

Table of Contents

I.	Introduction.....	1
II.	Overall Summary of Findings.....	2
III.	Results of Data Reconciliation – AT&T.....	3
A.	Introduction.....	3
B.	Reconciliation Results.....	3
C.	Trouble Tickets	6
V.	Status of Observations and Exceptions	8

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 #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. 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 1031. 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.

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 numerator and 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 was April 2001 through June 2001. Qwest was unable to provide the data necessary to reconcile OP-15 for UBL for May. 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. These matters of not having data for particular measures and months have been reported in Liberty's earlier data reconciliation reports.

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 88 percent of the unique orders that either AT&T or Qwest had included in its calculations. For the 12 percent of total orders that the companies disagreed on, Liberty found that Qwest had been correct for 5 percent:

- For 2 percent, Qwest had reported the order in a different month than logged by AT&T on the basis of the reference date. 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 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 treating 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 1037) 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 analysts failed to incorporate data on an order when transferring data to its calculation spreadsheets, so that the order was never reported in 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 in 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 28 percent of the orders. Of the remaining orders over which the parties disagreed, Liberty found that Qwest was correct in 23 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 but

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 measure). 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 (#1028) 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.

V. Status of Observations and Exceptions

Exception 1046

Exception 1046 reported a programming problem that affected OP-15 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 Covad'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 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.

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 in 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

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.