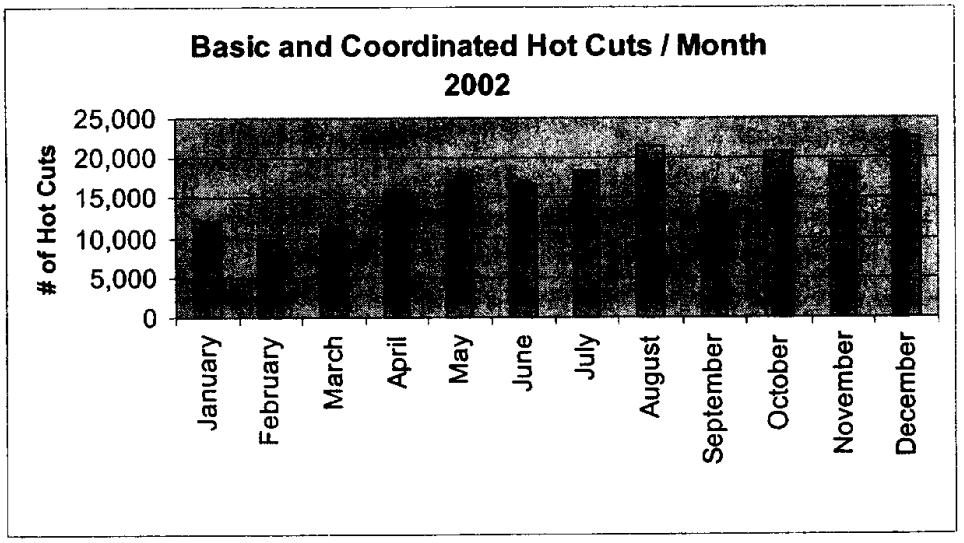
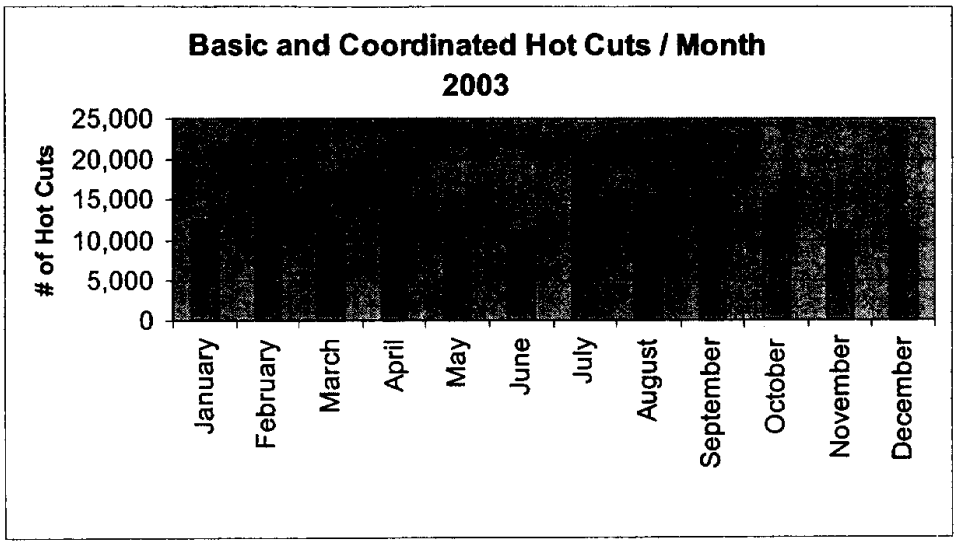
8. Qwest Historical Hot Cut Volumes and Volume Forecast

Daily volumes of Basic and Coordinated 'Reuse' (i.e., reusing the loop facility) hot cuts performed by Qwest COs for each CLEC during 2002 and 2003 were collected from Qwest's Service Order Processing systems.

This data indicates that Qwest performed approximately 202,000 and 163,000 hot cuts during 2002 and 2003, respectively. Illustration 1 represents the total number of hot cuts performed each month by Qwest. Exhibit 7 provides total monthly volume of hot cuts performed by state.

Illustration 1 – Total Number of Hot Cuts Performed per Month





Source: Qwest's Service Order Processing Systems

Total Daily Volume

The following observations are made regarding total daily volumes of Basic and Coordinated 'Reuse' hot cuts performed by Qwest for all CLECs, across all COs.

2002

- Qwest performed between 700 and 900 hot cuts on 85 different business days.
- Qwest performed between 901 and 1,100 hot cuts on 56 different business days.
- Qwest performed between 1,101 and 1,300 hot cuts on 20 different business days.
- Qwest performed more than 1,300 hot cuts on five different business days.
- The maximum number of hot cuts performed by Qwest in a single day was 1,631.

2003

- Qwest performed between 700 and 900 hot cuts on 59 different business days.
- Qwest performed between 901 and 1,100 hot cuts on 23 different business days.
- Qwest performed between 1,101 and 1,300 hot cuts on three different business days.
- The maximum number of hot cuts performed by Qwest in a single day was 1,216.

Illustration 2 – Total Daily Volume of Hot Cuts

Daily Hot Cut Volumes	2002	2003
700-900	85	59
901-1100	56	23
1101-1300	20	3
>1300	5	0
Maximum Single Day Volume	**1,631**	**1,216**

Source: Qwest's Service Order Processing Systems

Daily Volume by Central Office

Daily volumes of Basic and Coordinated 'Reuse' hot cuts performed by Qwest were disaggregated to analyze hot cut volume at each CO. The following observations were made.

2002

In 2002, 73 COs across 11 different states demonstrated the ability to perform 50 or more hot cuts in a day. Exhibit 8 provides a list of COs that demonstrated the aforementioned capability and the number of times they achieved hot cut volume of 50 or more in a day. The following are examples of COs that performed high volumes of hot cuts on a consistent basis. Exhibit 9 provides daily volume of hot cuts performed by these and other COs.

- CDFLIACO (Iowa) performed between 22 and 122 hot cuts per day over 17 days (a total of 723 hot cuts) in April and between 20 and 134 hot cuts per day over 14 days (a total of 1,045 hot cuts) in August.
- CLTNIACO (Iowa) performed between 33 and 119 hot cuts per day over six days (a total of 477 hot cuts) in April and between 37 and 94 hot cuts per day over six days (a total of 373 hot cuts) in April and May.
- DESMIANW (Iowa) performed between 21 and 81 hot cuts per day over 14 days (a total of 744 hot cuts) in January and between 16 and 65 hot cuts per day over nine days (a total of 387 hot cuts) in January and February.

- DUBQIATC (Iowa) performed between 19 and 83 hot cuts per day over nine days (a total of 428 hot cuts) in April and May and between 20 and 86 hot cuts per day over 59 days (a total of 2,978 hot cuts) in September, October and November.
- WTRLIADT (Iowa) performed between 19 and 89 hot cuts per day over 18 days (a total of 881 hot cuts) in September and October between 30 and 122 hot cuts per day over 39 days (a total of 2,779 hot cuts) in October and November.
- FARGNDBC (North Dakota) performed between 20 and 71 hot cuts per day over 13 days (a total of 458 hot cuts) in January and between 27 and 75 hot cuts per day over 14 days (a total of 633 hot cuts) in August and September.
- SXFLSDCO (South Dakota) performed between 29 and 124 hot cuts per day over 21 days (a total of 1,209 hot cuts) in August and between 30 and 80 hot cuts per day over 16 days (a total of 930 hot cuts) in December.

The five largest daily volumes of hot cuts performed by individual COs were 205, 257, 291, 335 and 347, respectively. Further research indicates that there were 12 trouble reports experienced within 30 calendar days following installations of the aforementioned 1,435 hot cuts. This represents a trouble rate of 0.84%. Paragraph 309 of FCC's decision In the Matter of Application by Bell Atlantic New York for Authorization Under Section 271 of the Communications Act to Provide In-Region InterLATA Service in the State of New York, -CC Docket #99-295 (Rel. Dec. 22, 1999), sets the performance benchmark at five percent or lower for such new installation service outages. The aforementioned trouble rate of 0.84% met the benchmark set forth mentioned in the section of the report titled "Testing Benchmarks."

2003

In 2003, 66 COs across 11 different states demonstrated the ability to perform 50 or more hot cuts in a day. Exhibit 8 provides a list of COs that demonstrated the aforementioned capability and the number of times they achieved hot cut volumes of 50 or more in a day.

The following are examples of COs that performed high volumes of hot cuts on a consistent basis. Exhibit 9 provides daily volume of hot cuts performed by these and other COs.

- FTCLCOMA (Colorado) performed between 33 and 63 hot cuts per day over seven days (a total of 309 hot cuts) in August and between 28 and 56 hot cuts per day over 14 days (a total of 569 hot cuts) in September.
- ANKNIACO (Iowa) performed between 27 and 86 hot cuts per day over 25 days (a total of 1,456 hot cuts) in August and September.
- DUBQIATC (Iowa) performed between 20 and 65 hot cuts per day over 24 days (a total of 1,129 hot cuts) in July and August and between 25 and 65 hot cuts per day over 17 days (a total of 816 hot cuts) in August.
- MRTWIASO (Iowa) performed between 20 and 46 hot cuts per day over 13 days (a total of 404 hot cuts) in September and between 28 and 88 hot cuts per day over 27 days (a total of 1,421 hot cuts) in September and October.
- WFRGNDBC (North Dakota) performed between 34 and 60 hot cuts per day over 21 days (a total of 948 hot cuts) in October and November and between 23 and 72 hot cuts per day over eight days (a total of 398 hot cuts) in December.

The four largest daily volumes of hot cuts performed by individual COs were 100, 111, 123 and 135, respectively. Further research indicates that there were four trouble reports experienced within 30 calendar days following the aforementioned installations (a total of 469 hot cuts). This represents a trouble rate of 0.85%. The aforementioned trouble rate of 0.85% met the benchmark set forth mentioned in the section of the report titled "Testing Benchmarks."

Illustration 3 is a tabular representation of consistent, high-volume monthly hot cuts performed at aforementioned COs.

Illustration 3: Selected Hot Cut Volumes

2002

State	CO	Consecutive days	Number of hot cuts	Average hot cuts/day
Colorado	BLDRCOMA	14	32 - 119	68
Iowa	CDFLIACO	17	22 - 122	43
Iowa	CDFLIACO	14	20 - 134	75
Iowa	CLTNIACO	6	33 - 119	80
Iowa	CLTNIACO	6	37 - 94	62
Iowa	DESMIANW	14	21 - 81	53
Iowa	DESMIANW	9	16 - 65	43
Iowa	DUBQIATC	9	19 - 83	48
Iowa	DUBQIATC	59	20 - 86	50
Iowa	IWCYIATC	12	17 - 347	107
Iowa	SXCYIADT	7	67 - 183	112
Iowa	SXCYIADT	9	27 - 53	41
Iowa	SXCYIADT	11	28 - 69	46
Iowa	WTRLIADT	8	19 - 61	44
Iowa	WTRLIADT	18	19 - 89	49
Iowa	WTRLIADT	39	30 -122	71
Minnesota	MPLSMNTF	11	25 - 64	46
North Dakota	FARGNDBC	13	20 -71	35
North Dakota	FARGNDBC	14	27 - 75	45
South Dakota	SXFLSDCO	21	29 - 124	58
South Dakota	SXFLSDCO	13	21 - 69	48
South Dakota	SXFLSDCO	16	30 - 80	58

2003

State	CO	Consecutive days	Number of hot cuts	Average hot cuts/day
Colorado	DNVRCOCW	9	25 - 53	43
Colorado	FTCLCOMA	7	33 - 63	44
Colorado	FTCLCOMA	14	28 - 56	41
Iowa	LVLDCOMA	7	43 - 53	49
Iowa	ANKNIACO	25	27 - 86	58
Iowa	AMESIATC	21	27 - 97	64
Iowa	BURLIATC	18	22 - 83	60
Iowa	DUBQIATC	24	20 - 65	47
Iowa	DUBQIATC	17	25 - 65	48
Iowa	MRTWIASO	13	20 – 46	31
Iowa	MRTWIASO	27	28 - 88	53
Minnesota	MPLSMNPI	9	23 - 67	43
Minnesota	NSPLMNPR	9	29 - 76	49
Minnesota	WBLKMNWB	15	36 - 71	50
North Dakota	FARGNDBC	10	30 - 75	46
North Dakota	WFRGNDBC	21	34 - 60	45
North Dakota	WFRGNDBC	8	23 - 72	50

Source: Qwest's Service Order Processing Systems

Multi-CLEC Hot Cut Volume

Although high-volume days are often triggered by a large volume of requests from one CLEC, Qwest has handled significant hot cut volumes for multiple CLECs on the same day. For example, the following observations were made after analyzing the five largest daily volumes of hot cuts performed by Qwest:

2002

- On November 27, 2002 Qwest performed 1,631 hot cuts for 18 CLECs.
- On July 31, 2002 Qwest performed 1,503 hot cuts for 16 CLECs.
- On June 28, 2002 Qwest performed 1,435 hot cuts for 15 CLECs.
- On August 30, 2002 Qwest performed 1,389 hot cuts for 19 CLECs.
- On December 16, 2002 Qwest performed 1,331 hot cuts for 18 CLECs.

2003

- On July 31, 2003 Qwest performed 1,216 hot cuts for 18 CLECs.
- On September 17, 2003 Qwest performed 1,198 hot cuts for 20 CLECs.
- On February 10, 2003 Qwest performed 1,172 hot cuts for 19 CLECs.
- On September 15, 2003 Qwest performed 1,050 hot cuts for 24 CLECs.
- On September 11, 2003 Qwest performed 1,049 hot cuts for 24 CLECs.

Volume Forecast of UNE-Loop

Qwest has estimated the embedded base of UNE-P lines as of December 31, 2004, at 1,275,000 lines. Qwest assumes that 64% of the total embedded lines are in the proposed unimpaired market areas, resulting in an estimate of 816,000 UNE-P lines in unimpaired market areas as of December 31, 2004. Between January 1, 2005, and July 31, 2005, the number of UNE-P lines in the proposed unimpaired market areas is further reduced by

assuming churn of three percent per month, resulting in approximately 659,000 lines that will require conversion.[2]

Qwest's migration analysis includes:

- The estimated embedded base requiring conversion;
- New UNE-Loops resulting from a freeze on UNE-P in unimpaired markets;
- Churn on the embedded base requiring conversions; and,
- Churn on the UNE-Loop.

This analysis forecasts a daily volume of conversions of that reaches a peak approximately 3,600 in August 2005. Qwest assumes all UNE-P lines in unimpaired areas will convert to UNE-Loop. Hence, the forecast made by Qwest of the daily conversion volumes appears to be conservative.

To conduct a migration analysis at the CO level, Qwest chose the CO with the largest embedded base of UNE-P in Minnesota (6,595 lines). Using 60% growth, Qwest estimates the embedded base will be 10,552 lines. Qwest has estimated that to convert the embedded base of UNE-P in this largest CO in the state of Minnesota while handling the new UNE-Loop volume created by the absence of the UNE-P option, the CO would have to perform 64 hot cuts per business day over the next 21 months. This is significantly less than the 100 BHCs Qwest has committed to undertake per CO per day. It is also significantly less than Qwest has successfully performed in the past using the current hot cut process.[3]

This analysis indicates that all of the individual COs can be converted within the 21 months provided in the FCC Triennial Review Order.

[2] Source: According to the written testimony of Robert Brigham dated January 23, 2004.
[3] Source: According to the written testimony of Robert Brigham dated January 23, 2004, filed in the state of Minnesota.

Summary of Historical and Forecast Volume Analysis

Qwest has demonstrated, based on historical data for the existing hot cut process, that it can handle large volumes of UNE-P to UNE-Loop conversion requests. Qwest has further demonstrated on many occasions the ability to process more than 1,000 hot cut requests per day. Qwest has also demonstrated the capability to consistently perform between 25 and 100 hot cuts per day per CO and to exceed these amounts when required with 30-day trouble rates of less than 1%.

Qwest has serviced the above volumes using the existing hot cut process. The proposed BHC process will implement significant improvements that will enable increased efficiencies and scalability over the existing process.

Qwest has provided forecasts of the volume of hot cuts required in the largest COs over the 21 month migration period. This forecast, including growth of the embedded base and including new UNE-Loop replacing new UNE-P, would be 64 cuts per business day in the largest CO in Minnesota. This is significantly less than the 100 BHCs Qwest has committed to, and is no more than Qwest performs today using the current hot cut process.

9. Testing Procedures Performed

Our testing of Qwest's BHC process consisted of three parts:

- A preliminary live trial of the BHC process;
- A second round live trial of the BHC process; and,
- A comparison of the current hot cut process to the BHC process.

Preliminary Live Trial of the BHC Process

We tested Qwest's proposed BHC process with a live trial using CLEC customers. This was accomplished through an agreement with a CLEC to perform commercial trials of the BHC process. The purpose of the initial trial was to ensure that the process worked and to develop process improvement recommendations based on the results.

The BHC preliminary live trial consisted of two production batches of 25 hot cuts each in one Cod (CO #1)[4]. This trial was conducted on two consecutive days in December 2003. The submission of LSRs occurred on December 10th and 11th and the hot cuts took place on the December 17th and 18th. The LSRs were submitted on two consecutive days as two separate batches containing 25 lines each. The composition of these batches is included in Exhibits 12 and 13a. Results of the preliminary live trial are discussed in the section of this report titled "Testing Results."

Second Round Live Trial of the BHC Process

After the CLEC forum in January 2004, the CLEC permitted us to perform additional live testing. Two additional batches of 25 cuts were submitted on the same day to two separate COs.[5] The composition of these batches is included in Exhibits 12 and 13b. LSRs were submitted on January 12, 2004, DVA was on January 15, 2004 and Due Date was on January 19, 2004.

During the period between the preliminary live trial and the second round live trial, changes were made to the BHC process. Significant examples of these changes include:

- In December 2003, the process did not offer the ability for Qwest to notify CLECs of issues before Due Date because the pre-wire was done on Due Date. Thus, in the December 2003 trial, the CLEC had only one hour on Due Date to resolve issues

[4] The locations of these COs are disclosed in the highly confidential Exhibit 14.
[5] IBID.

before the order was removed from the BHC. In January 2004, pre-wire occurred on DVA and the "lift and lay" occurred on Due Date. The COTs checked CLEC dial tone and ANI on DVA which would have allowed the CLEC to fix issues before Due Date if there were any.

- In January 2004, if the CLEC dial tone or ANI test was not accurate on Due Date, the order would have been pulled from the BHC.[6] This process step did not occur in the December trial.
- In January 2004, the line continuity testing was removed from the automated sort engine at the QCCC. The removal of the test allowed for faster throughput at the QCCC.

The results of the second round live trial are included within the section titled "Testing Results" of this report.

Comparison of Hot Cut Process to the BHC Process

In addition, we compared key process steps between the hot cut process and the BHC process. This approach required the identification and comparison of the most significant differences between the two processes. Thus, observations were required of time components to measure efficiencies.

Between January 13 and 15, 2003, we observed the existing hot cut process at three Colorado COs on three consecutive days. These observations created a baseline for the time required to complete the CO steps for the hot cut process. This benchmark was used to compare the current hot cut process with the BHC process. In both processes (hot cut and BHC), the pre-wire and Due Date steps occur on separate days.[7]

[6] In this case, there were no issues.

[7] Due to the fact that both pre-wire and Due Dates steps were observed on the same day at the CO, the service orders that were observed for the steps were different.

We captured the same time metrics that were captured during the BHC trials. These metrics were compared against the BHC trial results. The comparisons were used to evaluate efficiencies created by the new process. Results of these comparisons are included in the section of the report titled "Testing Results."

The most significant process changes we were able to monitor were:

- Implementation of the online order status tool as a replacement for the current QCCC communication process[8]; and,
- Updates to the CO workflow.

Test Documentation

We developed test documentation templates to capture process and system timing. During each phase of testing, we obtained system logs and data extracts from the Qwest systems used to execute the BHC transactions. In addition, our consultants were on-site at various Qwest facilities to capture the time required to perform specific work activities. Summaries of these test logs are shown in Exhibits 10 and 11.

10. Testing Benchmarks

The FCC's decision In the Matter of Application by Bell Atlantic New York for Authorization Under Section 271 of the Communications Act to Provide In-Region InterLATA Service in the State of New York, -CC Docket #99-295 (Rel. Dec. 22, 1999), sets forth a series of performance benchmarks with which to evaluate an ILEC's ability to unbundle network elements. Paragraph 309 of FCC's New York 271 decision broadly categorizes the benchmarks and the minimum expected performance as:

- On-time hot cut performance rate at or above 90%;

[8] This step was not involved in January because CLEC dial tone was available for all lines.

- Hot cuts resulting in service outages within the first 30 days at rates at or below 5%; and,
- Trouble rate at or below 2% per month for the total installed base.

It is our understanding that Qwest has developed the following PIDs to measure and report the aforementioned benchmarks:

- Installation Commitments Met (OP-3): evaluates the extent to which Qwest installs services for customers by the scheduled due date;
- New Service Installation Quality (OP-5): evaluates the quality of ordering and service within the first 30 days of installation; and,
- Trouble Report (MR-8): evaluates the trouble rate per month as a percentage of the total installed base of the service or element.

11. Testing Results

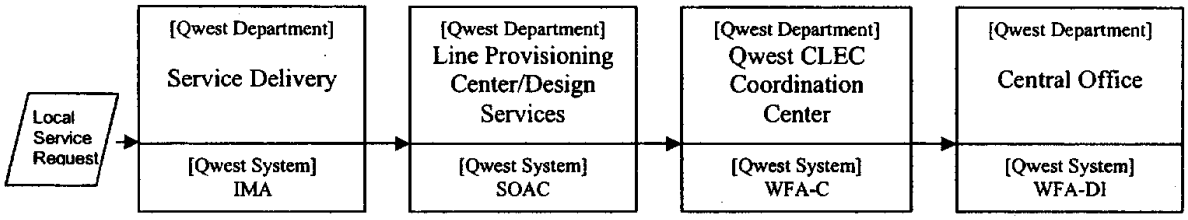
Preliminary Live Trial of the BHC Process

The preliminary live trial of the BHC process was conducted in CO #1. The BHC process began on Wednesday, December 10, 2003, with the submission of 17 LSRs that contained 25 lines for the BHC. The LSRs submitted on that day represented 24 migrations from UNE-P to UNE-Loop and one migration from Qwest Resale to UNE-Loop. The following day, Thursday, December 11, 2003, an additional 18 LSRs were submitted that also contained a batch of 25 hot cuts. The 18 LSRs submitted on that day represented 25 migrations from UNE-P to UNE-Loop. Our consultants were on-site at Qwest facilities to observe the orders processed through the various Qwest departments and systems.[9] The following diagram

[9]Consultants observed the orders process through Service Delivery and the QCCC. Consultants were not on site at the LPC or Design Services.

represents a high-level depiction of the physical flow for the BHC orders through Qwest departments and systems. Detailed process flows are in Exhibit 5.

Illustration 4: High Level Physical Flow of BHC Orders



Service Delivery Observations

The Qwest Service Delivery Centers' primary responsibility is to process the LSRs received by Qwest. The Service Delivery Centers will typically process all LSRs in the same day that the request for service is received by Qwest. The LSRs for the preliminary live trial of the BHC process were received by the IMA application. The IMA application provides a graphical user interface (GUI) for the CLECs to enter BHC LSRs. The IMA application provides functionality for the Qwest Service Delivery Center to validate the accuracy of LSRs. For example, a basic address check is run to check certain types of address errors before the LSR is submitted.

We observed the BHC LSRs processed by Service Delivery on Wednesday, December 10, 2003. Each Telephone Number (TN) that qualified for automatic flow-through had a Firm Order Commitment (FOC) issued within one minute. On that day, the average LSR processing time through the Service Delivery Center was approximately three minutes.

We observed that one LSR fell out for manual handling because there were other orders on the account in pending status. Based on the functionality of the IMA application, all LSRs that are received with pending orders on the account will be automatically routed for manual handling in Service Delivery. This LSR represented a migration from Resale to UNE-Loop.

Based on discussions with Qwest personnel, resale LSRs will frequently have other orders pending on the account and will require manual handling.[10]

We also observed the BHC LSRs processed by Service Delivery on Thursday, December 11, 2003. Each TN that qualified for automatic flow-through had a FOC issued within one minute. On that day, the average LSR processing time through the Service Delivery Center was approximately two minutes. We observed that one LSR fell out for manual handling due to a central number (CNUM) error database exception. This exception was created by a database issue which resulted in an error on the service order. When this error occurs, the addresses and numbers are revalidated and updated if required to correct the database. The entire batch of 18 LSRs was processed through Service Delivery within 38 minutes of receipt by Qwest.

For the preliminary live trial, Service Delivery assigned a dedicated Service Delivery Coordinator (SDC) to monitor the LSRs as they passed through the system. These LSRs were not pulled in chronological order from the queue due to a request from the CLEC to understand the nature of the fallout for manual handling.

Line Provisioning Center and Design Services

The Line Provisioning Center (LPC) is responsible for managing the process of evaluating the loop characteristics to determine compatibility with the requested service. UNE-Loops are automatically evaluated for compatibility through the Loop Facility Assignment and Control System (LFACS) application. In the event any service orders have fallen out for RMA (Request for Manual Assistance) in the provisioning systems, the LPC will resolve or facilitate the resolution of the RMA to meet the service order Due Date.

[10] *Service Delivery manually processed the Resale LSR within 53 minutes. We observed that the entire batch of* 17 LSRs was processed through Service Delivery within 53 minutes of receipt by Qwest.

The Design Services organization is responsible for creating the circuit design. The circuit design for UNE-Loops is automatically created in the TIRKS application.

We observed both the LPC and Design Services operations to become familiar with the components of the BHC process. In addition, we contacted representatives from these departments on an as needed basis to clarify results from the BHC Trial.

QCCC Observations

The QCCC is responsible for validating the accuracy of the BHC service orders, assigning the service orders to the appropriate Qwest CO facility, managing the BHC process and providing communication with CLECs regarding order status. Qwest has proposed the development of an online order status application that will provide online communication with CLECs regarding the status of requested BHCs. The online order status tool was not available during our preliminary live trial of the BHC process.

The QCCC receives BHC service orders in the WFA-C application. The BHC orders received in WFA-C are processed daily. Thus, the BHC preliminary live trial LSRs that were received on Wednesday, December 10, 2003, by Service Delivery were processed at the QCCC on Thursday, December 11, 2003.

We observed the BHC service orders processed by the QCCC on Thursday, December 11, 2003. All the orders went through the automated flow-through process; however, we observed two service orders that required manual follow up by the QCCC. The orders required follow up for the following reasons: one for a Universal Digital Channel Unit (UDC) issue that required a dispatch out and the second for a facilities error that was resolved manually by the LPC before the QCCC could reach the LPC for follow up.[11] The elapsed time for all BHC service orders processed on December 11, 2003, was 51 minutes.

[11] Both of these issues were resolved prior to the Due Date.

We also observed the BHC service orders processed by the QCCC on Friday, December 12, 2003. All of the service orders went through the automated flow-through process, however, we observed five service orders that required manual follow up by the QCCC. The orders that required manual handling consisted of one order that had a line short in the loop and required a dispatch out from the CO to resolve. The other four service orders that required manual handling were resolved by LPC Consultants. One of the service orders was resolved before the QCCC could reach the LPC for follow up. Refer to Exhibit 10 for results of preliminary live trial. The elapsed time for all BHC service orders processed on December 12, 2003, was 38 minutes.

CO Observations

The Qwest CO facilities are responsible for operating and maintaining the core telephony assets (e.g. main distribution frame, interconnection distribution frame, etc.) that are involved in the BHC process. Under the BHC process, the CO receives a spreadsheet from the QCCC that contains a list of the work orders included in the BHC.

We observed the BHC procedures performed at CO #1 on Wednesday, December 17, 2003, and Thursday, December 18, 2003. The BHCs performed on these two days represented the LSRs received on Wednesday, December 10 and Thursday, December 11, 2003, respectively. We observed 25 BHCs performed on December 17 and 23 BHCs performed on December 18, 2003. Two orders with Due Dates on December 18, 2003, had their Due Dates delayed and were later cancelled by the CLEC for the following reasons: In the first case, the CLEC input an incorrect Service Provider Identification Code (SPID) on the LSR. The SPID on the order was for a different CLEC and if cut over, the number would have incorrectly ported to another CLEC. The second cancellation was due to an issue with an off-premises extension.

During these two days we observed the following procedures performed in the Qwest CO:

- Review of the spreadsheet with orders and wiring information;
- Dial tone test;
- Installation of interconnection distribution frame jumpers;
- Installation of main distribution frame jumpers;
- Qwest and CLEC ANI checks;
- Physical lift and lay of the copper pair;
- Protector Distribution Frame (PDF) dial tone check; and,
- Updates to WFA-DI.

During our observations of the BHC trial, we recorded the following average elapsed time to complete each CO procedure:

Illustration 5: Average Elapsed Time for Each DVA Procedures

CO Procedure	Average Time Per TN (December 17, 2003)	Average Time Per TN (December 18, 2003)
Review spreadsheet	16 seconds (Note 1)	16 seconds (Note 1)
Dial Tone Test	22 seconds	24 seconds
Installation of IC distribution frame jumpers	2 minutes 46 seconds	3 minute 2 seconds
Installation of main distribution jumpers	1 minute 17 seconds	1 minute 53 seconds
Total Average Time for DVA Procedures	**4 minutes 41 seconds**	**5 minutes 35 seconds**

Note 1: These figures represent the average times recorded in the second round live trial.

Illustration 6: Average Elapsed Time for Each Due Date Procedures

CO Procedure	Average Time Per TN (December 17, 2003)	Average Time Per TN (December 18, 2003)
Review spreadsheet	N/A (Note 2)	N/A (Note 2)
Qwest and CLEC ANI tests & Lift and Lay	1 minute 17 seconds	1 minute 36 seconds
PDF dial tone checks	17 seconds	29 seconds
Update WFA	43 seconds (Note 1)	43 seconds (Note 1)
Total Average Time for CO Procedures	**2 minutes 17 seconds**	**2 minutes 48 seconds**

Note 1: These figures represent the average times recorded in the second round live trial.

Note 2: Review of the spreadsheet was only performed once because the steps for DVA and Due Date were performed on the same day.

The preliminary live trial piloted the proposed BHC process that was discussed during the CLEC Forum on December 3-5, 2003. In this trial the pre-wire and hot cut tasks were both performed on the Due Date. During the second round live trial on January 12 thru 19, 2004, Qwest modified the process based on feedback received from the CLEC forum. The revised BHC process dated January 9, 2004, performs the pre-wire activities on DVA and hot cut procedures on Due Date. Therefore, for comparison with additional trials, we have separated the elapsed work time for the pre-wire and hot cut procedures in the following table:

Illustration 7: Elapsed Time for Preliminary Live Trial

Date	Volume of TNs Included in Batch	Elapsed Work Time for Pre-Wire Procedures	Elapsed Work Time for Due Date Procedures	Time Required for CO BHC Procedures	Total Elapsed Time for CO BHC Procedures; Question and Answer with COT
December 17, 2003	25	1 hour 57 minutes	57 minutes	2 hours 54 minutes	6 hours 37 minutes (Note 1)
December 18, 2003	23	2 hours 20 minutes	1 hour 9 minutes	3 hours 29 minutes	4 hours 25 minutes

Note 1: Time includes rework associated with a process error that occurred in the CO BHC procedures on Due Date.

Summary of Preliminary Live Trial

During both days of the preliminary live trial, Qwest met 100% of its commitments on time. There were no trouble reports for these TNs during the 30 days following the BHC.

Second Round Live Trial of the BHC Process

The second round live trial of the BHC process was conducted in CO #2 and CO #3. The BHC process began on Monday, January 12, 2004, with the submission of 26 LSRs that contained 52 BHCs. The LSRs submitted on that day represented 26 migrations from UNE-P to UNE-Loop submitted in nine LSRs and 26 Centrex migrations submitted in 17 LSRs. In addition to monitoring the process through system-captured times, our consultants were on-site at the CO facilities to observe the orders processed.

Service Delivery Observations

The BHC LSRs were processed by Service Delivery on Monday, January 12, 2004. Each TN that qualified for automatic flow-through in Service Delivery had a FOC issued within one minute. The only LSRs that fell out for manual handling were the Centrex orders, which were anticipated. LSRs received with Centrex orders may fall out to manual handling in Service Delivery due to the fact that there may be a pending order on the account.

The average manual processing time for Centrex LSRs through Service Delivery was 46 minutes. Orders that fell out for manual handling and were handled by the SDC also had a FOC issued within one minute of the completion. The average LSR processing time for both manual handling and automatic flow-through in the Service Delivery Center was 39 minutes. Based on discussion with Qwest personnel, Centrex comprises approximately 20% of the total embedded base of UNE-P.

QCCC Observations

The BHC service orders were processed in the QCCC on Monday, January 12, 2004. All the orders went through the automated flow-through process and none required manual follow up by the QCCC. Two orders that had been rejected were processed on January 13th.

CO Observations

We observed the BHC procedures performed at CO #2 and CO #3 for both the DVA Date, Thursday, January 15, 2004, and Due Date, Monday, January 19, 2004. The BHCs performed on these two days represented the LSRs received on Monday, January 12, 2004. We observed 26 BHCs performed in each location.

On the DVA Date, Thursday, January 15, 2004, we observed the following procedures performed in both COs:

- Review of the spreadsheet with orders and wiring information.
- ANI and dial tone test.
- Installation of interconnection distribution frame jumpers.
- Installation of main distribution frame jumpers.

On the Due Date, Monday, January 19, 2004, we observed the following procedures performed in both COs:

- Review of the spreadsheet with orders and wiring information.
- Qwest and CLEC dial tone and ANI tests.
- Physical lift and lay of the copper pair.
- Updates to WFA-DI.

During our observations of the second round live trial we recorded the following average elapsed time to complete each CO procedure:

Illustration 8: Average Elapsed Time Per DVA Procedure

CO Procedure	Average Time Per TN (CO #3)	Average Time Per TN (CO #2)
Review spreadsheet	16 seconds	16 seconds
Dial Tone Test	(Performed along with MDF jumpers)	44 seconds
Installation of ICDF jumpers	1 minute 44 seconds	1 minute 39 seconds
Installation of main distribution jumpers	1 minute 9 seconds	1 minute 48 seconds
Total Average Time for DVA Procedures	**3 minutes 9 seconds**	**4 minutes 27 seconds**

Illustration 9: Average Time Per Due Date Procedure

CO Procedure	Average Time Per TN (CO #3)	Average Time Per TN (CO #2)
Review spreadsheet	16 seconds	16 seconds
Qwest and CLEC ANI tests & Lift and Lay	1 minute 21 seconds	1 minute 30 seconds
PDF dial tone checks	Note 1	Note 1
Update WFA	28 seconds	58 seconds
Total Average Time for Due Date Procedures	**2 minutes 5 seconds**	**2 minute 44 seconds**

Note 1: Neither CO had a separate PDF from the MDF so the PDF checks could not be performed.

We compiled the following elapsed work times in the CO for the second round live trial of the BHC process. The following elapsed times include the total work time to perform the pre-wire (DVA) and Due Date (Due Date) procedures.

Illustration 10: Elapsed Times for the Second Round Live Trial

Date/ Location	Volume of TNs Included in Batch	Elapsed Work Time for Pre-Wire Procedures	Elapsed Work Time for Due Date Procedures	Total Elapsed Work Time for CO BHC Procedures	Total Elapsed Time for CO BHC Procedures; Question and Answer with COT
January 19, 2004 (CO #3)	26	1 hour 22 minutes	54 minutes	2 hours 16 minutes	2 hours 48 minutes
January 19, 2004 (CO #2)	26	1 hour 56 minutes	1 hour 11 minutes	3 hours 7 minutes	3 hours 14 minutes

The second round live trial piloted components of the revised BHC process that was discussed during the CLEC Forum on January 6 thru 8, 2004. The pre-wire activities were performed on DVA and hot cut procedures on Due Date.

Summary of Second Round Live Trial

During the second round live trial, Qwest met 100% of its commitments on time. In addition, there were no trouble reports for these TNs as of the writing of this report following the BHC, although the 30 days were not up.

The findings for the second round live trial represented an improvement preliminary live trial.

Differences in times for the COs can be attributed to several factors including:

- The physical size and layout of the COs and the installed equipment. For example, larger COs require more travel time (walking) between larger frames. Moreover, in CO #1 and CO #2, the vertical and horizontal side of the ICDF were facing opposite directions. In CO #3, they were both facing the same direction and therefore easier to wire.
- Unique COTs at each site.

Comparison of Hot Cut Process to the BHC Process

In comparing the BHC process to the hot cut process, we focused on two areas, as previously mentioned in this report, in the section titled "Testing Procedures Performed". These are:

- BHC communication between Qwest and CLECs
- Updates to the CO workflow

BHC Communication between Qwest and CLECs

As part of the BHC process, three changes are being made which will have a major effect on the communication process between Qwest and the CLEC.

- TNs are grouped by CO by CLEC and not by LSR. This results in having a larger number of TNs per batch.
- Only basic Reuse orders are allowed, thereby, information shared between the parties is less extensive than the amount of data communicated through coordinated and new orders.
- Orders that have NDT or an incorrect ANI on Due Date are immediately removed from the BHC. No resolution process is required.

Each of these changes would reduce the amount of coordination required between the CLEC and the QCCC. However in addition, Qwest is developing an online order status tool to communicate order status directly from the CO to the CLEC. The QCCC, in this process, will monitor the communications tool from the Qwest side and resolve any issues that arise. All current standard communications between the CO and the CLEC through the QCCC will be eliminated. All correspondence regarding NDT and incorrect ANI on Due Date will also be eliminated.

For comparison to the use of the online order status tool, observations of Plain Old Telephone Service (POTS) Provisioners at the QCCC were performed over the week of November 17, 2003, and January 15, 2004. During both visits, observations included monitoring the Provisioners, listening to their phone calls and understanding the nature and duration of the calls. The observations demonstrated that the Provisioner is currently involved in multiple types of orders including basic Reuse, coordinated Reuse and new orders. Each call series is based on an individual LSR (multiple TNs can exist per order). However, the average number of TNs associated with each LSR, based on the average number of TNs per LSR from January 2002 to December 2003, is 1.80. Servicing orders

individually results in Provisioner workload that averages 30 TNs per Provisioner per day. This is, in part, due to the many telephone calls that the Provisioners perform using the existing hot cut process.

To better understand the impact on the BHC process, actual workflow steps that would be removed by the online tool were recorded during the January 15, 2003 visit. The results of these observations are shown below.

Illustration 11: CLEC Notification Time Measurement

QCCC Service Representative Phone Call	Average Time Per Call
Call from COT to QCCC about cuts being completed	30 seconds
Call to CLEC from QCCC about cuts being completed	56 seconds
Call from CLEC to QCCC about acceptance of cuts	30 seconds
Completing the paper OSSCN form	60 seconds
Total impact per order	***2 minutes 56 seconds***

For each call type above, there were seven orders used to calculate the averages shown. While not a representative sample, our observations yielded very similar call times across all orders, and the largest variation in any of the calls was 20 seconds.

Calls conveying NDT and incorrect ANI were also observed as shown below:

Illustration 12: CLEC Communication Time Measurement

QCCC Provisioner Phone Call	Average Time Per Call
Call from CO to QCCC notifying them of problem	2 minutes
Call from QCCC to CLEC notifying them of problem	2 minutes
Call from CLEC to QCCC telling them problem was fixed	10 seconds
Call from QCCC to CO telling them problem was fixed	10 seconds
Total time per order	***4 minutes 20 seconds***