject of Observation 1027.

For measure OP-4, the same issues arose as those presented above for OP-3, and in roughly the same percentages. For measure OP-6A, some of the same issues arose, however the effect was magnified because of the relatively small number of orders in the measure.

The parties agreed on all orders in the OP-6B measure. Although AT&T did not have the ability to determine what orders had been delayed due to Qwest facility reasons, AT&T concurred that Qwest had treated the orders properly.

For OP-13, AT&T and Qwest recorded different start and stop times for many of the coordinated cuts, and most of the discrepancies could not be explained. Qwest has been measuring the interval correctly as the difference between the scheduled due time (or start time if the order was started early with permission) and stop time. Qwest did acknowledge, however, that after it moved the hot cut operations from Des Moines to Omaha (April to May 2001 period), there may be have been some confusion among technicians about how to properly record stop times. In some instances, technicians were not reporting stop time as the time when physical work and Qwest testing was completed, but rather as the time that AT&T called back to confirm that the order was completed. In these cases, Qwest would be recording intervals as longer than they should be, since it was capturing the time technicians waited for a call back, which should not have been recorded at all. In June, Qwest technicians began tracking the time between notifying AT&T the work was completed and getting a confirmation call back as delay time. Although Qwest subtracted delay time from the interval, and the interval was correct, Qwest's data records were not correct. Liberty issued an observation report (Observation 1059) on this subject. This error affected the records for at least 9 percent of orders included by either party in the measure. In only one case, however, did the expanded interval cause Qwest to improperly record an order as a miss that should have been a make. In most cases, the extended interval was still within the tolerances set out for OP-13.

Qwest and AT&T agreed on the treatment (make or miss) for 97 percent of the unique orders that either AT&T or Qwest had included in its calculations. All of the discrepancies were due to Qwest errors, either: (a) Qwest's analysis failed to incorporate data on an order when transferring data to its calculation spreadsheets, so that the order was never reported on the measure, (b) Qwest assigned incorrect PON numbers for certain orders (so the orders were counted with other service orders under the wrong PON and never picked up under the correct PON), or (c) Qwest technicians recorded incorrect stop times, which made the order appear incorrectly as a miss rather than a make.

For OP-15A, Liberty reconciled results for April and June only, since Qwest was unable to produce reliable data for May. While AT&T and Qwest agreed on the treatment of orders that Qwest had included in the measure for these two months, AT&T believed that there were a significant number of orders that had been omitted from April results. This omission had a significant effect on reported results for the month because of the relatively small number of orders in the measure. Specifically, adding these orders to the measure would increase the OP-15A denominator by 37 percent. Qwest stated that the omissions were due to a programming code error. Liberty issued an observation report (Observation 1038) on this subject.

AT&T and Qwest agreed on all orders for OP-15B for the months of April and June. AT&T did not record the reason for delays, and thus had no information to indicate that Qwest had not handled the orders properly.

For PO-5, Qwest and AT&T agreed on 91 percent of the orders. All of the discrepancies were due to Qwest errors. The remaining 9 percent of the orders had errors because of a programming problem that existed during the months of May and June. Orders that were either for multiple loops or were duplicated in the Qwest system were left out entirely. Qwest has since corrected this programming error, effective with July 2001 results. According to Qwest, the error was the result of programming changes made to move to PID 4.0.

LIS Trunks

For LIS trunks and OP-3, the parties agreed on 78 percent of the orders. Of the remaining orders over which the parties disagreed, Liberty found that Qwest was correct in 27 percent of its reporting. All but one of Qwest's errors occurred in January and February and most were related to issues identified in open Observation 1031. The results for OP-4 were very similar to those for OP-3.

For OP-6, Liberty found two Qwest errors, one of which was related to open Observation 1031.

For OP-15, there were no orders reported by either party during the data reconciliation period.

For PO-5, Liberty found one order in which Qwest mistakenly recorded the correct application date.

C. Trouble Tickets

Liberty's work scope included a review of AT&T's and Qwest's Oregon trouble ticket data for unbundled loop products (UBL) for the April to June 2001 period. Liberty conducted this review to determine whether Qwest had correctly reported its performance measures, particularly MR-6 – Mean Time to Repair *(MTTR)*. Liberty received summary information in spreadsheet form from both parties, as well as a hard copy of many of the AT&T and Qwest trouble tickets.

Liberty identified several issues in its preliminary analysis:

- There was a large discrepancy in the population of trouble tickets provided by each party.
- In many cases, AT&T had logged more than one Qwest trouble ticket number in connection with a single AT&T repair request.
- In 61 percent of the tickets in common, the MTTR or repair duration recorded by each party did not match.

There was a significant disparity in the population of relevant Qwest trouble ticket numbers that each party provided. Roughly one-third of the Qwest trouble tickets appeared in the AT&T data. Forty percent of the tickets in the AT&T data did not appear in the Qwest data. Qwest stated that these tickets (except for three that it could not find) were either for non-UBL products (LNP, DS1, or DS0), for a state other than Oregon, or "Info/Test Assist" tickets and were not included in the measure. Liberty found that Qwest had treated these tickets consistent with its procedures and consistent with the PID.

Roughly 13 percent of the total population of AT&T repair orders had multiple, i.e., two or more, Qwest ticket numbers associated with them. In almost all cases, Qwest had assigned more than one ticket number to an AT&T repair order for one of two reasons:

- The AT&T repair order included two or more different circuits, and Qwest assigned the circuits separate Qwest trouble ticket numbers.
- There was more than one repair performed on the given circuit, and these repairs were performed on different days or at different times. Qwest typically opened and closed the original tickets and opened new ones for the later repairs.

In one case, AT&T had opened a duplicate ticket on the same circuit and Qwest closed the second duplicate ticket to "INFO" and excluded it from the measure to avoid double counting.

Liberty developed a summary chart itemizing the reasons for multiple Qwest tickets, and submitted it to the parties for comments. Liberty found that, for each of the trouble tickets in question, Qwest handled its trouble tickets consistently with its stated procedures and with the PID. AT&T accepted Liberty's analysis in all of the cases. Not all of the tickets were included in the MR-6 measure by both parties, however. In some cases, AT&T had included tickets for non-UBL products or "Info/Test Assist" tickets that were not included by Qwest in the measure.

For 61 percent of the individual Qwest trouble tickets that the two parties had in common, the MTTR reported by each party did not match. Of these, the durations differed by more than 1 hour less than 12 hours for roughly 60 percent and by more than 12 hours for roughly 40 percent. In each case, the MTTR recorded by AT&T was longer than that recorded by Qwest.

Liberty held discussions with AT&T and Qwest to determine the reasons for these differences in duration. During the course of the discussions, both parties revised their data or reinterpreted the information on their ticket logs. Liberty found that:

- There was a 3-hour difference between the system clock used by Qwest and that of AT&T (this difference would not affect net duration, however).
- In 90 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open time for the ticket.
- In 20 percent of the cases, Qwest and AT&T had recorded the same (or roughly the same) open and restore time for the ticket.
- In 37 percent of the cases, there was "no access" time that AT&T had not removed from MTTR or AT&T had not used the correct "restore back to" time.

The net results of the duration reconciliation were as follows:

- In 84 percent of the cases, the parties ultimately concurred that Qwest had properly handled the ticket duration.
- In 5 percent of the cases, the discrepancies could not be explained.
- In 11 percent of the cases, Qwest had made administrative errors, which led to durations that were significantly different from those recorded by AT&T.
- The adjustments to increase MTTR for the Qwest tickets in error ranged from roughly 12 to 80 hours.

The population of tickets analyzed for MTTR above constituted 61 percent of the tickets the parties had in common (not the number used by Qwest to derive its MR-6 measures). Assuming the error rate in the other 39 percent is zero (since the parties agreed), Qwest had significant errors in 6.5 percent of the total ticket durations used to calculate the measure. It should be noted, however, that one of the errors involved a ticket with an extremely long and complex log, and neither party could reconstruct or defend the MTTR that it used.

Although the sample analyzed by Liberty was small compared to Qwest's entire trouble ticket population, the human error rate was higher than Liberty believes is acceptable for a process of this type. Liberty previously issued an Observation report (#1030) on this subject. In its report on Nebraska, Liberty had noted that the combined MTTR error rate for Arizona and Nebraska was 6.5 percent. Liberty recommended that it conduct an analysis of AT&T trouble tickets in Oregon to obtain additional data on the nature and frequency of errors. As noted above, Liberty found a 6.5 percent error rate for Oregon, consistent with prior results.

Qwest informed Liberty that it had instituted additional training programs and review efforts geared towards improving the administration of trouble tickets. Liberty has closed the observation.

Exception 1046

Exception 1046 reported a programming problem that affected OP-13 and designed service products. Liberty previously closed this exception report.

Observation 1026

Observation 1026 identified retail orders that were being included in performance reports as wholesale orders. Liberty found that performance measures from July 2001 onward were free of this problem and previously closed this observation report.

Observation 1027

Observation 1027 identified various orders that were included and counted in more than one month. Previously, Liberty reported that it had reviewed the data files and the revised code provided by Qwest, confirmed that the problem had been resolved, and considered the observation to be closed.

Observation 1028

Observation 1028 identified a significant error rate in the mean-time-to-repair (MTTR), or repair duration, used by Qwest in calculating its MR-6 measure. Liberty was satisfied that Qwest had taken positive steps to reduce the level of errors found during the data reconciliation work, and previously closed this observation report. Liberty also recommended that the error rate be the subject of any future monitoring work.

Observation 1029

Observation 1029 noted the exclusion of certain CLEC line-sharing orders because the CLEC was unknown. Liberty evaluated Qwest's solution to the problem, confirmed that the improperly excluded orders were included, and, as previously reported, considered the observation to be closed.

Observation 1030

Observation 1030 noted that Qwest failed to report a number of Qwest's Firm Order Commitment (FOC) records because the state code was not automatically logged for those transactions. The "code break" occurred in a system that has since been retired. Liberty evaluated Qwest's proposed solution to identifying records that did not include a state code, and, as previously reported, considered this observation to be closed.

Observation 1031

Observation 1031 initially reported that the Service Order Misc 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.

For Washington LIS trunk orders, Qwest included several in the reporting of OP-15 for which AT&T had caused the delay. This matter will be investigated as part of this Observation report.

For a large number of Covad's unbundled loop orders, Liberty found that while Qwest's treatment of the order for OP-4 was correct, Qwest's processes or procedures differed from those used in other states and differed from that previously described to Liberty. More 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 and unlike other states, Liberty found customer-caused miss codes entered for orders in which the due date had been met. Liberty is investigating this matter as part of the resolution of Observation 1031.

During its data reconciliation work for Oregon UBL orders, Liberty found that, for roughly 4 percent of the cases for OP-3 and OP-4, Qwest's order typist had entered the incorrect completion date. 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. Liberty is also investigating this matter as part of the resolution of Observation 1031.

Qwest initially responded to this observation on January 24, 2002. Among other things, 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 a further assessment of the underlying causes of these human error problems and the means by which they will 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 most *1031 issue* orders, the order was first held for facility reasons without populating WFAC with the associated jeopardy code. If such an order was subsequently jeopardized to the CLEC and that jeopardy code was populated on WFAC, then the Service Delivery Coordinator might be unaware of the Qwest jeopardy and populate the SOMC with a customer miss. Qwest stated that it retrained the affected employees on February 12, 2002 to ensure that they populate WFAC with all Qwest-caused delays. 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). Finally, Qwest stated that it assessed the magnitude of the *1031 issue* (as it interprets it), and that the issue has had minimal impact, i.e., Qwest stated that its "historical results are accurate and reliable."

Liberty will determine whether Qwest has addressed all of the issues that Liberty has included in Observation 1031. If Qwest has not fully addressed any of the issues, Liberty will submit data requests to learn Qwest's position and how it plans to resolve them. Furthermore, Liberty will assess the actions Qwest has already taken. Liberty will also recommend any additional actions deemed necessary and assess how Qwest carries them out. Accordingly, this observation remains open.

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. Liberty's subsequent analysis of Colorado and Washington orders showed 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. As such, Liberty had closed this observation.

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. Liberty was satisfied that the documentation used by Qwest to train personnel in properly determining the application date was sound. As previously reported, Liberty closed this observation but recommended that Qwest closely monitor and track application date error rates over time.

Observation 1034

Observation 1034 identified various line-sharing orders that were incorrectly excluded as loops with non-standard intervals of 72 hours. Liberty confirmed that the problem has not appeared after May 2001, and, as previously reported, considered this observation to be 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. Liberty determined that the programming fix put in place as of May 12, 2001 corrected the problem and that results beginning with June 2001 should not be affected. As previously reported, Liberty considered 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 (DENP0103676 and

DENP0103679.) In addition, Washington re-termination orders were improperly coded C40 due to human error. This issue was discussed in an interview with Qwest on February 28, 2002.

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. In an e-mail AT&T stated that it accepts Qwest's explanation of why re-termination orders should be excluded from the performance measures, although it expresses 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 OP-15 as a supplement to its observation response. Liberty reviewed it and confirmed that Qwest had created a new exclusion (exclusion type 93) that removes central office conversion orders from that measure. As a second supplement, Qwest also provided Liberty with the revised code for OP-3/OP-4/OP-6. Liberty reviewed it as well and confirmed that the same new exclusion type for those measures had been created, and for the same purpose.

Qwest stated that it retrained all Customer Communication Technicians – Implementor 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 there were errors in the stop times recorded by Qwest for unbundled loop coordinated cuts. According to Qwest, these errors coincided with moving the coordinate cut service center from Des Moines to Omaha.

Stop time is defined in the PID as when Qwest notifies the CLEC that the Qwest physical work and the appropriate tests have been successfully accomplished. During April and May, testers had, for some orders, recorded the stop time for the order as the time the CLEC called back to confirm the order was completed, rather than the time Qwest first notified the CLEC that the order was completed. In effect, Qwest had incorporated this waiting time in the duration of the coordinated cut. In most cases, Qwest still made the interval, but in a few cases, this additional time caused an order to be considered a miss.

Liberty found a somewhat different manifestation of the problem occurring in June. Testers began to regard the time spent waiting for a call back from the CLEC as "delay time." Qwest appropriately subtracted any delay time from the calculated interval, so the duration of the coordinated cut would be accurate in this case. However, the actual recorded stop time would be incorrect.

Observation 1038

Observation 1038 noted that there were orders omitted from OP-15A UBL results for April 2001. Qwest stated that there was a mistake in its programming code that caused the omissions. According to Qwest, any completed order that had not been posted to CRIS before the April OP-15A results were re-run in June did not get picked up in the measure. Qwest should provide a full explanation of the nature of the programming code mistake, and discuss whether a programming fix is either planned or in place. Qwest should also discuss whether similar errors have occurred in other months and quantify the effect on reported results. Liberty considers this observation still open.

Report on Data Reconciliation of Qwest's Performance Measures

Presented to:

The Regional Oversight Committee

By:

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EXHIBIT Qwest 70

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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 matter. 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. However, some 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 summary 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.

II. 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.

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 0.3 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 date 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 help 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, 19 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 [illegible] 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 the 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.