Qwest.

Spirit of Service

Timothy J. Goodwin
Senior Attorney
1801 California
Suite 4700
Denver, CO 80202
303-896-9874

303-896-8120 (fax)
tim.goodwin@qwest.com

July 25, 2003

Pamela Bonrud   *VIA OVERNIGHT UPS*
Executive Director
Public Utilities Commission of the State of South Dakota
500 East Capitol Avenue
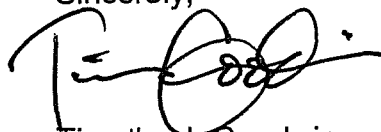Pierre, SD 57501

Re: Docket TC01-098

Dear Ms. Bonrud:

     I attach the original and ten copies of Qwest's rebuttal testimony and associated exhibits in this proceeding, from the following witnesses:

- Terri Million (please note we are requesting confidential treatment for Exhibits 2, 4, 5, and 6 to this testimony)
- Richard Buckley
- Dennis Pappas
- Renee Albersheim
- Georganne Weidenbach
- Marti Gude
- Craig Morris
- Phil Linse

     I am also sending a copy of this filing to you and Karen Cremer by email. Copies are also being served on counsel for the Intervenors in this case, via email and, if requested, hard copy.

Sincerely,

Timothy J. Goodwin

enclosures
cc: all counsel of record

1

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF DETERMINING PRICES	)	DOCKET NO. TC01-098
FOR UNBUNDLED NETWORK ELEMENTS	)	
(UNEs) IN QWEST CORPORATION'S	)	
STATEMENT OF GENERALLY AVAILABLE	)	
TERMS (SGAT)	)	

REBUTTAL TESTIMONY OF

TERESA K. MILLION

ON BEHALF OF

QWEST CORPORATION

JULY 28, 2003

TABLE OF CONTENTS

1   **I. IDENTIFICATION OF WITNESS**

2   **Q.   PLEASE STATE YOUR NAME AND BUSINESS ADDRESS AND POSITION WITH**

3   **QWEST CORPORATION.**

4   A.   My name is Teresa K. (Terri) Million. My business address is 1801 California Street, Room

5   2050, Denver, Colorado 80202. I am employed by Qwest Services Corporation as a

6   Director, Service Costs, in the Policy and Law Department.   In this position, I am

7   responsible for preparing testimony and testifying about Qwest's cost studies in a variety of

8   regulatory proceedings.

9   **Q.   HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?**

10   A.   Yes. I filed direct testimony, including cost models and cost studies, on October 15, 2002 in

11   this proceeding. Subsequently, I filed supplemental direct testimony on December 23, 2002,

12   including updates to previously filed cost studies and Qwest's new Excel-based switching

13   model as agreed by the parties during the technical conference held in Denver on December

14   17, 2002.

15   **II. PURPOSE OF TESTIMONY**

16   **Q.   WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

17   A.   The purpose of this rebuttal testimony is to present arguments in support of the costs Qwest

18   filed in this proceeding and to rebut the arguments against such costs as presented in the

1   testimony of certain of the South Dakota Commission staff's representatives, i.e. Sidney

2   Morrison and Mark Stacy, who provide testimony regarding Qwest nonrecurring costs. In

3   addition, I also respond to Peter Gose who provides testimony regarding Qwest's switching

4   elements.

5   **III. TESTIMONY OF MR. MORRISON**

6   **A. Nonrecurring Costs**

1. General

7   **Q.**   **DO YOU HAVE ANY GENERAL COMMENTS REGARDING MR. MORRISON'S**

8   **TESTIMONY?**

9   **A.**   Yes. I believe the Commission should give little weight to Mr. Morrison's nonrecurring

10   cost testimony. Mr. Morrison's testimony includes a great deal of opinion and conjecture,

11   but contains virtually nothing in the way of evidence or data to support his conclusions.

12   Essentially, Mr. Morrison is asking the Commission to reject the Qwest nonrecurring cost

13   studies simply because, in his sole *opinion*, the work times or probabilities in the study are

14   "inflated" or "overstated." In each case, Mr. Morrison provides no data to support his

15   opinion – he simply proffers an unsupported conclusion based on his view of how

16   provisioning ought to work. Mr. Morrison envisions a company with operations support

17   systems ("OSS") in place that allow for fully mechanized processes, which effectively

18   eliminate the need for employees in the provisioning process. This vision is pure fantasy

1   and is not in existence today at Qwest or other efficient carriers. Mr. Morrison provides no

2   evidence to suggest that it is likely to exist in the foreseeable future.

3 Q. **COULD YOU PLEASE SUMMARIZE MR. MORRISON'S STATED CONCERNS**

4   **REGARDING THE QWEST COST STUDIES?**

5 A. Mr. Morrison's criticisms of the Qwest nonrecurring cost studies fall into three general

6   categories:

7   1. Mr. Morrison is critical because Qwest relies on the opinions of subject matter

8   experts for the times and probabilities that are the basis for developing the

9   nonrecurring costs the Company is proposing in this proceeding;

10   2. Mr. Morrison claims that Qwest "violates its own stated objective" by including

11   costs in its studies that are not required in a world where all systems and service

12   order inputs operate without any errors (i.e. a "perfect" service order flow);

13   3. Mr. Morrison contends that Qwest fails to recognize that all provisioning systems

14   could be mechanized to eliminate virtually all manual intervention in the service

15   provisioning process.

16   In Mr. Morrison's postulated world, virtually all manual tasks that an efficient incumbent

17   local exchange carrier must perform to provision service for a competitor would be

18   automated. As he stated: "One of the advantages of providing an efficient OSS platform is

1   that efficient OSS virtually eliminate the requirement for manual intervention when

2   connecting and disconnecting services (representing a full flow-through environment)."[1] In

3   his world, the jobs of the thousands of service order representatives and network technicians

4   can be "virtually" eliminated by installing allegedly "state-of-the-art" systems. He never

5   identifies the systems that could perform all these tasks electronically or any company that

6   has deployed such systems. He merely assumes away the tasks and the employees' jobs on

7   the basis that these systems are theoretically possible.

8   Q.   **DO YOU AGREE WITH MR. MORRISON'S REASONING?**

9   A.   No. As I will explain in this testimony, each of the premises upon which Mr. Morrison

10   bases his testimony is without merit. The FCC has stated that a total element long run

11   incremental cost ("TELRIC") study estimates the cost an efficient carrier would incur to

12   provision the requested element of service using technology "currently available" in the

13   market, not some futuristic technology that does not exist and is unlikely to ever exist.[2] The

14   TELRIC rules were developed pursuant to the provisions of the Telecommunications Act of

15   1996 ("the Act") and provide for ILECs to be compensated for the forward-looking costs of

16   an efficient carrier in providing competitive local exchange carriers ("CLECs") access to

17   their networks. The FCC described TELRIC as including the requirement that the cost

18   recovery should be no more than an efficient carrier would incur to provision the service.

19   Even the most efficient carrier would never recover its costs if the recovery was based on

---

[1] Morrison direct testimony, page 13.

[2] 47 C.F.R. §51.505(b)(1).

1 technologies and systems that do not exist. The FCC recognized this fact when it specified

2 that TELRIC should be based on the most efficient systems and technologies that are

3 currently deployed in networks. Assumptions that all manual labor can be "virtually"

4 eliminated by some yet-to-be-defined technology is a violation of the Act and the TELRIC

5 principles established by the FCC – it is inappropriate to simply assume future efficiencies

6 in the absence of proven, real world technology that can produce those results. Mr.

7 Morrison's assumptions would never lead to adequate cost recovery for any carrier required

8 to provide wholesale services and network elements to CLECs.

9 Q. **WHAT PROBLEMS DO YOU HAVE WITH THE OTHER PREMISES UPON**

10   **WHICH MR. MORRISON BASES HIS RECOMMENDATION?**

11 A. Mr. Morrison has taken some excerpts from Qwest's nonrecurring cost model

12   documentation, misinterpreted them, and erroneously concluded that Qwest has voluntarily

13   foregone recovery for any costs associated with the problems that may arise in provisioning

14   a CLEC service order request.

15 Q. **WHAT DOES MR. MORRISON RELY ON FOR HIS ERRONEOUS**

16   **CONLCUSION?**

17 A. Qwest asked the subject matter experts that provided input into the studies to assume a

18   "perfect" service order flow in which minimal resources would be dedicated to addressing

19   problems that may arise during the provisioning process. The purpose of this directive was

20   to reduce the time spent on problem solving in order to reflect the activities of an efficient

1   carrier. Mr. Morrison has interpreted this instruction to mean that the company has

2   voluntarily relinquished any right to recover costs for verifying orders, and for identifying

3   and fixing problems, even when the problem arises from faulty service order processing on

4   the part of the CLEC. Qwest never intended these instructions to be a voluntary waiver of

5   its right to recover legitimate costs that any efficient carrier would incur. Mr. Morrison's

6   claims to the contrary should be disregarded since this Commission's goal is to determine

7   the reasonable costs of an efficient carrier. My testimony will explain that Qwest has not

8   voluntarily foregone recovery of its legitimate costs to identify and fix problems, although

9   Qwest's studies do reflect the activities of an efficient carrier.

10 **Q.**   **DO YOU AGREE WITH MR. MORRISON'S CRITICISM THAT QWEST SHOULD**

11   **NOT RELY ON SUBJECT MATTER EXPERTS?**

12 **A.**   No. Mr. Morrison claims that the use of subject matter experts is unverifiable and creates a

13   bias to overstating costs. As I discussed above, Qwest specifically requested estimates that

14   assumed an efficient, problem-free process flow to eliminate any bias toward overstating

15   costs. Furthermore, the development of the cost of processing an order assuming the use of

16   the most efficient systems and technology currently available requires reliance on the

17   judgment of subject matter experts. Any other approach, such as time and motion studies of

18   current processes, would only provide the time estimates for the company's current

19   processes, which other parties would surely attack as being an "embedded" approach. The

20   problem solving that the subject matter experts were asked to ignore would inherently be

21   included in a current time-and-motion study. The process improvements the subject matter

1   experts were asked to identify would be ignored in such a study. The time and motion

2   studies would not necessarily reflect the "efficient" criteria required for determining

3   TELRIC. Subject matter experts would be required to eliminate inefficient problem solving

4   during every phase of the process. They would also need to review each time to determine

5   if it reflected the use of the most efficient processes currently available. In other words, the

6   resulting costs would be the product of what Mr. Morrison would claim are the unverifiable

7   estimates of subject matter experts. The use of subject matter expert estimates is required in

8   performing a TELRIC study. Below, I address each of these issues in greater detail,

9   including discussions of specific inputs and related assumptions made by Mr. Morrison.

2. Qwest Has NOT Opted to Forego Legitimate Cost Recovery

10   **Q.**   **WHAT ARE YOU REFERRING TO WHEN YOU STATE THAT MR. MORRISON**

11   **CLAIMS QWEST VOLUNTARILY OPTED TO FOREGO COST RECOVERY?**

12   **A.**   At pages 6-7 of his testimony, Mr. Morrison identifies work items that he claims the Qwest

13   backup documentation states are excluded from the calculation of the Qwest proposed

14   nonrecurring cost estimates. These items identified in Mr. Morrison's testimony are:

15   • Problems encountered during the work activities to process the service order

16   • Systems down time

17   • Time spent resolving internal order flow procedures

18   • Supplements to the initial order

1   • Maintenance or repair time

2   He then goes on to state that the descriptions of many of the work time estimates included in

3   the study are inconsistent with the above criteria. He concludes that "many of the work task

4   descriptions include time for processes that assume that problems, errors or inconsistencies

5   exist in the provisioning process. The descriptions of work items include descriptive terms

6   such as review, verify, validate, analyze, handle, screen and ensure, as well as other similar

7   terms." (Lines 148-51). He further concludes that "[i]f there are no charges for correcting

8   the problems, then there should not be charges for searching for errors." (Lines 155-56)

9   Finally, he concludes, incorrectly, that such errors are caused by Qwest's processes and not

10   by the CLEC service request. (Lines 157-58).

11   Q.   **DOES MR. MORRISON RECOGNIZE THAT PROBLEMS THAT OCCUR**

12   **DURING THE SERVICE ORDER PROCESS OFTEN RESULT DIRECTLY FROM**

13   **ERRORS CLECS MAKE IN FILLING OUT THE SERVICE REQUEST?**

14   A.   Yes. However, he again claims that Qwest has voluntarily opted to forego recovery of costs

15   resulting directly from CLEC errors in submitting service requests. As a basis for this

16   contention, Mr. Morrison identifies the following response to a New Mexico discovery

17   request (Staff 05-004):

18   [I]t is Qwest's expectation that the Local Service Request ("LSR") be error free
19   when submitted into the system for provisioning. If an error is identified after
20   submission of the "LSR" there is no charge for the CLEC to supplement the "LSR"
21   to correct the error.

1   This language merely states that Qwest gives the CLEC an opportunity to resubmit the LSR

2   with no additional charge. Mr. Morrison misinterprets it to mean that Qwest will not include

3   in its time estimates the time necessary to correct the error, but it does not say that. Nor

4   does it say that Qwest will not include the cost resulting from time spent correcting the error

5   in its cost study.

6   Mr. Morrison further identifies a paragraph in the documentation relating to a particular

7   work function that states that all times are based on a "perfect service order and no problems

8   encountered at test & turnup." Mr. Morrison uses these passages in the study documentation

9   and interrogatory responses to manufacture the erroneous conclusion that Qwest has

10   voluntarily foregone recovery of numerous costs that the company included in their cost

11   studies. According to Mr. Morrison, the costs Qwest has voluntarily relinquished the right

12   to recover include any costs resulting from errors CLECs make in submitting the service

13   order request.

14   Q.   **DO YOU AGREE WITH MR. MORRISON'S CONCLUSION THAT QWEST HAS**

15   **VOLUNTARILY FOREGONE RECOVERY OF MANY SERVICE ORDER**

16   **PROCESSING COSTS, INCLUDING THOSE THAT ARE THE DIRECT RESULT**

17   **OF CLEC ERRORS IN SUBMITTING THE ORDER?**

18   A.   Absolutely not. First, if the statements in Qwest documentation were intended to reflect Mr.

19   Morrison's interpretation of them, Qwest would not have included the work times in its

20   studies. Qwest has asked for recovery of certain costs in this proceeding. Those costs

1   include amounts to screen CLEC orders for errors and obtain corrections from CLECs.

2   They include time to handle orders that fall out of the system because of inaccurate service

3   orders. They include time to insure all information is correct before an end-user customer's

4   service is changed. If Qwest intended to forego recovery of these costs as Mr. Morrison

5   contends, the costs would not be included in the studies. Mr. Morrison has misinterpreted

6   Qwest's intent in its documentation and interrogatory request responses.

7   **Q.   MUST THIS COMMISSION DETERMINE THE MEANING OF QWEST'S**

8   **STATEMENTS IN ORDER TO ESTABLISH COSTS IN THIS PROCEEDING?**

9   A.   No. The Commission's purpose here is to determine Qwest's cost-based prices. Mr.

10   Morrison's interpretation of what Qwest meant when it included certain terminology in its

11   cost study documentation is meaningless and irrelevant to this proceeding. The Act and the

12   TELRIC principles adopted by the FCC require that incumbent LECs recover the efficient

13   costs of providing unbundled network elements. This recovery should include the

14   reasonable costs that will be incurred to correct errors on service orders submitted by the

15   CLECs. No efficient firm can have its employees spend time correcting errors created by

16   other parties without the expectation of cost recovery. Nor can it correct errors on CLEC

17   service orders without reviewing and analyzing the actual service order. The TELRIC

18   principles adopted by the FCC require costs to be set at levels that reflect the operations of

19   an "efficient" not "perfect" carrier. It is this Commission's obligation to set costs that

20   conform to the standards adopted by the FCC and Congress. The fact that Mr. Morrison has

21   incorrectly interpreted the language in some of Qwest's documentation in a way that would

1   revise these rules should not distract the Commission as it carries out its obligation. The real

2   question is whether these are legitimate costs that would be encountered by an efficient

3   carrier. If they are, TELRIC mandates cost recovery. Mr. Morrison's attempt to rely on ill-

4   supported interpretations of Qwest's study documentation does not change the fact that these

5   legitimate costs are part of a provisioning process that exists for the benefit of the CLECs

6   and should be recovered.

7   **Q.   MR. MORRISON STATES THAT CLECS SHOULD NOT BE CHARGED FOR**

8   **PROVISIONING PROBLEMS THAT QWEST SAYS DO NOT EXIST. DO YOU**

9   **AGREE?**

10   A.   No. Mr. Morrison starts from a faulty premise. He takes statements in Qwest's

11   documentation and erroneously extrapolates an opinion that many of the costs in Qwest's

12   study violate Qwest's own costing standards. In setting the study assumptions to reflect the

13   costs of an efficient carrier, Qwest requested that the work times exclude many of the costs

14   that result from resolving problems with the company's internal service order processes.

15   These statements, as discussed above, were designed to insure the study did not include

16   costs associated with correcting system errors that might not be indicative of the problems

17   that would be incurred by an efficient firm. Qwest is continuously improving its systems.

18   As new systems come on-line, it frequently takes time to debug the system, or the

19   information the system relies on to perform its functions. Qwest wanted to insure that such

20   de-bugging time was not reflected in the studies, so it requested that all estimates ignore the

21   time spent correcting internal system and process problems. Qwest statements that it does

1   not include the time spent resolving internal process problems in its study means that Qwest

2   has modeled efficient provisioning activities. But that is a far cry from the conclusion that

3   there would never be any problems in the provisioning process that Mr. Morrison asks this

4   Commission to reach. Nor do these statements imply that Qwest voluntarily foregoes any

5   costs that may be associated with identifying problems that will arise during the process,

6   especially those problems resulting from erroneous CLEC service orders. Rather, the

7   statements are intended to explain that Qwest's average estimates do not include time spent

8   resolving problems that do occur. However, if an LSR is submitted by a CLEC with data

9   missing, Qwest's time estimate will include the average time to check the order for

10 completeness and ensure that the LSR is completed correctly. Nevertheless, Qwest does not

11 charge the CLEC for resubmitting the LSR into the order processing system.

12 If Qwest's documentation, as Mr. Morrison implies, required assuming an order flow in

13 which all manual intervention was eliminated, then Qwest would not have included these

14 costs in its studies. These costs are required for the provisioning of CLEC services and

15 Qwest, therefore, requests recovery of these costs in this docket.

3. Operations Support Systems

16 Q.   **WHAT ARE MR. MORRISON'S CONCLUSIONS REGARDING OPERATION**

17   **SUPPORT SYSTEMS?**

18 A.   Mr. Morrison's recommendations are premised on the assumption that new systems will be

19   developed that will virtually eliminate all manual intervention into the provisioning process.

1   He assumes the existence of hypothetical systems that go well beyond the level of

2   mechanization available in the market today.   These theoretical systems have not been

3   implemented by any ILEC, nor does Mr. Morrison provide evidence that they have been

4   implemented by anyone else, including CLECs.   Mr. Morrison implies that the manual

5   activities in the Qwest studies are unnecessary and the result of Qwest's antiquated service

6   order processing systems. This assumption is plainly wrong. Qwest spends many hundreds

7   of millions of dollars each year updating, improving and maintaining its systems. Qwest has

8   implemented and uses all the service order processing systems and improvements Mr.

9   Morrison identifies on pages 11 and 12 of his testimony including:

10   • The Work and Force Administration ("WFA") Systems which automate work
11   assignments including dispatches in and outside the central office

12   • The Trunk Integrated Records Keeping System ("TIRKS") which supports the
13   design of numerous types of circuits

14   • SWITCH which supports the inventory and assignment of switch ports

15   • The Memory Administration ("MARCH") which mechanizes many of the switch
16   upgrade and administration functions

17   • The Provisioning Analyst Work Stations ("PAWS")

18   In fact, every system advancement identified by Mr. Morrison in his testimony, except the

19   Automated Distribution Frame ("ADF") discussed at page 18, has been implemented by

20   Qwest. Applying the basic TELRIC requirement of using only technologies that are

21   currently available, there is no legitimate basis for including more mechanization in the

1   ordering, installation and provisioning processes beyond the levels already included in

2   Qwest's studies.

3   Q.   **WHY DOESN'T QWEST USE AUTOMATED DISTRIBUTION FRAME IN ITS**

4   **COST STUDY DEVELOPMENT?**

5   A.   As Mr. Pappas discusses in his testimony, Qwest has tested several electronic cross connect

6   systems, each of which has characteristics that preclude cost effective mass deployment for

7   handling unbundled loop orders. In addition to the technological problems identified in Mr.

8   Pappas' testimony, there are numerous cost factors that make deployment of this technology

9   inadvisable.

10   First, there are no operating system interfaces existing to integrate the ADFs with existing

11   ILEC OSS. The absence of this integrated network means that each new cross-connect

12   would require programming by a technician. The time the technician saves in manually

13   running the jumpers would be offset by the additional programming necessary to

14   electronically perform the cross-connect. Second, in order to provide a CLEC access to all

15   unbundled loops in a central office, every loop in the office would have to terminate on an

16   ADF. Qwest would have to replace all its existing main distribution frames with the more

17   expensive automatic distribution frames in order to provide this access. The additional cost

18   of installing these frames would more than offset any savings that could be achieved through

19   automating the cross-connect function for unbundled loops. Finally, many loops enter the

20   central office on Integrated Digital Loop Carrier systems. The loops are integrated into the

1   switch at a DS1 level. An ADF is incapable of segregating a single loop off these systems

2   for rerouting to a CLEC facility. In other words, deploying an ADF results in minimal, if

3   any, reduction in the time it takes a technician to perform a cross-connect, and significantly

4   increases the cost associated with the placement of main distribution frames. At this time,

5   no ILEC has found that the mass deployment of this technology is economically justified.

6 Q. **ARE THERE OTHER PROBLEMS WITH MR. MORRISON'S PROPOSAL TO**

7   **ASSUME THE USE OF ADFS?**

8 A. Yes. Any proposed reduction in the cost of provisioning unbundled loops using ADF

9   technology must be offset by a recurring charge to recover the additional cost of deploying

10   automated frames throughout the network. None of the loop studies submitted in this docket

11   includes any cost for these frames. In addition, staff's consultant has failed to propose any

12   adjustments to the Qwest model to reflect this increase in costs. There is a cost/benefit

13   trade-off in deploying any new technology. Thus, under TELRIC even if ADF were

14   considered a current technology, it would be inappropriate for this Commission to assume

15   the existence of such a technology for purposes of determining Qwest's nonrecurring costs

16   and then ignore the cost of deploying it when determining Qwest's recurring costs. QSI's

17   one-sided proposal ignores the costs of deploying this new technology. To date, the ILECs

18   have found that the costs exceed the benefits and have delayed any attempts to deploy ADF

19   ubiquitously in their networks.

20 Q. **DOES QWEST HAVE STATE-OF-THE-ART OPERATIONS SUPPORT SYSTEMS?**

1   A.   Yes. Qwest's systems include most, if not all, the latest technology improvements that are

2   available in the market and are cost-effective to implement. As I stated previously, and as

3   discussed in Ms. Albersheim's rebuttal testimony, Qwest has deployed all the systems Mr.

4   Morrison directly references in his testimony. In addition, Qwest has expended billions to

5   deploy new systems over the last decade. From 1990 through 1999, Qwest's annual

6   programming expenditures alone have ranged from $275 million to almost a billion dollars.

7   For the years 1997 through 1999, Qwest spent $2.4 billion on programming costs, of which

8   more than $2.1 billion was used to upgrade Qwest's internal systems and business processes.

9   These numbers do not take into account the capital dollars Qwest has expended for

10   computer hardware upgrades. There is no basis for Mr. Morrison's suggestion that Qwest's

11   internal systems have not been upgraded causing manual processes to be overstated in its

12   nonrecurring studies. Qwest continuously updates its systems and processes and those

13   system improvements are reflected in the time and probability estimates contained in its

14   nonrecurring studies. Furthermore, Qwest includes in its time and probability estimates

15   planned improvements to its systems that have to date not been implemented.

16   For example, in its study Qwest assumed 85% as the probability that an order will flow

17   through the interconnection service center without the need for manual intervention. This

18   estimate was based on planned system improvements that had not yet been achieved. The

19   current targeted flow-through rate for unbundled loops that resulted from the 271 workshops

20   is 80%. Qwest is using the higher 85% rate in its study based on proposed process

21   improvements. In this and other instances, Qwest's nonrecurring studies reflect

1   provisioning objectives that have not yet been achieved, or are considered to be a work

2   group's stretch objectives.

3   Qwest and the other ILECs have some of the most sophisticated, state-of-the-art systems in

4   the world. Those systems provide tracking, inventory management, provisioning and billing

5   capabilities for billions of dollars worth of assets. This is precisely the reason that the FCC

6   declared OSS to be a UNE and determined that CLEC access to the ILECs' ordering

7   systems would be essential to the success of competition. The FCC recognized that

8   requiring CLECs to purchase systems that duplicate the functions performed by the ILECs'

9   existing systems would virtually eliminate the CLECs' opportunity to effectively compete

10   with the ILECs. The Commission should not establish nonrecurring charges on the premise

11   that some future systems, that do not exist today, will eliminate all the functions currently

12   required to provision CLEC requests for UNEs.

13   Q.   **DOES MR. MORRISON PROVIDE CONCRETE EXAMPLES OF FORWARD-**

14   **LOOKING OSS THAT QWEST COULD INCLUDE IN ITS NONRECURRING**

15   **ANALYSIS?**

16   A.   No. In his testimony, Mr. Morrison does not identify a single system that is currently

17   available that could enhance or improve the systems Qwest currently has in place. He only

18   provides conjecture about the types of OSS that *might* be considered in developing

19   nonrecurring time estimates. He does not provide the name of a vendor that currently builds

20   such a system, nor does he provide the name of a viable system that is currently available in

1   the marketplace and functionally useful. He provides no estimate of the costs a company

2   might incur to deploy these hypothetical systems. He fails to identify the specific features

3   and functionality of Qwest's current systems and work processes that these systems would

4   replace. He cannot identify a single company of comparable size that has deployed such

5   systems because none have done so.

6   TELRIC requires the use of technology that is currently available in the market. TELRIC

7   also requires including the cost of deploying the technology in the cost study results. Mr.

8   Morrison fails to identify any systems that can achieve the process improvements upon

9   which he bases his recommended cost reductions. At the same time, he ignores the

10   additional costs that would be incurred were these unidentified systems actually deployed.

11   His recommendations on this issue are therefore in direct violation of the TELRIC principles

12   adopted by the FCC.

13   Q.   **CAN YOU GIVE ANOTHER EXAMPLE OF MECHANIZATION LEVELS THAT**

14   **ARE CURRENTLY REFLECTED IN QWEST'S NONRECURRING COSTS?**

15   A.   Yes. Qwest assumes that when an existing customer transfers to a CLEC that is providing

16   service under either the resale tariff or a UNE platform, virtually all service order processing

17   costs will be avoided. Qwest's nonrecurring studies for the Customer Transfer Charge

18   ("CTC") and UNE-Platform Existing Charge (mechanized) assume that 95% of the orders

19   submitted electronically flow through the Interconnect Service Center ("ISC") without need

20   for manual intervention. Consequently, the cost of functions, such as "Screen and route to

1   order writer" that take an average of 5 minutes to perform, are reduced by 95% when

2   calculating the TELRIC cost of these orders. This reduction is made to reflect the fact that a

3   vast majority of the time this function will be performed electronically. Similarly, the 10

4   minute time it generally takes to "Type change of service provider" is reduced to half of a

5   minute (10 * .05) of processing time in order to reflect the fact that this function is not

6   required for 95% of the orders. Thus, the total time for processing CTC and UNE-P POTS

7   Existing (mechanized) service orders is less than a minute once the flow-through

8   probabilities in Qwest's nonrecurring studies are accounted for. This example illustrates the

9   progress Qwest has made in reducing provisioning times and increasing flow through.

4. Fall-out Probabilities

10 Q.   **WHAT IS MR. MORRISON'S POSITION REGARDING THE APPLICATION OF**

11   **FALL-OUT PROBABILITIES IN A COST STUDY?**

12 A.   Mr. Morrison identifies two ways to apply fall-out rates in a cost study. One is to apply

13   separate fall-out rates to each of the job functions. The other is to apply a single fall-out rate

14   to the entire process. He provides an example in which the first method, which Qwest uses,

15   results in 100 additional computations. The other approach, which he recommends, results

16   in only 10 additional computations. All Mr. Morrison's example proves is that if you apply

17   the fall-out rate differently from one study to another, you get a different result. In one case

18   he is applying a hypothetical 10% fall-out rate to each work step in each order, and in the

19   other, he is applying the 10% rate only once to the entire order. These are two completely

1   different approaches; individual work steps and orders are not equivalent to each other,

2   therefore it is meaningless to analyze them by applying 10% to them and comparing the

3   result.   In order to arrive at a meaningful analysis one must first find the common

4   denominator of the items being compared. In this case, the common denominator is number

5   of minutes. Thus, the correct analysis would compare the results of applying individual fall-

6   out rates to the number of minutes in each work step in each order, to the results of applying

7   the weighted-average fall-out rate once to the total number of minutes in each order. This

8   approach places the proper weighting to each of the items compared and allows for a

9   meaningful analysis.   The result of such an "apples to apples" comparison is that each

10   method produces the same amount of fall-out in minutes.

11   Q.   **WHAT IS THE CRITICAL ISSUE THIS COMMISSION MUST ADDRESS**

12   **REGARDING THE APPLICATION OF FALL-OUT PROBABILITIES?**

13   A.   This Commission must decide whether it is more appropriate to apply an average fall-out

14   rate once to the total minutes for processing each order or to apply individual fall-out rates

15   for the work steps performed for each order. Qwest believes there are two reasons that it is a

16   better and more accurate approach to apply separate fall-out rates to each work function.

17   First, fall-out rates, as well as mechanization rates, vary from one work activity to another

18   because of the differences in the systems and process flows required for each function. For

19   example, the activities and process flows that take place in the Interconnect Service Center

20   are entirely different and unrelated to the activities in the Loop Provisioning Center. The

21   fact that orders flow from the Interconnection Service Center to the Loop Provisioning

1   Center does not imply that there are similar process flows within the centers. An overall

2   fall-out rate may simplify a cost study; however, it would ignore the fact that different

3   processes have different fall-out rates. Process improvements may occur in one center and

4   should be reflected in the NRC study. However, in all likelihood, those same process

5   improvements will not have the same impact on processes in unrelated centers. Qwest's

6   approach provides a more accurate and effective way to reflect forward-looking process

7   improvements in its nonrecurring charges. It does not, as Mr. Morrison states, compound

8   the rate of failure for processes. It merely recognizes that each work center involved in the

9   provisioning process will have its own levels of flow-through and/or fall-out, and that each

10   center performs a function that is separate and distinct from the other centers.

11   Second, the probabilities for fall-out and flow-through that Qwest uses in its NRC studies

12   are provided by experts on the processes performed in each center. These people have

13   responsibility for the processes based on their considerable experience. They work day-to-

14   day in the centers where the work steps are performed, and they are involved in evaluating

15   and implementing process and system improvements in their groups. By assigning fall-out

16   and mechanization probabilities at work-step levels, Qwest is able to use these expert

17   opinions to accurately estimate the level of flow-through that will occur from planned

18   process improvements in each center. Developing an overall fall-out rate would require

19   assembling the inputs from each of the individual SMEs and calculating a weighted average

20   to apply across all work steps and centers. This less precise approach would not allow the

21   Commission to evaluate or judge the efficiencies reflected in Qwest's NRC studies in any

22   kind of detail.

5. Cost Study Revisions Proposed by Mr. Morrison

1 **Q.** **WHAT SPECIFIC ADJUSTMENTS HAS MR. MORRISON MADE TO THE**

2 **QWEST COST STUDIES?**

3 **A.** Mr. Morrison recommends the following changes to the Qwest nonrecurring studies:

4   • Eliminate times for all functions that include the terms verify, check, review,
5   analyze, screen, insure and validate;

6   • Eliminate times for all functions that include the terms distribute or send;

7   • Eliminate all times for logging orders, logging on to the systems and other
8   manual inputs into the systems;

9   • Set all times for travel and performing test functions at 10 minutes and set the
10   times for running a DS0 cross connect at 1 minute;

11   • Eliminate all times for determining and insuring critical dates are met; and

12   • Reduce by 50% the times for all other process functions.

13   Mr. Morrison provides no specific evidence to support any of these adjustments. It appears

14   that all of them are premised on his generalized critiques of the Qwest studies identified

15   above since he provides no other specific evidence. He assumes that the times for many

16   tasks may be removed based on the unsupported premise that they can be mechanized. Mr.

17   Morrison's times for other tasks are set at arbitrary levels that are never justified or even

18   discussed in his testimony. All other tasks times are reduced by an arbitrary 50 percent.

1   Q.   **DO YOU AGREE WITH MR. MORRISON'S RECOMMENDATION TO REMOVE**

2   **MANY OF THE TASK TIMES FROM THE STUDY?**

3   A.   No. Most of the tasks Mr. Morrison proposes to eliminate are associated with inputting

4   information into the systems; reviewing or analyzing the order to determine what steps need

5   to be taken to complete the task; distributing the orders to the appropriate personnel for

6   completion; or planning the workload to meet critical dates. It is Mr. Morrison's opinion

7   that all of these tasks should be mechanized. Many of the tasks that fall into the

8   "verification" category, which Mr. Morrison attempts to eliminate, reflect the time

9   technicians, circuit designers or coordinators use to familiarize themselves with the order.

10   Irrespective of the assumed level of mechanization, these employees need to understand

11   what the order requires prior to determining what steps are necessary to perform the

12   function. No one can solve a problem until the source of the problem is identified or until

13   the specific work steps are clearly understood. No one can identify what problem needs to

14   be resolved without understanding the ultimate objective. Only by understanding an order

15   can the employee perform the tasks necessary to complete the order or solve the problem.

16   Eliminating the time allotted to familiarize the employee with the job to be performed does

17   not eliminate the fact that on every job an employee will need to go through that process.

18   All Mr. Morrison's proposal really means is that Qwest will not be compensated for this

19   legitimately-incurred expense.

20   Q.   **CAN YOU PROVIDE A SPECIFIC EXAMPLE OF WHY AN ORDER MAY NEED**

21   **TO BE REVIEWED PRIOR TO PROCESSING?**

1 A. Yes. Mr. Morrison claims that there is no reason that more than 2.5 minutes is required to

2   review, verify, analyze or correct a service order submitted by a CLEC. His conclusion

3   ignores some key facts. Service orders submitted by CLECs often have attached remarks

4   that indicate specific issues or requirements that the CLEC wants Qwest to address during

5   the provisioning process. These requests require special treatment and cannot be addressed

6   through a mechanized flow. Mr. Morrison eliminates from the nonrecurring study virtually

7   all the time Qwest allots for identifying and addressing these remarks, filling special needs,

8   and dealing with CLEC-originated mistakes in the order.

9 Q. **DO CLEC-SUBMITTED SERVICE ORDERS FREQUENTLY CONTAIN ERRORS?**

10 A. Yes. Service orders often contain incorrect data that has been provided by the CLECs.

11   Qwest does not charge the CLEC to resubmit the order, but the studies do include the time

12   to identify the problem and input the information necessary to correct the problem, if it is

13   readily available. It also includes the time to input the request for additional information

14   from the CLEC if it is required. Identification of potential problems is part of the normal

15   provisioning process, and is required to keep the order moving forward.

16   One example of the type of problems that can arise from CLEC-submitted service orders

17   involves a CLEC client, WorldCom, which Mr. Morrison is currently representing in other

18   states. WorldCom has more than one service center that submits orders to Qwest. It appears

19   there is sometimes a lag in communication between these two centers. Qwest has received

20   what amounts to duplicate orders for the same service from each of these WorldCom service

1   centers. One center may submit an order requesting a particular connection facility

2   assignment ("CFA"), not knowing that the other center has already submitted an order

3   requesting that CFA. In these instances, Qwest had to review and verify the orders to

4   correct a situation created by the WorldCom request.

5   Another example of a CLEC-generated error involves the submission of the wrong CLLI

6   code on an order. While the system may be able to perform edits and identify that the CLLI

7   code is in error, it cannot guess the CLEC's intent and supply the correct code. However, an

8   experienced Qwest employee is able to not only identify that the CLLI code is wrong, but to

9   interpret the order to determine the correct CLLI code intended by the CLEC, contact the

10   CLEC to verify the correct CLLI code (allowing the CLEC to correct its own records), and

11   ensure the continued processing of the order through the system. Mr. Morrison would

12   require Qwest to bear all costs associated with identifying these CLEC errors and rerouting

13   them for resolution. Even the most efficient carriers will never be able to electronically

14   correct all errors made by customers in submitting their orders. Failure to provide recovery

15   of these costs that are directly attributed to a CLEC action is a violation of TELRIC

16   principles.

17 **Q.** **ARE THERE OTHER FUNCTIONS THAT MR. MORRISON ERRONEOUSLY**

18   **ASSUMES QWEST CAN ELIMINATE THROUGH MECHANIZATION?**

19 **A.** Yes. Mr. Morrison eliminates all times associated with inputting information into the

20   systems. Mr. Morrison appears to assume that all Qwest systems are integrated with all

1   other Qwest systems and that they will always update themselves. However, even in a

2   forward-looking world, a company such as Qwest with nearly a thousand different systems

3   cannot possibly have all of its systems integrated. If a problem is identified with a CLEC-

4   submitted order, the systems need to be updated to correct the erroneous information or the

5   order cannot be completed. Once the order is completed, the order has to be closed, the

6   critical information on the job completion has to be logged into the systems and the billing

7   systems need to be updated. Systems cannot correct errors in service orders. Systems

8   cannot automatically stop billing one account and begin billing another account. Systems

9   cannot retain critical installation information, which is required to track performance, unless

10   that information is logged into the network. Mr. Morrison's assumption that Qwest will

11   never need to input any information into the systems once a CLEC places an order is, on its

12   face, absurd. For instance, in the example cited above a CLEC has submitted an erroneous

13   service order. Once the error is identified, the best means of getting any resolution to the

14   problem is to update the system with the correct information or use the system to request

15   additional information. The only other alternative would be to call someone; but that is

16   never assumed to happen in Mr. Morrison's world because he has also eliminated all times

17   for non-mechanized internal communications. Mr. Morrison's proposal would leave the

18   Qwest employee that identifies the problem with no means to inform anyone that the

19   problem exists.

20 **Q.   DO YOU HAVE ANY OTHER EXAMPLES OF TASKS THAT MR. MORRISON**

21 **UNJUSTLY ELIMINATES?**

1   A.   Mr. Morrison eliminates all times for intra-company calls made by the Service Delivery

2   Implementor.   As discussed above, he eliminates all times related to communications

3   between company personnel.   Typically, the Service Delivery Implementor has

4   responsibility for overseeing the provisioning of the service, maintaining and testing of

5   designed services, and coordinating work activities of other centers/technicians throughout

6   the service order process. The Implementor is in contact with all work groups, including

7   CLEC representatives and technicians, to insure all critical timelines are met and to address

8   problems that may occur during the provisioning process. As with all times in the study, the

9   estimates for time spent by the Implementor include any efficiencies that are anticipated to

10   be implemented over the next 12–18 month horizon. Mr. Morrison assumes all process

11   flows can be handled electronically. Qwest has found that a coordinator is required to insure

12   that all problems are resolved and critical dates are met.   Although Qwest minimizes the

13   amount of time spent resolving problems in its studies, it is clear that there is a continuing

14   need for a coordinator to insure that these problems are resolved during the time frames

15   required by the orders. Coordinating a service order is impossible without communication,

16   yet Mr. Morrison would eliminate the times for such communications from Qwest's

17   nonrecurring charges.

18 Q.   **WHAT OTHER ADJUSTMENTS DOES MR. MORRISON PROPOSE MAKING TO**

19   **QWEST'S NONRECURRING STUDIES?**

20 A.   Mr. Morrison proposes two types of adjustments to the work times in the Qwest studies. For

21   selected work functions such as travel, testing and running DS0 cross-connects, he proposes

1   the use of specific task times (e.g., ten, ten and one minute, respectively). All other task

2   times that have not been previously eliminated are reduced by half. He provides minimal if

3   any justification or documentation as to the reasonableness of these proposals. He simply

4   reduces or eliminates the times in the studies.

5   Q.   **ARE MR. MORRISON'S PROPOSED CHANGES TO THE QWEST TIME**

6   **ESTIMATES REASONABLE?**

7   A.   No. Mr. Morrison attempts to persuade the Commission that the time estimates provided by

8   Qwest's experts (who currently perform the tasks being studied, and who are aware of the

9   improvements that Qwest expects to achieve in the near future) are unreliable. However, he

10   provides nothing to substantiate that his adjustments to Qwest's time estimates are based on

11   anything other than conjecture.

12   For example, Mr. Morrison assumes that travel time should take an average of ten minutes

13   per order. This time includes walking to the truck, loading the equipment and materials used

14   at the job site, traveling to the new location, and identifying and unloading the equipment

15   and materials required at the new site. It should be noted that the travel time is only applied

16   against the initial order at a location. Subsequent orders at the same location are charged at

17   a separate rate that does not include additional travel time. It is inconceivable that anyone

18   can travel to all potential service locations within a Qwest serving area at an average travel

19   time of ten minutes. Mr. Morrison's assumption is unreasonable and fails to take into

20   consideration that, in rural environments where there are miles and miles between central

1   offices, it frequently takes more than ten minutes to travel from one location to another. As

2   for urban areas, the assumption likewise fails to consider the difficulties of city traffic

3   (including the problem of finding a parking space). In addition, unless a technician has been

4   in every building he or she has the potential to be dispatched to, it can take ten minutes just

5   to locate the telephone equipment room in a multi-tenant building. Nevertheless, Mr.

6   Morrison would reduce the travel time to ten minutes because "this is a lot of travel time."

7   (Line 684).

8   Qwest has provided detailed backup that includes estimates for each task time for every

9   nonrecurring charge. In many cases, this backup includes the name of the person or persons

10   providing the estimate, performing the work, or supervising the people who perform the

11   work. Mr. Morrison simply reduces all the surviving time estimates by half. He provides no

12   backup to justify this assumption. It appears he never even analyzes the results of his

13   adjustments to ascertain whether his proposals are reasonable.

14   Q.   **CAN THE COMPANY COORDINATE THE SERVICE ORDER INSTALLATIONS**

15   **TO MINIMIZE DRIVE TIME?**

16   A.   To some extent, but Qwest's ability to coordinate installation on loops that require

17   coordinated testing is limited. CLECs have significant latitude in determining when they

18   want service installed. Qwest cannot independently determine the installation dates.

19   However, Qwest does, to the extent possible, coordinate installations to minimize drive

20   time. Qwest has no control over the location of the customers that request service and little

1   control over the timing of the installations. Under these circumstances, and as discussed

2   above, no amount of coordination can reduce average drive times to ten minutes per trip.

3 Q. **CAN YOU GIVE A SPECIFIC EXAMPLE OF WHERE REVIEW OF THE**

4   **RESULTS OF HIS PROPOSED ADJUSTMENTS WOULD DEMONSTATE THE**

5   **PROBLEMS WITH MR. MORRISON'S ANALYSIS?**

6 A. Yes. Every unbundled loop order requires a technician to run a jumper between the

7   unbundled loop and the CLEC cables located on the distribution frame.   In order to

8   accomplish this task the technician must:

9   • Pull the service order;

10   • Identify the work to be performed, including identifying the location of the customer
11   loop and the CLEC cabling on the distribution frames;

12   • Identify any special provisions connected with the order;

13   • Travel to the frame and locate the customer presence;

14   • Test the customer loop to insure it is working;

15   • Locate and test the CLEC presence on the frame;

16   • Run the cross-connects between the customer and CLEC facility; and

17   • Notify the service coordinator that the order has been completed, including providing
18   the critical information required to log the order completion into the system.

19   Confidential Exhibit TKM-REB2 to my testimony provides three detailed guidelines of the

20   tasks that must be performed by a service technician during an analog unbundled loop

1 installation. The Qwest study estimates that it will take the technician 9.6 minutes to

2 complete all these functions. Mr. Morrison proposes eliminating all the time allotted for

3 pulling the order, identifying the work that must be completed, and identifying the location

4 of the circuits on the frame. He then reduces the time for testing the circuits and running the

5 jumpers to two minutes and reduces the time to complete the order by half, to one minute.

6 In all, Mr. Morrison allots three minutes to complete all the functions identified above.

7 Based on his assessment, a normal central office service technician could handle 150 CLEC

8 unbundled loop orders in a single day. It took me longer than three minutes just to read the

9 processes a central office technician is required to follow for such an installation. (See

10 Confidential Exhibit TKM-REB2). As the above example illustrates, the sweeping, across-

11 the-board adjustments proposed by Mr. Morrison produce obviously unrealistic results.

12 Q. **CAN YOU GIVE ANY OTHER EXAMPLES WHERE MR. MORRISON'S TIME**

13 **ESTIMATES PROVIDE UNJUSTIFIABLE RESULTS?**

14 A. Yes. The following are two more examples of unreasonable time estimates that result from

15 Mr. Morrison's recommendations:

16 • 0.0 minutes to coordinate the service cut-over with the CLEC employees (Qwest
17 estimates 5 minutes for this activity); and

18 • 23.8 minutes to perform a cooperative test at the customer premise including installing
19 the appropriate wiring when required.

20 Q. **PLEASE DISCUSS THE AMOUNT OF TIME MR. MORRISON ALLOTS FOR**

21 **COORDINATING AN INSTALLATION WITH A CLEC.**

1   A.   Mr. Morrison does not allot any time for the function of contacting a CLEC to coordinate an

2   installation. CLECs have the option of requesting a coordinated service installation. This

3   form of installation is identical to a basic installation, with the exception that the cut-over of

4   the service is coordinated between representatives of the two companies. The Service

5   Delivery Implementor is the Qwest employee assigned the task of contacting the CLEC to

6   coordinate the installation. Qwest includes five minutes in its studies to perform this

7   function. In the case of a coordinated cut-over of service with a CLEC, it is not unusual for

8   the Qwest Implementor to spend five or more minutes just trying to reach the CLEC

9   employee at the designated time, let alone going through the substantive steps necessary to

10   coordinate the cut-over with the Qwest technician. Yet Mr. Morrison completely eliminates

11   any time associated with this function in Qwest's nonrecurring study.

12   Qwest had included the time for coordinating the installation under the function "screen

13   workforce administrator for circuit." The difference in the time estimates for the Service

14   Delivery Implementor is the only significant difference between the time allotted for a basic

15   installation and a coordinated installation. In my opinion, this time allotment is

16   conservative. Mr. Morrison removes this time from Qwest's study, eliminating virtually all

17   cost differences between a coordinated and basic installation. He did this pursuant to his

18   broad-brush recommendation to eliminate all "verification" functions from the study.

19   Although the only means of identifying where these costs reside is to compare the two study

20   outputs, by not identifying these costs prior to making his adjustments, Mr. Morrison has

21   eliminated all times associated with a function that is required to perform a coordinated cut-

22   over. The irony of his proposal is that the activity that makes a coordinated cut-over unique

1   is the fact that a Qwest employee and a CLEC employee communicate with each other. Yet,

2   Mr. Morrison completely eliminates that communication.   This oversight shows the

3   weakness of applying broad, sweeping adjustments across all nonrecurring cost studies

4   without analyzing the underlying data.

5   Q.   **PLEASE DISCUSS THE AMOUNT OF TIME MR. MORRISON ALLOTS FOR**

6   **COOPERATIVE TESTING AT THE CUSTOMER PREMISE.**

7   A.   Mr. Morrison allots 23.8 minutes for a technician performing cooperative testing at the

8   customer premise. The following functions are performed during this period:

9   • Pull and analyze order;

10   • Travel to end user premises including the serving area interface and service terminal
11   if required;

12   • Contact the customer;

13   • Complete wiring at the service area interface if required (the study assumes this
14   function is required on 20% of orders);

15   • Complete wiring at the service terminal if required (the study assumes 20%);

16   • Contact the customer communications technician to work order;

17   • Complete performance testing; and

18   • Contact the administration center to close the job.

19   Mr. Morrison assumes all these tasks can be completed in 23.8 minutes, even though the

20   process agreed upon between Qwest and the CLECs requires that the Qwest technician be

1   available for a minimum of 30 minutes at the customer premises. As discussed above, this

2   time allotment barely covers the necessary travel time to the location. Moreover, as Mr.

3   Pappas explains in his testimony, a productive installation technician can handle 8 to 10

4   dispatch orders in a day. In his discussion of travel time, Mr. Morrison identifies 10 as the

5   hypothetical number of service requests a technician can handle in a day. Based on the time

6   in Mr. Morrison's revision of Qwest's study, a technician can complete one installation with

7   a dispatch to the customer location every 30 minutes. This would equate to 15 installations

8   in an eight hour day, assuming a half hour for lunch. Again, applying Mr. Morrison's

9   sweeping adjustments across all estimates in the study results in a conclusion that is

10   unjustifiable.

11   These examples are not a comprehensive list of the insufficient estimates resulting from Mr.

12   Morrison's proposals. They simply provide a snapshot of the result that will occur when

13   making broad, sweeping changes to studies with no specific analysis of the functions being

14   performed, as well as demonstrating the unreasonableness of the resulting times.

15   **Q.**   **HAVE YOU PERFORMED ANY ADDITIONAL ANALYSIS THAT**

16   **DEMONSTRATES THAT THE APPLICATION OF MR. MORRISON'S BROAD**

17   **ADJUSTMENTS PROVIDES UNREASONABLE RESULTS?**

18   **A.**   Yes. Exhibit TKM-REB3 compares the nonrecurring costs Mr. Morrison is proposing in his

19   testimony to the ordered rates in various other ILEC's states that have been granted

20   InterLATA relief by the FCC. To get approval to offer long distance service (i.e., 271

1   approval) a company must demonstrate that all its rates are TELRIC compliant. As

2   illustrated in this exhibit, Mr. Morrison is proposing rates that are significantly below the

3   comparable rates for virtually every state that has been granted 271 approval.   His

4   recommendations are unreasonable and should be rejected.

B. Loop Conditioning

6   **Q.**   **MR. MORRISON STATES THAT QWEST SHOULD NOT BE ALLOWED TO**

7   **CHARGE FOR LOOP CONDITIONING. IS HE CORRECT?**

8   **A.**   No. First, as noted in Mr. Pappas' rebuttal testimony, the FCC specifically recognizes that

9   ILECs incur costs for conditioning loops and states that they are entitled to charge for such

10   conditioning under the TELRIC rules. The FCC made this determination despite being

11   aware that an ILEC's network design used to develop recurring TELRIC costs for an

12   unbundled loop would not contain load coils and bridged taps.   In addition, Mr. Pappas

13   provides evidence that the Multi-State Facilitator in Qwest's 271 workshops confirmed that

14   loop conditioning is a legitimate cost of business that should be borne by the party for whom

15   the conditioning is performed. Thus, when Qwest incurs costs to condition loops at the

16   request of a CLEC, Qwest is entitled to charge the CLEC for those costs. Nevertheless,

17   Qwest has chosen to voluntarily withdraw its charges for loop conditioning across its 14-

18   state region at this time.

19   **Q.**   **PLEASE COMMENT ON MR. MORRISON'S ARGUMENTS REGARDING LOOP**

20   **CONDITIONING.**

1   A.   Mr. Morrison suggests in his footnote 6 that by using a 12-kilofoot crossover between

2   copper and fiber facilities, Qwest's recurring loop rates are higher than if copper facilities

3   were assumed for the entire loop. Therefore, he reasons, because Qwest is able to charge a

4   higher recurring rate for its loop based on a forward-looking architecture, Qwest should not

5   also be allowed to charge for conditioning its loops. Nothing could be further from the

6   truth. The crossover between copper and fiber facilities at 12 kilofeet results in a *lower*

7   recurring loop rate, not a higher rate. Furthermore, there are no costs for loop conditioning

8   included in Qwest's recurring loop rate; therefore, there is no double recovery of such costs

9   as Mr. Morrison claims. Finally, as explained above, the FCC does not share Mr.

10   Morrison's view that loop conditioning charges violate its TELRIC methodology, and in fact

11   recognizes that ILECs are entitled to charge for costs incurred to condition loops on behalf

12   of the CLECs.

13   **C. Collocation**

14   Q.   **MR. MORRISON RECOMMENDS THAT QWEST DISCONTINUE THE USE OF**

15   **INTERMEDIATE DISTRIBUTION FRAMES ("IDF") IN COLLOCATION. DO**

16   **YOU AGREE?**

17   A.   No. Apparently, Mr. Morrison does not understand that the cost for IDFs included in

18   Qwest's collocation study assumes the IDF is a frame requested by the CLEC that is shared

19   by Qwest as well as other CLECs. As explained by Mr. Pappas, IDFs are used commonly

20   by telecommunications carriers in central offices. Indeed numerous clients of Mr.

21   Morrison's consulting firm have chosen to use IDFs as a preferred means of interconnection.

1   As stated in Mr. Pappas' rebuttal testimony, they are "used by Qwest, other ILECs and

2   CLECs alike as an efficient manner in which to traverse a central office, reduce cross

3   connect activity at other frames and relieve congestion at the main distribution frame." Mr.

4   Morrison is incorrect to suggest that the use of IDFs should be discontinued. He has not

5   provided the Commission with any evidence that the shared costs included in Qwest's

6   collocation study for such frames to calculate the recurring rate for interconnection tie pairs

7   ("ITPs") are inaccurate in any respect. Most importantly, although Mr. Morrison purports to

8   address nonrecurring charges in his testimony, there is no NRC for use of the IDF in

9   Qwest's proposed rates.

10   Q.   IS MR. MORRISON CORRECT THAT THE USE OF AN IDF IS MORE COSTLY

11   THAN IF THE CLECS TERMINATE DIRECTLY ON THE MAIN DISTRIBUTION

12   FRAME ("MDF")?

13   A.   No. As explained in greater detail by Mr. Pappas, there are two reasons why intermediate

14   frames are commonly used throughout the telecommunications industry: 1) because an IDF

15   relieves congestion on the MDF; and 2) because a shared frame provides greater and more

16   efficient use of the MDF. Nevertheless, Qwest allows CLECs to choose between placing

17   terminations on an IDF and connecting directly on the MDF. However, if all connections

18   were made directly to the MDF, the resulting congestion from the cables would cause Qwest

19   to have to provide more main frame facilities at a much higher cost to the CLEC than

20   connecting on a shared frame. In addition, the uneven use of modules on the MDF that

21   result from direct connections mean that the MDF is not used efficiently. As a result of

1   these factors, use of an IDF is a less costly and more efficient way for ILECs to manage

2   terminations in a central office. Mr. Morrison's position that IDFs are more costly is not

3   supported by the evidence.

4 Q. **MR. MORRISON ALSO TAKES ISSUE WITH QWEST PLACEMENT OF**

5   **BATTERY DISTRIBUTION FUSE BAYS ("BDFB") IN ITS CENTRAL OFFICES.**

6   **PLEASE COMMENT.**

7 A. Again, Mr. Morrison ignores the fact that the costs associated with BDFBs in Qwest's

8   collocation study assume that they already exist in the central office, are shared by Qwest

9   and are placed efficiently to serve differing types of equipment in particular areas of the

10   central office. This allows different equipment types, on average, to have minimum cable

11   lengths. Mr. Morrison's proposal fails to take into account that to serve only four

12   collocation cages or bays Qwest would be required to place a new BDFB dedicated to the

13   use of the CLECs. This would result in the CLECs paying a nonrecurring charge for the

14   cost of that dedicated BDFB. Clearly, these additional costs would outweigh the benefit of

15   shorter cable lengths for the collocators. The Qwest collocation model assumes that the

16   central office is designed to minimize the forward-looking cost of serving all carriers

17   including the CLECs.

18 Q. **MR. MORRISON ALSO TAKES ISSUE WITH QWEST'S CALCULATION OF**

19   **FLOOR SPACE COSTS. IS HE CORRECT?**

1   A.   No. Mr. Morrison discusses the RS Means data used by Qwest in its calculation of rent for

2   the collocation model. He compares a number that he obtained from the 2001 RS Means

3   Square Foot Costs manual of $107.45 per square foot to Qwest's investment calculation of

4    $163.23[3] per square foot building investment. Not only is Mr. Morrison's comparison of

5   costs not an "apples to apples" comparison, but he has chosen the wrong source with which

6   to make his comparison. The RS Means Square Foot Costs manual acknowledges the

7   "limitless variation of building designs and combinations of construction methods and

8   materials"[4] that can be used to develop such costs. It goes on to say "costs in this book must

9   be used with discretion."[5] RS Means specifically recognizes the limits of this manual in

10   some instances. For example, it states:

11
12   In many building projects, there may be factors that increase or decrease the cost beyond the range shown in this manual. Some of these factors are: ...

13   • Substitution of building materials or systems for those used in the model.

14
15   • Special structural qualities (allowance for earthquake, future expansion, high winds, long spans, unusual shape)....

16
17   We strongly urge that, for maximum accuracy, these factors be considered each time a structure is being evaluated.

18
19
20   If users require greater accuracy than this manual can provide, the editors recommend that the Means Building Construction Cost Data, or the Means Assemblies Cost Data be consulted.[6]

---

[3] Please note that Mr. Morrison states on page 42 of his testimony that Qwest has calculated its building investment at $170.44 per square foot. This number actually reflects both the land and building investments.

[4] 1997 RS Means Square Foot Costs, page v, Factors Affecting Costs section.

[5] *Id.*

[6] *Id.*

1   Central office space is highly specialized building space that requires special reinforcement

2   of the structure for placement of equipment. The specialized nature of Qwest's central

3   offices fit the exceptions outlined in RS Means and clearly justifies the use of the Means

4   Building Construction Cost Data manual to develop costs.

5   The RS Means model represents a facility more like a Community Dialing Office ("CDO")

6   than a central office, which has the capacity for and offers enough interconnection for

7   exchange carrier services. Some specialized construction elements associated with a central

8   office include, but are not limited to, upgraded roofing systems for extended life (15-20

9   years), roofing systems that allow for expansion, basements with cable entrance facilities,

10   large power rooms with specialized flooring to retain battery acid in case of a spill,

11   earthquake reinforcement, and climate conditions in some areas that significantly reduce the

12   construction window. In addition, the mechanical and electrical systems in the Means

13   model do not represent the power densities of 40 to 70 watts per square foot that occur in

14   central offices. These densities require much larger components for both mechanical and

15   electrical equipment. To more accurately reflect its building costs in light of the special

16   requirements of central offices, Qwest uses the Means Building Construction Cost Data as

17   the basis for its costs.

18   Q.   HOW DOES QWEST DETERMINE ITS BUILDING COSTS?

19   A.   Qwest's floor space rent investment uses the Means Building Construction manual to obtain

20   an investment per rentable square foot ("Rsf") for a 4,500 square foot structure. That

1   number is adjusted according to the Means manual to reflect the economies of scale of an

2   8,000 square foot structure, the average central office size within the scope of the study.

3   The investment costs associated with site work, such as land preparation and landscaping,

4   are added to the base investment per Rsf. Next, the Means escalation factor is applied and

5   the average land costs are added. Finally, a 15% architectural fee and 5% project

6   management fee are applied. The reason that Qwest applies a factor for these fees is that

7   they are typically higher for central office construction than for traditional construction

8   activities. This type of specialized construction requires more time from architectural

9   consultants to help with project management, to develop work scope, and to plan cost

10   estimates in order to obtain project approval. It also requires more on-site supervision and

11   management from general contractors.

12   Q.   **MR. MORRISON DISCUSSES QWEST'S APPLICATION OF THE ESCALATION**

13   **FACTOR TO ITS COSTS. PLEASE DISCUSS HIS TESTIMONY ON THIS POINT.**

14   A.   As Mr. Morrison stated, Qwest has used data from the 1997 version of the RS Means

15   Building Construction Cost Data to determine the 1997 construction cost per Rsf. Qwest

16   then applies the RS Means 97 to 98 cost escalation factor of 2.5% to adjust the construction

17   cost per Rsf to 1998 costs. RS Means provides historical cost indexes (page 575 of 1997 RS

18   Means Building Construction Cost Data) in order to compare construction costs for different

19   years and assist in determining reasonable construction costs over time. Mr. Morrison

20   criticizes Qwest for this approach and implies that Qwest's cost for floor space would be

21   lower if Qwest had used more recent data. However, this index provides clear evidence of

1   the increasing cost of construction over time. Thus, in choosing to use data from 1997 and

2   adjusting it to 1998 costs, rather than equivalent data from 2001, Qwest has foregone the

3   increase in construction cost that would be reflected between 1998 and 2001.

4   **Q.**   **PLEASE ADDRESS MR. MORRISON'S STATEMENT THAT HE CANNOT FIND**

5   **SUPPORT FOR THE COLLOCATION QUOTE PREPARATION FEES ("QPF") IN**

6   **THE QWEST COLLOCATION MODEL.**

7   **A.**   Mr. Morrison is not correct that the nonrecurring cost backup for the QPF was not included

8   in Qwest's cost model documentation. Therefore, I have included Exhibit TKM-REB4,

9   which explains where the nonrecurring cost study backup for QPF resides within the cost

10   information provided in Qwest's June 28, 2002 filing. This exhibit also describes which

11   tabs within the collocation model output contain references to the calculation of Qwest's

12   QPF costs.

13 **Q.**   **MR. MORRISON COMPARES QWEST'S QPF WITH NON-REFUNDABLE**

14   **APPLICATION FEES OF OTHER LANDLORDS. IS THIS AN APPROPRIATE**

15   **COMPARISON?**

16 **A.**   No. The costs Qwest develops for a QPF are not the same as a prospective tenant being

17   charged a non-refundable fee by a landlord in the real estate market to find out if space is

18   available. The level of work required of Qwest to develop a QPF is considerable greater

19   than what a typical landlord would need to do to determine if space is available. For

20   example, it is extremely unlikely that a landlord will conduct engineering activities to

1   determine if office or residential space is available. However, if a tenant desired to alter the

2   space, it is quite likely that the fee paid to the party providing the tenant finish would

3   include a cost to develop such plans.

4   Qwest develops a QPF for collocation that includes the cost to process a request for

5   collocation and certain of the engineering costs that are incurred in the construction of

6   collocation space for a CLEC. This fee is credited against the CLEC's space construction

7   charge in the event that the CLEC actually collocates in Qwest's central office. The purpose

8   of the QPF is to recover the costs that Qwest incurs to process the request and engineer the

9   space. The only time that Qwest retains the QPF is when the CLEC decides not to collocate

10   in Qwest's central office; however, at that point Qwest has already incurred costs associated

11   with the abandoned request. Qwest should be entitled to recover such costs from the

12   requesting CLEC because, as the FCC has made clear, ILECs are not required to underwrite

13   the CLEC's entrance into the competitive marketplace.

14   Q.   **IN HIS DISCUSSION OF CLEC TO CLEC CONNECTIONS, MR. MORRISON**

15   **ARGUES THAT QWEST HAS OVERSTATED DESIGN AND ENGINEERING**

16   **CHARGES. PLEASE COMMENT.**

17   A.   Mr. Morrison argues that the 8 hours of design and engineering time in the Qwest study is

18   overstated, and that this time should be reduced to 4 hours.

19   Q.   **IS THERE ANY BASIS FOR HIS REDUCTION?**

1   A.   No. Mr. Morrison simply states that in his opinion and based on his experience, the time

2   should be cut by 50%. As I discussed above in connection with Qwest's nonrecurring

3   charges, there is no basis to reject the work time estimated by Qwest SMEs who perform the

4   work, in favor of Mr. Morrison's opinion. The testimony of Ms. Weidenbach demonstrates

5   that the Qwest design and engineering costs are reasonable.

6   **D. Remote Terminal Collocation**

7   Q.   **MR. MORRISON PROPOSES THAT QWEST BE REQUIRED TO FURTHER**

8   **UNBUNDLE REMOTE TERMINAL ELEMENTS AND PROVIDE CLECS WITH**

9   **"CARD AT A TIME" ACCESS. DOES THE FCC REQUIRE SUCH**

10   **UNBUNDLING?**

11   A.   No. Once again, Mr. Morrison is proposing a solution to the high cost of providing

12   advanced telecommunications services that would require Qwest to underwrite the cost for

13   CLECs. He proposes that Qwest be required to unbundle network transport elements, which

14   he defines as digital loop carrier ("DLC") equipment. Mr. Morrison's proposal requires that

15   Qwest provide "card at a time" access to next generation digital loop carrier ("NGDLC") as

16   opposed to collocating a digital subscriber line access multiplexer ("DSLAM") in the

17   distribution area ("DA") cabinet provided by Qwest. He states that both Texas and Illinois

18   commissions have required SBC to make such access available. But he fails to note that

19   SBC had plans to deploy NGDLC in its network and withdrew those plans after the Texas

20   commission decision. Mr. Morrison also fails to note in his testimony that Qwest has not

21   deployed the necessary NGDLC equipment in its network. Qwest cannot unbundle

1   equipment that it has not deployed. Furthermore, nowhere in Mr. Morrison's proposal or in

2   any of the other rates proposed in this docket has he included the costs of deploying

3   NGDLC throughout the network. Thus, once again, Mr. Morrison expects Qwest to incur

4   costs to provide services to the CLECs, but provides no mechanism for recovering those

5   costs. The FCC has made it clear that ILECs are not required to finance the cost to CLECs

6   of entering the competitive marketplace. For all of these reasons, the Commission should

7   reject this proposal.

8   Q.   **ARE THERE OTHER PROBLEMS WITH MR. MORRISON'S PROPOSAL?**

9   A.   Yes. His proposal also ignores the fact of the FCC's conclusion that, to the extent an ILEC

10   places that equipment (i.e., a DSLAM) at a remote location, it must also provide space at

11   that location for CLECs to place their own equipment. The FCC went on to say that if no

12   space was available to the CLEC *at a location where the ILEC had deployed a DSLAM*, and

13   no spare copper line was available, then and only then, would the ILEC be required to

14   provide the CLEC with unbundled packet switching. The FCC came to this conclusion

15   because it recognized that xDSL is an emerging competitive service in which ILECs have

16   little or no advantage over CLECs, and face competition from the unregulated cable industry

17   as well. Furthermore, nowhere does the FCC imply that ILECs must provide card-at-a-time

18   collocation, in the limited circumstances where packet switching unbundling is required.

19   What the FCC does say is that it will "define unbundled network elements, to the extent

20   practicable, in a technologically neutral manner so as to not favor one particular packet

1   switching technology over another."[7] Nor does the FCC indicate anywhere that NGDLC is

2   the technology of choice for purposes of developing costs for unbundled packet switching

3   ("UPS"). Nothing in Mr. Morrison's testimony should convince the Commission that

4   NGDLC is the least cost architecture for remote collocation. Qwest has provided costs for

5   UPS in the situations where the four FCC conditions have been met, but no party criticized

6   those proposals.

7   Finally, Mr. Morrison's proposal ignores the FCC's recent statement in the attachment to its

8   February 2003 press release in its Triennial Review docket that "Incumbent LECs are not

9   required to unbundled packet switching, including routers and DSLAMs, as stand-alone

10   network elements. The [Triennial Review] order eliminates the current limited requirement

11   for unbundling of packet switching."[8]

12   Mr. Morrison's ill-advised proposal should be rejected.

13   **E. Line Sharing**

14   Q.   **WHAT PRICE DOES MR. MORRISON RECOMMEND FOR THE HIGH**

15   **FREQUENCY PORTION OF THE LOOP?**

16   A.   Mr. Morrison states that the Commission should set the price for the high frequency portion

17   of the loop at a range of $1.56 to $2.47, although he admits that both Washington and

18   Colorado set higher rates of $4.00 and $4.89, respectively. Wyoming also adopted the $4.89

---

[7] UNE Remand Order at ¶ 312

1   rate determined by the Colorado commission. Qwest's proposal in South Dakota is $5.00,

2   as it has been in each of its states.

3 Q.   **CAN THE APPLICATION OF TELRIC METHODS BE USED TO DEVELOP A**

4   **PRICE FOR LINE SHARING?**

5 A.   No. The standard TELRIC methodology is not applicable to pricing the high-frequency

6   portion of the loop. I agree with Mr. Morrison that the high and low frequency portions of

7   the loop are joint costs. When a shared line is used to provide two dedicated connections

8   (high and low frequency loops), these connections are jointly provided, and the cost to

9   provide the loop is incurred for the sake of both together. However, TELRIC analysis was

10   designed for estimating direct costs, not joint costs. In the context of TELRIC analysis,

11   costs that are shared by two network elements are common to those elements and should be

12   allocated to those elements. TELRIC analysis does not, however, offer a clear method for

13   selecting the most reasonable allocation of these joint costs. In addition, there is no

14   economic basis for other allocation schemes, such as Mr. Morrison's suggestion to "allocate

15   joint product costs among the products according to the relative strength of demand for each

16   product."[9]

---

[8] Attachment to FCC Press Release (February 20, 2003), at 1.

[9] Morrison direct, page 59.

1   Mr. Morrison and I both agree that there should be a positive rate for the high frequency

2   portion of the loop (i.e., line sharing). The question is: what is the proper price? I believe

3   the Commission should consider several factors as it sets the line sharing rate.[10]

4 Q. **WHAT FACTORS SHOULD THE COMMISSION CONSIDER IN DETERMINING**

5   **THE APPROPRIATE PRICE FOR LINE SHARING?**

6 A. First, the Commission should consider that the high frequency portion of the loop is a

7   legitimate source of funding for the loop network. Loops are used to provide dedicated

8   connections to customers as part of basic local service. For a large number of households,

9   however, the price of basic local service is below the cost of providing this service; for

10   many, it is even below the cost-based prices of unbundled loops. Today, Qwest funds the

11   shortfall with above-cost prices for a number of services, such as intraLATA toll and call

12   waiting. These services, however, do not cause the cost of the loop network, and they are

13   not sustainable sources of funding for the loop network in a competitive environment.

14   Qwest is no longer the only firm providing services across its loop networks, and an

15   increasing number of customers are receiving local telecommunications services from

16   wireless and cable television service providers. The time is rapidly approaching when it will

17   no longer be feasible for Qwest to fund below-cost basic local service for residential

18   customers with revenues from current sources. It will be necessary to find other sources of

19   revenue to recover the full cost of residential loops, or it may even be necessary to stop

---

[10] At present, the industry is awaiting the FCC Triennial Review Order. This Order will impact the provision of line sharing by Qwest. My testimony, pending the Order, assumes the status quo.

1   providing service, at least in high-cost geographic areas. The high frequency portion of the

2   loop is a legitimate source of funding for the loop network.

3 Q.   **WHAT OTHER FACTORS SHOULD BE CONSIDERED BY THE COMMISSION?**

4 A.   The Commission should adopt pricing policies that comport with the ongoing development

5   of a competitive local telecommunications market in South Dakota. If the Commission does

6   not set a price for the high frequency portion of the loop that recognizes the joint-cost nature

7   of a shared loop and comports with a reasonable competitive allocation of this joint cost,

8   harm to competition, efficiency, and investment in the telecommunications infrastructure

9   will result. The overriding principle for determining the portion of the shared loop cost to

10   allocate for recovery by the price of the high frequency portion of the loop is that this

11   allocation should allow for a competitive outcome to the greatest possible extent. A

12   fundamental economic concept underlying the decision to transform local

13   telecommunications into a competitive market is that competition will provide the proper

14   incentives for more efficient investment and innovation. To achieve this transformation, the

15   FCC mandated that ILECs make productive assets available to competitors at prices that

16   simulate competitive conditions. Under the FCC's concept, prices developed under this

17   methodology will lead to efficient investment decisions during the transformation to

18   competition. A price for the high frequency portion of the loop that is out of sync with a

19   price that would reasonably prevail in a competitive market will have a disruptive impact on

20   local telecommunications services competition.

1   **Q.**   **IS THERE A THIRD FACTOR THAT THE COMMISSION SHOULD CONSIDER?**

2   A.   Yes. Just as technology has created the ability to provide high-speed access on the high-

3   frequency spectrum of the loop, it is creating alternative modes of high-speed access, such

4   as cable modem and broadband wireless services. Currently, cable modem service is the

5   leader in this market, with DSL in second, and wireless in third. Setting a low price for the

6   high-frequency spectrum on a loop may stimulate short-term consumer benefits by

7   increasing the activity of DSL providers, but in the long term it may also deter facilities-

8   based investments in competing technologies and restrict investment by the ILEC.

9   **Q.**   **WHAT RATE IS QWEST PROPOSING FOR THE LINE SHARING UNE?**

10   A.   Qwest's proposed charge for the high frequency portion of the unbundled loop is $5.

11   **F. Operations Support Systems**

12   **Q.**   **MR. MORRISON RECOMMENDS THAT THE COMMISSION ALLOW QWEST**

13   **TO CHARGE ONLY A NOMINAL RATE OF $0.23 PER ORDER FOR LINE**

14   **SHARING OSS. DO YOU AGREE WITH HIS PROPOSAL?**

15   A.   No. Mr. Morrison believes that because Qwest paid Telcordia to modify existing OSS for

16   purposes of line sharing that Qwest should not be entitled to recover its costs for those

17   modifications. Mr. Morrison's conclusion is wrong for several reasons. First, he fails to

18   recognize that the alternative to Qwest incurring costs to modify its existing systems, is for

19   Qwest to replace, at a far higher cost, all of those systems with new OSS that are already

1   designed to accommodate multiple providers for multiple end-users. However, the reason

2   that the FCC declared OSS to be a UNE is that it realized that the cost to replace or replicate

3   the ILECs' existing systems would result in an impairment to the CLECs' ability to

4   compete. Thus, the FCC determined that the ILECs must provide the CLECs with access to

5   their *existing* OSS under the Act.

6   Second, as quoted by Mr. Morrison, the FCC stated that the ILECs "should recover in their

7   line sharing charges those reasonable incremental costs of OSS modifications that are

8   caused by the obligation to provide line sharing as an unbundled network element."[11] The

9   FCC did not say "except if the ILEC has to pay Telcordia for such modifications," or "only

10   if those modifications cost less than replacing the ILECs' entire OSS." The fact is that by

11   talking about the recovery of costs in terms of OSS modifications the FCC implicitly

12   recognized that the ILECs would be *modifying* existing systems, and that those existing

13   systems could have resulted from the Telcordia legacy of existing systems. As explained by

14   Ms. Albersheim, it was reasonable for Qwest to pay Telcordia to modify the affected

15   software for line sharing, and it is incorrect for Mr. Morrison to conclude that Qwest paid a

16   "monopoly price" for those changes. Mr. Morrison offered no evidence that the charges

17   from Telcordia increased as a result of the sale of Qwest's interest in Telcordia. To the

18   contrary, now that Telcordia is a separate and independent provider of services to the ILECs,

19   it is more likely that its charges are market-based. Furthermore, Qwest has every incentive

---

[11] Line Sharing Order at ¶ 144.

1   to see that the Telcordia prices are reasonable. Other than unsupported innuendo, Mr.

2   Morrison provides nothing to prove otherwise.

3   Third, Mr. Morrison's recommendation to set a nominal rate for recovery of significant line

4   sharing OSS costs already incurred by Qwest sends an inappropriate message about the way

5   ILECs should behave in their dealings with CLECs. In the case of line sharing, Qwest was

6   the first ILEC to react and make a good faith effort to provide the CLECs with access to

7   shared loops. While other ILECs were resisting the line sharing mandate and attempting to

8   avoid the requirement, Qwest conducted workshops and negotiated with the CLECs to

9   determine their needs with regard to access to Qwest's OSS for purposes of line sharing.

10   Qwest then negotiated with Telcordia to make the necessary changes to its existing software.

11   Mr. Morrison does not dispute that Qwest incurred costs associated with those modifications

12   that it would not have incurred but for the need to accommodate the CLECs' requirements.

13   He simply believes that Qwest should bear the burden of those costs regardless of the fact

14   that the CLEC was the cost-causer of those modifications.

15   Finally, Mr. Morrison says that he amended the Qwest OSS Line Sharing study to develop a

16   rate of $0.23 per order for OSS line sharing. This implies that he intends that rate to be

17   nonrecurring in nature. However, the Qwest study for line sharing develops a recurring

18   charge for line sharing that applies on a per line basis for lines that are shared. The study

19   spreads the costs Qwest incurred for line sharing OSS over the number of lines that it

20   projects will be shared and over the number of years the CLECs are projected to share lines.

1   Unless Mr. Morrison has somehow modified the assumptions in Qwest's cost study to

2   reflect orders, it is impossible for the rate that he proposes to be on a per-order basis.

3   **IV. TESTIMONY OF MR. STACY**

4   **A. The Use of Subject Matter Experts**

5   Q.   **ARE THE TIME ESTIMATES IN QWEST'S NONRECURRING STUDIES BASED**

6   **ON UNSUPPORTED OPINION?**

7   A.   No. Qwest's assumptions are based on a disciplined analysis made by subject matter experts

8   ("SMEs") who have hands-on experience with provisioning processes as they exist today in

9   Qwest's region. These same experts are in the best position to know what improvements

10   will be made to those processes in the near future. The development of the estimates in the

11   Qwest studies is generally conducted in meetings attended by the cost experts, the subject

12   matter experts and the employees who perform the functions being analyzed. The cost

13   analyst oversees the process by providing key assumptions that should be used to derive the

14   time and probability estimates and to monitor the discussions to insure the assumptions are

15   being adhered to by the experts. The SMEs identify the required work functions, the

16   systems needed to perform each function, the estimated time required to perform the

17   function, and the probabilities that the function will be required. Finally, the process is

18   analyzed to determine if projected process improvements will eliminate the need for the

19   function, reduce the probability that the function will be required or reduce the time required

1   to perform the function. The SMEs document the results and provide the estimated times

2   and probabilities to the cost analyst for inclusion in the nonrecurring study.

3 Q.   **IS MR. STACY CORRECT IN HIS ASSESSMENT THAT THE STUDIES LACK**

4   **DOCUMENTATION?**

5 A.   No. The studies themselves identify each task, the time estimates for each task and the

6   probabilities that each task will occur. The backup documentation was provided at a

7   technical conference that I conducted for the benefit of the parties on December 17, 2002 in

8   Denver. Commission staff and its consultants, including Mr. Stacy, attended. The

9   documentation includes descriptions of the processes and functions and the estimates

10   provided by the SMEs. Mr. Stacy argues that this documentation is inadequate and lacks

11   credible support. As an alternative, he proposes that the foundation for the Company's

12   nonrecurring studies should be time and motion studies. However, Qwest is unaware of a

13   single ILEC or CLEC that bases nonrecurring studies on anything other than similar SME

14   estimates, although Verizon may have used this approach in the past. Further because time

15   and motion studies measure only the provisioning activities and tasks performed by Qwest's

16   employees currently, any study would require significant adjustments by a person extremely

17   knowledgeable in the provisioning process (a SME) to insure that it reflected the forward-

18   looking processes of an "efficient" firm. Of course, how these knowledgeable SMEs could

19   document their estimates of the adjustments necessary to produce a forward-looking cost

20   study would probably be the subject of much discussion and disagreement, similar to the

1   disagreement surrounding Qwest's nonrecurring cost study. Informed judgment is an

2   inherent part of any TELRIC study.

3 Q. **HAVE YOU PROVIDED AN EXAMPLE OF THE TYPE OF BACKUP**

4   **DOCUMENTATION QWEST HAS INCLUDED FOR ITS NONRECURRING**

5   **STUDIES?**

6 A. Yes. Exhibit TKM-REB1 contains three of the sections identified by tabs in Qwest's

7   nonrecurring backup documentation. These sections are illustrative of the types of

8   documentation Qwest's experts provide to the cost analyst for development of the

9   nonrecurring cost study, and are intended to represent the variety of processes included in

10   provisioning an unbundled loop. The sections provided in Exhibit TKM-REB1 include Tab

11   18, Interconnect Service Center; Tab 19, Loop Provisioning Center; and Tab 21, Central

12   Office.

13 Q. **HAVE ANY OF THE OTHER PARTIES IN THIS PROCEEDING USED**

14   **JUDGMENT OF EXPERTS IN DEVELOPING THEIR PROPOSALS?**

15 A. Yes. As I discussed above, the basis for the recommendations of Mr. Stacy's own

16   colleague, Mr. Morrison, are his judgments, which are essentially pure conjecture. He fails

17   to provide any support for his conclusions. His recommendations are based on the

18   implementation of operations support systems that he never identifies, nor can he, because

19   they do not exist in the real world.

1   **Q.**   **HAS QWEST PROVIDED SUPPORT FOR THE FUNCTIONS, TIMES AND**

2   **PROBABILITIES IN THEIR STUDIES?**

3   A.   Yes. As indicated above, Qwest's nonrecurring backup provided at the technical conference

4   clearly documents the key assumptions used by the SMEs in their analysis. Mr. Stacy

5   claims that the studies do not contain any formal written instructions to the experts that

6   provide input to the studies, yet Mr. Morrison in his testimony quotes the study

7   documentation that outlines the assumptions used to derive the inputs. Each section of the

8   manual contains explicit documentation of the assumptions used to derive the inputs. These

9   assumptions include:

10   1. The time estimates and probabilities will be forward-looking and include any

11   foreseeable process improvements over the foreseeable future;

12   2. The time estimates should represent an efficient carrier and not include time spent on

13   resolving problems resulting from system down time, times spent resolving internal

14   order flow procedures and other similar problems related to Qwest's internal

15   processes and systems; and

16   3. The time estimates should not include any time for maintenance and repair.

17   On the one hand, Mr. Morrison cites these assumptions repeatedly in his testimony but then,

18   on the other hand, Mr. Stacy criticizes the company for not explicitly defining the task the

19   experts were asked to undertake. They cannot have it both ways. It is interesting to note

1   that in other jurisdictions Mr. Morrison had responsibility for the testimony now presented

2   by Mr. Stacy. In those jurisdictions Qwest was able to point out the inconsistencies within

3   Mr. Morrison's single piece of testimony, whereas in South Dakota the inconsistencies now

4   exist between the testimonies of two witnesses.

5   Mr. Stacy says that other ILECs do provide written documentation for SMEs developing

6   time estimates; however, he fails to provide even an illustrative example of this

7   documentation. Mr. Stacy asks the Commission to ignore the input from Qwest employees

8   who actually perform the work studied. He recommends these well documented estimates

9   be ignored and supplanted with Mr. Morrison's unsupported opinion and conjecture about

10   futuristic OSS that he cannot specifically identify nor even demonstrate that it exists. Mr.

11   Stacy asserts that because Mr. Morrison will be available for cross-examination the

12   Commission should find comfort in his opinions where it should find none in the opinions of

13   Qwest's experts. Mr. Morrison and Mr. Stacy represent the interests of CLECs in other

14   jurisdictions and are therefore equally subject to the biases they ascribe to Qwest

15   employees.[12] The real issue here is whether the estimates of Qwest employees who actually

16   do the work are reasonable. Neither Mr. Morrison nor Mr. Stacy have provided any

17   evidence that they are not reasonable.

18   **Q.   DOES MR. STACY QUESTION THE MOTIVES OF QWEST'S EMPLOYEES WHO**

19   **PROVIDE TIME ESTIMATES?**

1   A.   Yes. Mr. Stacy says that Qwest's process for estimating times is fraught with opportunities

2   for inaccuracy and abuse. He claims in his testimony that the Commission has no way of

3   knowing whether Qwest's SMEs were told to overstate times and probabilities in order to

4   intentionally increase costs to Qwest's competitors. This testimony is in direct conflict with

5   Mr. Morrison's testimony in Part D of the Washington cost docket (Docket No. UT-003013)

6   where he stated he is "certain that the time and fall-out estimates [in Qwest's NRC study]

7   are consistent with the individual SMEs experience...." It is inconsistent for Mr. Stacy to

8   suggest that Qwest is intentionally padding its time estimates while, at the same time, Mr.

9   Morrison has gone on record with the conclusion that those same estimates are consistent

10   with SME experience. While Staff's consultants appear to waffle on this issue, I do not, and

11   I am available for cross-examination in this proceeding. The subject matter experts I have

12   met are conscientious, hard-working employees. They take pride in their knowledge and

13   their work. They do not deliberately manipulate the task times to achieve some self-serving

14   objective. Qwest does everything it can to eliminate any bias from its estimates, including

15   documenting each estimate so that intervening experts have all the information required to

16   analyze the studies. The use of hands-on employees that are removed from the advocacy

17   process in and of itself limits the chance for bias in the company position.

18   Q.   **PLEASE SUMMARIZE QWEST'S USE OF EXPERTS IN DEVELOPING ITS**

19   **COSTS.**

---

[12] In fact, the testimony and recommendations presented by Messrs. Morrison and Stacy on behalf of Staff in South Dakota are nearly the same as Mr. Morrison's testimony and recommendations on behalf of WorldCom in Washington in Phase D of Docket No. UT-003013.

1   A.   Qwest's nonrecurring cost studies are based on input from experts who are directly involved

2   on a day-to-day basis in the activities under study. These SMEs provide forward-looking

3   time estimates and probabilities that are based on expected improvements to processes and

4   systems that efficient carriers use to provision service. The estimates do not rely on

5   conjecture about a mechanized world where machines run everything and human

6   intervention is superfluous. Test times and probability estimates for a loop with

7   performance testing are provided by personnel who are involved daily in these specific

8   activities. Mr. Stacy argues that Mr. Morrison's unsubstantiated opinion should be used to

9   replace all estimates developed by these SMEs. There is no reason to assume that Mr.

10   Morrison has *any* greater knowledge of the performance testing process than the individuals

11   actually performing the activity. Nor should the Commission be misled into thinking QSI is

12   offering a bias-free opinion. Instead the Commission should look at the quality of evidence

13   used to support the respective positions of Qwest and QSI in this proceeding.

14   **B. Time and Motion Studies**

15   Q.   **MR. STACY SUGGESTS THAT THE COMMISSION SHOULD REQUIRE QWEST**

16   **TO CONDUCT TIME AND MOTION STUDIES TO VERIFY ITS TIME**

17   **ESTIMATES. DO YOU AGREE WITH THAT APPROACH?**

18   A.   No. Qwest discontinued its practice of conducting formal time and motion studies for the

19   purpose of compiling cost studies, years before the passage of the Act of 1996. Properly

20   conducted time and motion studies entail several experienced people observing numerous

21   other people performing their work functions. It can take months to evaluate the activities

1   involved in one complex nonrecurring study such as loop installations. Qwest has hundreds

2   of such studies. The studies took years to compile and the results were never adopted by a

3   commission. Opposing parties argued, among other things, that the studies were not

4   properly conducted, did not achieve a statistically valid result, reflected the company's

5   embedded inefficient operations, did not properly eliminate nonproductive time, and were

6   outdated. The result was a significant cost to the corporation to conduct the studies with

7   little or no benefit in resolving disputed issues. In addition, the presence of observers in the

8   work centers caused disruptions in the work-flows. As a result, Qwest only performs time

9   and motion studies when it is felt that such an elaborate analysis will result in savings

10   through process improvements, not just to verify the time estimates in existing studies.

11   **Q.   ARE THERE OTHER PROBLEMS WITH USING TIME AND MOTION STUDIES**

12   **TO PERFORM COST STUDIES?**

13   A.   Yes. Many Qwest employees work on a variety of products and services during a day.

14   They do not spend all their time on a single function. Time and motion studies are most

15   effective in measuring repetitive, assembly-line type functions. However, the work

16   activities performed by an average service order technician are complex and variable. One

17   moment he may be installing a loop that requires little or no customer premise wiring, while

18   the next loop must be wired at both the service terminal and the serving area interface. The

19   loop may require special testing to insure it can handle high capacity services or it may be a

20   plain old POTS installation. There are hundreds of Qwest services, many of which can be

21   provided under multiple installation options. Some of the more complex services may

1   require more than fifty steps for a single installation. Sorting these thousands of functions

2   out of the multiple tasks that Qwest's employees perform every day is virtually an

3   impossible task. To conduct a time and motion study with any degree of statistical

4   significance would make the task insurmountable. Thus, Qwest believes that it is more

5   reliable and cost-effective to use the forward-looking estimates provided by its experienced

6   experts. These experts use their vast experience and their knowledge of forward-looking

7   processes as the basis for estimating task times. They vary their estimates based on

8   proposed process and mechanization improvements that will increase productivity and they

9   adjust their estimates to reflect reduction in times spent resolving problems. Qwest's expert

10   estimates are specifically designed to reflect a forward-looking, efficient carrier's operations

11   and therefore comply with the FCC's TELRIC costing principles.

12 **Q.** **DO TIME AND MOTION STUDIES ELIMINATE EXPERT OPINION FROM THE**

13   **TIME ESTIMATES THAT UNDERLIE THE NONRECURRING COSTS?**

14 **A.** No. Indeed, as I mentioned above, the only way to conduct a time and motion study of

15   complex and variable activities would be to engage one or more experts to adjust the results

16   of the study to eliminate inefficient or nonproductive work activities. The result is a time

17   and motion study based as much on expert opinion as Qwest's nonrecurring cost study. As

18   explained above, Qwest's SMEs are already instructed to incorporate forward-looking

19   assumptions when they provide their estimates. Additionally, they exclude much of the time

20   spent resolving problems encountered during the processing of the service order. Because

1   time and motion studies will capture all of these additional work times, they will then need

2   to be adjusted to remove these tasks, a process that involves expert judgment.

3   For all of the foregoing reasons, Qwest recommends that the Commission reject requests to

4   order Qwest to provide time and motion studies. Such studies measure only Qwest's current

5   processes, require SME adjustment and opinion, and have very little applicability in

6   developing forward-looking TELRIC studies.

7   **V. TESTIMONY OF MR. GOSE**

8   **A. Validation of the Switching Cost Model**

9   Q.   **DOES MR. GOSE ARGUE THAT THE QWEST SWITCHING COST MODEL**

10   **("SCM") CANNOT BE VALIDATED?**

11 A.   Yes. Mr. Gose makes two arguments: first that the vendor contracts provided by Qwest

12   cannot be validated and second that the SCM is not based on current contract prices.

13   However, as this Commission is aware, Qwest cannot release vendor price information

14   without permission, and then only under protective order. Qwest redacts its contracts not for

15   its own protection, but at the direction of its vendors in order to obtain permission to provide

16   them under protective order. Even though the contracts are redacted so that the vendor

17   cannot be identified, all other operative terms of the contracts are available for review.

18   These redacted contracts were provided in response to Staff Set 01, data requests #160 and

19   161. This is consistent with the manner in which this information is provided in other

20   jurisdictions.

1   In order to make SCM non-proprietary so that the model could be filed without vendor

2   permission, Qwest calculates the investment inputs to SCM using the proprietary discounted

3   vendor contract prices in separate spreadsheets outside of the model. These spreadsheets

4   weight together the discounted vendor prices for initial lines and growth lines, as reflected in

5   Qwest's switching contracts, and combine them with an amount that represents software and

6   hardware upgrades. The results of these calculations form the basis for the unit investment

7   inputs to SCM (e.g., investment per line, per trunk, per TR303 DS1, per BRI, etc.). In the

8   final analysis, Qwest's approach produces the same result in its non-proprietary version of

9   SCM as would be achieved using the proprietary contract prices.

10   Q.   **HAVE YOU PREPARED AN ADDITIONAL CONFIDENTIAL EXHIBIT THAT**

11   **SHOWS THESE CALCULATIONS?**

12   A.   Yes. I have prepared Confidential Exhibit TKM-REB5, which includes the confidential

13   attachments (Attachments A, B, and C) from the data request response to Staff Set 01,

14   request #174. As described above, these attachments show how the investment inputs to

15   SCM are derived based on the discounted prices reflected in Qwest's vendor contracts. The

16   Excel audit function can be used with these spreadsheets to follow the calculations.

17   Q.   **MR. GOSE CLAIMS THAT QWEST'S SWITCHING COSTS ARE NOT BASED ON**

18   **QWEST'S CURRENT CONTRACT PRICES. IS THIS TRUE?**

1   A.   No. As explained above, Qwest has provided a spreadsheet (attached here as Confidential

2   Exhibit TKM-REB5) that demonstrates how its current discounted contract prices are used

3   to develop the investment inputs used in SCM.

4   Q.   **MR. GOSE STATES THAT QWEST'S RESPONSE TO DATA REQUEST NO. 192**

5   **INDICATED THAT QWEST DOES NOT USE VENDOR DISCOUNTS IN**

6   **DEVELOPING ITS SWITCH INVESTMENTS. IS HE CORRECT?**

7   A.   No. Mr. Gose apparently misunderstood the response to data request No. 192. The intent of

8   that response was to indicate that the vendor discounts are not a part of the calculation

9   within SCM. This is because the vendor contract prices used as inputs to SCM already

10   reflect Qwest's vendor "discount." Although no discount rates are explicitly expressed in

11   Qwest's proprietary vendor contracts, the prices contained in the contracts already reflect the

12   discount Qwest receives. The SCM then uses the partitioning ratios, which are developed

13   on the basis of list prices, to allocate the discounted vendor contract price to the various

14   components of the switch.

15   **B. Usage-based Switching Costs**

16   Q.   **WHAT IS THE BASIS FOR MR. GOSE'S CLAIM THAT THE SWITCHING**

17   **COSTS ARE ALL LINE-RELATED?**

18   A.   Mr. Gose argues that a usage-based switching rate violates the principle of cost causation.

19   He argues that switching costs are not usage-related, but are 100% line related, and that it is

1   inappropriate to consider switching costs as usage sensitive. Mr. Gose claims that usage is

2   not a binding constraint on the switch. In large part, Mr. Gose bases this incorrect

3   conclusion on his analysis of Qwest switch vendor contracts. He notes that in current switch

4   vendor contracts Qwest pays for some switching equipment on a per line basis. He argues

5   that only when usage exceeds a high threshold would an additional charge be assessed.

6   Thus, he concludes that all switching costs are line-related, and that it would not follow the

7   principle of cost-causation to recover these costs on a usage basis.

8 Q.   **DO YOU AGREE WITH MR. GOSE?**

9 A.   No. First, it is true that today's vendor contracts charge Qwest for switch facilities on a per-

10   line or per-trunk basis. Thus, based on a superficial, short run analysis that goes no further,

11   one might conclude that all switching costs are caused by the number of lines and trunks, not

12   usage. However, a more thorough analysis reveals that in the long run (as mandated by

13   TELRIC), large portions of switching costs are still caused by usage – even though vendors

14   charge Qwest on a per-line or per-trunk basis.

15   It is worth reiterating that Qwest is not advocating recovery of all costs of switching on the

16   basis of usage-sensitive elements. To the contrary, Qwest's approach is balanced and

17   recognizes that non-usage-sensitive costs are best recovered through the flat-rated port

18   element. Nevertheless, those costs that are primarily driven by usage should continue to be

19   recovered from the cost causer through usage-sensitive prices.

1   Q.   **WHAT IS WRONG WITH MR. GOSE'S ARGUMENT THAT LOCAL SWITCHING**

2   **COSTS ARE NOT CAUSED BY USAGE?**

3   A.   An engineer will determine how much switch fabric and processor capacity to install

4   depending on the amount of average peak usage expected from the ports connected to the

5   switch. That is, as usage (calls or CCS or minutes of use) increases, these portions of the

6   switch must be engineered to handle the additional traffic. More usage means more trunks,

7   conference circuits, interactive announcements and processors. While line ports are

8   dedicated to a customer, the interoffice message trunks and the switch fabric are shared by

9   all customers. If there are no additional ports, but the usage per port increases, the usage-

10   sensitive portions of the switch must be engineered to accommodate the increased usage.

11   For years, the telecommunications industry has realized that pure peak-usage pricing (i.e.,

12   only charging for usage in the busy hour) is problematic, and thus usage-based costs have

13   been recovered over the entire day. In some cases, time of day pricing (e.g., day, night and

14   weekend rates) has been established to recognize the nature of peak usage. However, Mr.

15   Gose never establishes in his testimony that busy-hour demand is correlated with the number

16   of ports (rated on a flat basis) to the same extent that it is correlated with usage. Common

17   sense would indicate that an average usage charge – while not perfectly reflecting the peak

18   nature of the costs – would be more related to cost causation than a flat port charge. To

19   assess the most cost-causative approach, Mr. Gose should ask if busy hour usage is more

20   correlated to the total amount a customer *uses* its line or to the fact that it purchased a line in

21   the first place.

1   Q.   **DOES MR. GOSE ARGUE THAT THE SWITCH PORT REPRESENTS A LEASE**

2   **OF SWITCH CAPACITY?**

3   A.   Yes. Mr. Gose appears to argue that because in his opinion all of the switch's functionality

4   is available to a port, it doesn't matter how much the port uses those functions. This is not

5   correct if the concept of cost causation is to be applied to setting rates. While it is clear that

6   the switch is engineered to have enough traffic-sensitive equipment so that there is minimal

7   blocking during peak usage, it is clearly wrong to infer that each port has a fixed or

8   committed amount of capacity dedicated to its use, as implied by Mr. Gose.

9   In fact, the traffic-sensitive capacity – the switch fabric, trunks, conference circuits,

10   interactive announcements, and processors, etc. – is shared by many ports. When these

11   resources are being fully used by a group of ports, they are not available to other ports. For

12   example, the switch may be designed, depending on how much usage is anticipated, so that

13   for every 1000 lines, there are 100 call paths. Only 100 calls can be simultaneously in

14   session at any one time. If all 100 paths are being used and the 101st port wants to make a

15   call, it will be blocked. Only when one of the 100 callers hangs up and frees a path can a

16   call be made from one of the other 900 ports. The relevant point is that a line port does not

17   have traffic-sensitive or usage-sensitive equipment dedicated to it. Quite simply, if a line

18   port uses one of these 100 paths more than the other ports in the switch, it has caused more

19   costs. Similarly, if the switch port uses this traffic-sensitive equipment less than other ports,

20   it has caused fewer costs. If there are ports that want to use more traffic-sensitive equipment

1   than is available, more traffic-sensitive equipment must be purchased even though the total

2   number of ports has not increased.

3 Q. **CAN YOU PROVIDE AN EXAMPLE THAT ILLUSTRATES THIS POINT?**

4 A. Yes. One of the most dramatic examples of the usage-sensitive nature of certain switching

5   equipment is the impact that dial-up Internet usage has had on the network over the past five

6   years. Switches were designed with enough trunk ports based on a forecast of what the peak

7   usage would be. The forecasts did not anticipate the explosion of Internet use and,

8   therefore, there were not enough interoffice trunks. ILECs, such as Qwest, were forced to

9   make significant investments in trunk capacity to meet this demand. For example in South

10   Dakota, as provided in response to Staff Set 03, data request #042, Qwest showed forecasted

11   expenditures over the past five years related to trunk ports of $6 million out of a total of

12   approximately $38 million. The $6 million of expenditures related to trunk ports are

13   primarily made up of trunks purchased at the per-trunk price and, therefore, reflects trunks

14   in excess of the 12% assumption for trunks included in the per-line prices in the switch

15   contracts. These increases in investment were the result of usage causing additional costs.

16 Q. **DO QWEST'S SWITCHING CONTRACTS REFLECT THE FACT THAT**

17   **INCREASES IN USAGE INCREASE COSTS?**

18 A. Yes. Mr. Gose states that virtually all major switch vendors are selling their switches on a

19   per line basis, and that therefore the costs are not usage-based. However, Qwest's contracts

20   clearly reflect the fact that there are traffic-sensitive costs. For example, in Qwest vendor

1   contracts the "price per line" is actually different depending on the CCS[13] per line or the

2   CCS per line is restricted to the maximum stated in the contract. The fact that the maximum

3   CCS per line allowed in a particular contract is designed to provide coverage during peak

4   usage, does not make that aspect of the contract any less usage-based. Furthermore, trunks

5   are not included in the per-line rate, or else the number of trunks per 100 lines is limited to

6   12. If more trunks are needed, there is another price that must be paid to purchase additional

7   trunks. In addition, the price per line provides enough conference circuits, interactive

8   announcements and processing capacity to meet a limited feature penetration. If that

9   penetration is exceeded, the cost of adding more capacity is in addition to the per line price.

10   This added cost is based on switch usage, and not on the number of lines. Finally, contract

11   terms are limited. If the usage per line is more than the switch vendor assumed originally,

12   the vendor will increase the price per line or demand a more traffic-sensitive price structure

13   when the contract is renegotiated. The fact that the current contract price per line provides

14   adequate coverage for usage, does not make the underlying driver of cost per line any less

15   usage-based.

16   Q.   ARE ALL VENDOR PRICES FOR SWITCHING CHARGED ON A PER LINE

17   BASIS?

18   A.   No. The simplistic approach of Mr. Gose's testimony ignores the fact that there are some

19   prices that are not charged on a per line basis. For example, as mentioned above, if more

20   than 12 trunks are needed per 100 lines installed initially or if trunks are added after the

_____

[13] CCS stands for 100 call seconds.

1   initial switch installation, these trunks are charged for on a per trunk basis. In Qwest's

2   network, the number of trunks required per 100 lines is close to 20, so 8 additional trunks

3   must be purchased along with each 100 lines initially installed. These additional trunks are

4   necessary strictly as a result of the fact that the usage generated by the installed lines cannot

5   be handled by the trunks included in the initial line price. Since trunks are shared by all

6   lines and are engineered based on usage, Qwest must order trunks based on the number of

7   trunks needed to serve anticipated usage. It is obvious that these costs are usage based.

8   Therefore, if usage increases in the office Qwest will be forced to order more trunks

9   regardless of the number of lines provided for in the switch.

10   In addition, the cost per line for switching equipment may increase if the usage per line

11   reaches a certain point. Mr. Gose notes that for SW1, the charge increases only above a

12   level of CCS that would not likely be achieved. Thus, he argues it is not a binding

13   constraint.[14] However, the fact that there is a usage limit certainly demonstrates that the

14   switch is in fact engineered based on usage.

15   **Q.   ARE THERE OTHER VENDOR CHARGES RELATED TO SWITCHING THAT**

16   **ARE NOT PRICED ON A PER LINE BASIS?**

17   A.   Yes. TR-303 Integrated Digital Line Carrier ("IDLC") remote terminals are connected to

18   the switch with DS1 terminations. The vendor rate structure prices these terminations on a

19   per TR-303 DS1 port basis. However, the number of TR-303 DS1 ports that are required is

---

[14] Gose direct testimony, page 32.

1   a not a function of the number of lines at the IDLC remote terminal, rather it is a function of

2   the amount of usage those IDLC lines generate. This is particularly significant when

3   considered in conjunction with the forward-looking loop models, which assume that nearly

4   half of all lines are served with IDLC and not analog line technology. Clearly, this results in

5   a major switch investment that is driven by usage rather than the number of lines.

6 **Q.** **ON PAGE 33 OF HIS TESTIMONY MR. GOSE PROVIDES A CALCULATION**

7   **THAT SHOWS THAT DOUBLING THE ALLOWED CCS PER LINE FOR SW2**

8   **RESULTS IN ONLY A 6% INCREASE IN COST. IS HIS CALCULATION**

9   **CORRECT?**

10 **A.** No. As my Confidential Exhibit TKM-REB6 demonstrates, Mr. Gose's simplistic testimony

11   is misleading. In order to understand the real-world impact of exceeding the allowable CCS

12   in the contract, and based only on the current contract prices, I have provided an analysis of

13   the increase in cost if the busy hour CCS were to double for both SW1 and SW2. This

14   exhibit shows that if usage doubled (i.e., increased by 100%) for each of the switches the

15   total cost for SW1 and SW2 switches would increase by 37%. For SW2 switches alone, the

16   increase would be 569% based on current contract prices and analog line counts. This

17   exhibit shows that, assuming the mid-study analog line counts for each switch location stay

18   constant but that total usage doubles, the total cost for SW1 and SW2 switches in South

19   Dakota would increase from $12.2 million to $16.8 million. This is because the Average

20   Busy Season Busy Hour (ABSBH CCS) in the SW2 contract for a 4 CCS line is really 3.32

21   ABSBH CCS. Similarly, an 8 CCS line is really limited to 5.74 ABSBH CCS. So lines that

1   exceed 5.74 ABSBH CCS have a contract price of $302 more than the price for lines with

2   less than 3.32 ABSBH CCS. This is significantly more that the $3 price differential that Mr.

3   Gose uses for ALL lines in his analysis. Thus, if usage in a switch with 3 ABSBH CCS per

4   line doubled to 6 ABSBH CCS, the cost per line would increase by $302 as opposed to the

5    $3 increase in Mr. Gose's simple analysis. Mr. Gose's analysis fails to take into account the

6   true impact of doubling usage, which is a 569% increase for SW2 switches and a 37%

7   increase for all switches, rather than his 6% increase in switching costs.

8   Q.   ASSUMING THAT ALL SWITCH PRICES ARE CHARGED ON A PER LINE

9   BASIS WITH NO USAGE CONSTRAINT, DOES THAT MEAN THAT ALL

10   SWITCHING COSTS ARE CAUSED BY THE NUMBER OF LINES?

11   A.   No, and this is a key point. Assume that Vendor A is charging Qwest for all switching

12   equipment on a per line basis. When Vendor A sets this price, the price per line is designed

13   to compensate the vendor for all of the switching equipment it installs, both the costs that are

14   engineered based on lines and the costs that are engineered based on usage. Thus, if the

15   anticipated usage per line increases, the amount of usage sensitive equipment (e.g., trunks,

16   talk paths through the switch fabric, etc.) provided by the vendor will increase. If the vendor

17   wants to be compensated for this increased investment, when the current contract expires the

18   vendor will increase the price per line because the vendor will have to provide more

19   equipment. In the long run, the price per line is driven by the amount of usage; thus, any

20   long run cost analysis like TELRIC must consider this fact in the development of costs.

1   Mr. Gose argues that the current contract price per line does not change below a certain high

2   level of CCS. That is true for the present contract. The vendor has set this price based on

3   the assumed average level of CCS per line and feature use per line that it believes the switch

4   will need to bear. By focusing on only the present contract and the current levels of CCS

5   incorporated in the contract, Mr. Gose provides the Commission with only a short run

6   analysis of switch costs. However, as Mr. Gose points out in his discussion of TELRIC

7   (page 25), TELRIC requires cost studies to be long run, not short run studies. If greater

8   usage increases cost in the long run, that increase must be reflected in a properly constructed

9   study. Even if usage never increases, as long as Qwest must periodically renegotiate switch

10   contracts, and as long as those contracts contain pricing that reflects maximum usage based

11   on CCS, then a long run TELRIC study should take usage into account. In future contracts,

12   while it is conceivable that a vendor would be willing to provide a lower per line price if

13   usage fell below current levels of usage, Qwest would almost certainly have to pay the

14   higher price if usage did not fall and remained unchanged. This reality demonstrates that in

15   the long run, there are costs associated with usage, even when prices are offered by vendors

16   on a per line basis. For the reasons stated above, the Commission should reject the flat rate

17   proposal offered by Mr. Gose.

18 **Q.**   **MR. GOSE ARGUES THAT USAGE-BASED RATES WILL CAUSE CROSS-**

19   **SUBSIDIES. IS HE CORRECT?**

20 **A.**   No. Mr. Gose's argument is based on an assumption that there are no usage-based switching

21   costs and that, therefore, a usage based charge will require high-usage customers to

1   subsidize low-usage customers. In reality, since high-usage customers do cause more costs,

2   it is a flat structure, such as the one proposed by Mr. Gose, which will lead to cross-

3   subsidies. With Mr. Gose's flat charge, the low-usage customers will subsidize the high-

4   usage customers. It is not surprising that Mr. Gose argues for a flat charge because he

5   usually represents CLEC clients who are likely to target their service offerings to high-usage

6   customers and they would be on the receiving end of the subsidy. However, in representing

7   Commission Staff, which in turn represents the interests of all South Dakota consumers, Mr.

8   Gose should not argue for a pricing structure that averages the cost for low-usage residential

9   customers in with high-usage business customers to the benefit of the business customers.

10   Rather, he should argue for a pricing structure (i.e., a lower port charge combined with a

11   usage charge) that keeps the overall costs lower for residential customers, and assigns more

12   costs to the high-usage business customers. This is exactly the argument made by the

13   Arizona Commission's consultant, Mr. Dunkel, in a recent proceeding regarding flat-rated

14   switching in Arizona. At page 5 of his testimony Mr. Dunkel states that "if AT&T and/or

15   MCI are planning to signing up a disproportionate share of high-volume customer (such as

16   telemarketers) then the average usage per line they would generate would be above average,

17   and the usage costs they would be causing would be above average. Under those conditions

18   it would be appropriate for them to support the associated higher than average usage

19   costs."[15] Unlike Mr. Gose, Mr. Dunkel does not regularly represent the interests of CLEC

20   clients in other proceedings and was, thus, able to maintain an objective view on this issue.

[15] Rebuttal testimony of Mr. William Dunkel in Phase IIA of the Arizona Cost Docket, Docket No. T-00000A-00-0194 (May 12, 2003).

1 Q. MR. GOSE TRIES TO USE THE NUMBER OF PASSENGERS IN RENTAL CARS

2 AS AN ANALOGY TO USAGE IN A SWITCH. IS THIS A VALID COMPARISON?

3 A. No, although Mr. Gose's analogy goes directly to my point about subsidies in a flat-rate

4 pricing structure, it misses the point on this issue. Mr. Gose talks about the average price

5 that the rental car company charges for a rental car regardless of the number of passengers

6 that it carries and equates that to switching usage and costs on a per line basis. While the

7 number of passengers carried may not influence the rental price for a particular class of car,

8 over the long run, it can affect the average price the company charges to rent the car. In

9 other words, the rental car company sets its rates to cover, on average, the cost of cars that

10 receive high use (i.e., those with a high amount of wear and tear), as well as cars that receive

11 low use (i.e., those with a low amount of wear and tear). Cars that receive a greater amount

12 of wear and tear must be replaced more quickly and thus cost the rental company more in

13 the long run than cars with a low amount of wear and tear. It is logical to correlate the

14 number of passengers a car carries to the wear and tear it receives.

15 For example, more passengers means more potential for slammed car doors, spilled food,

16 smoking and other circumstances that cause more "usage" of a car and result in lower resale

17 values when the rental company sells its used cars. In the long run, lower resale values do

18 influence the average price the company charges to rent a car and consequently the rental

19 price for a particular class of car. Thus, in the car rental business, renters who do not carry

20 extra passengers and cause less wear and tear, in effect, subsidize those who do carry extra

21 passengers and cause higher wear and tear. This is because the average price to rent a car

1   must cover the increased cost of high usage customers and is higher due to the latter type of

2   customer.

3   In reality, the rental car company does vary its charges on the basis of the number of

4   passengers a car carries by establishing different classes of rental cars. Small compact cars

5   that are designed to carry only a few passengers are much cheaper to rent than larger cars

6   and vans that are designed to carry many passengers.

7   Finally, rental car companies often charge a mileage fee to renters who exceed an amount of

8   mileage that is considered included in the base rental rate. Again, the rental company is

9   structuring its rates to cover the cost of higher usage cars. In this case, it charges the high

10   usage customer directly for greater use by adding on a per-mile charge for excess mileage.

11   The point is that in competitive industries companies do try to limit cross subsidization with

12   economically appropriate rate structures.

13   **C. Implications of Flat Switch Rates**

14 Q.   **WHAT ARE THE IMPLICATIONS FOR QWEST'S OVERALL RATE**

15   **STRUCTURE SHOULD THE COMMISSION ADOPT MR. GOSE'S**

16   **RECOMMENDATION THAT SWITCHING COSTS BE RECOVERED**

17   **EXCLUSIVELY FROM A FLAT PER PORT CHARGE?**

18 A.   If the Commission establishes a flat rated port charge, with no usage component, this will

19   have a significant impact on Qwest's overall wholesale and retail rate structures.

1 **Q.   HOW WOULD THIS IMPACT QWEST'S WHOLESALE RATE STRUCTURE?**

2 A.   Currently, Qwest offers the unbundled switching usage UNE and the call termination (local

3   switching) interconnection service at a usage-based rate. These rates are designed to recover

4   the costs of the usage-sensitive portion of the switch. If the Commission determines that the

5   TELRIC costs for the local switching UNE are 100% line-related, it would mean that no

6   switching costs are usage-sensitive. This would require the reciprocal compensation

7   (interconnection) rate for call termination to be set at $0.00.

8   This would be required for two reasons. First, if the Commission concludes there are no

9   usage-related costs for switching, setting usage based reciprocal compensation

10   (interconnection) rates would violate the costing provisions of the Telecommunications Act.

11   Per the Act, interconnection rates, like UNE rates, must be based on costs. If there is no cost

12   for switch usage, then interconnection call termination rates must be set at $0.00. Second, if

13   all switching costs are recovered in a per-port charge, with no usage rate, any additional

14   recovery through usage-based reciprocal compensation rates would result in double

15   recovery. Either the Commission must recover the traffic sensitive switching costs via a

16   usage-based UNE and call termination rate, or it must recover all traffic-sensitive switching

17   costs on a flat basis. It cannot logically establish a flat UNE switching charge that recovers

18   all switching costs and still retain a usage-based reciprocal compensation rate. Consistency

19   would require the Commission likewise set the same type of rates for CLEC reciprocal

20   compensation. Both CLECs and ILECs must use the same TELRIC for reciprocal

21   compensation, not the mix of market based pricing and TELRIC proposed by Mr. Gose.

1 Q. **WILL THE ESTABLISHMENT OF A FLAT RATED PORT IMPACT RETAIL**

2 **RATES?**

3 A. Yes. Currently, Qwest's retail rate structure recovers a portion of the costs of the usage

4 sensitive portion of the switch via toll and access rates, while the non-traffic sensitive

5 portion is recovered primarily through basic exchange rates and CALC charges. If the

6 Commission establishes a 100% flat-rated port charge to recover all switching costs, it is

7 essentially saying that no switching costs are usage sensitive. This means that usage

8 sensitive toll rates would be out of synch with how the Commission has determined that

9 switching costs are incurred. If the Commission decides to adopt a 100% port-based local

10 switching UNE rate, it must carefully consider the implications on toll, access rates and

11 other usage-based rates. Thus, the implications of a flat rated port are significant in setting

12 both toll and local retail rates. These issues must be considered prior to adopting the flat

13 switching UNE rates proposed by Mr. Gose.

14 Q. **MR. GOSE ARGUES THAT SEVERAL OTHER STATE COMMISSIONS HAVE**

15 **ADOPTED FLAT-RATED SWITCHING RATES. HOW DO YOU RESPOND?**

16 A. While Mr. Gose would have the Commission join the early movers on this issue,[16] at least

17 five other state commissions, including Missouri, New York, Ohio, New Jersey and

18 Pennsylvania have within the last eighteen months considered and rejected flat-rated

[16] Gose direct at 39-43 notes three states in the Ameritech region have adopted a single flat-rate switching charge. Minnesota and Utah are the only Qwest states to do so.

1   switching proposals like the one at issue here.[17] As noted by the Ohio Commission, "as

2   customer usage increases incrementally, switch investments have to be made in the form of

3   CCS jobs," and "as switching usage levels increase, additional equipment is needed in order

4   to handle increased capacity."[18] Thus, a rate structure that accounts for switching costs on a

5   bifurcated basis, allocating some investments to usage and others to a port charge, "is

6   consistent with the way costs are incurred in [the incumbent's] network."[19]

7   In the Pennsylvania case, the ALJ had accepted an argument that switch processor and

8   memory costs are non-traffic sensitive[20] - but even the ALJ did not conclude that all switch

9   costs are non-traffic sensitive. In overturning the ALJ's conclusion on processor costs, the

10   full commission noted that "notwithstanding the extensive capacity of the switch and

11   processor, switch resources are sized prior to deployment based on expected usage levels."[21]

12   AT&T/WorldCom argued that the principal limiting factor in switch sizing and exhaust is

---

[17] Arbitration Order, *Petition of MCImetro Access Transmission Services, LLC, Brooks Fiber Communications of Missouri, Inc., and MCI WorldCom Communications, Inc. for Arbitration of an Interconnection Agreement with Southwestern Bell Telephone Company under the Telecommunications Act of 1996*, Case No. T-2002-222, 2002 Mo. PSC LEXIS 307, at *58 (Mo. P.S.C. Feb. 28, 2002) (declining to adopt a flat-rated switching structure); Order on Unbundled Network Elements Rates, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case No. 98-C-1357, 2002 N.Y. PUC LEXIS 15, at *57 (N.Y.P.S.C. Jan. 28, 2002) (adopting ALJ recommended decision rejecting flat-rated switching rates); Opinion and Order, *Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, and Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic*, Case No. 96-922-TP-UNC, 2001 Ohio PUC LEXIS 719, at *47 (Ohio P.U.C. Oct. 4, 2001) ("*Ohio Switching Order*") (rejecting flat rated switching rates and finding that "usage is a driver of switching costs"); Order, *Re Bell Atlantic-New Jersey, Inc.*, Docket No. TO00060356, 2002 WL 31970306 (N.J.Bd. P.U., September 13, 2002) at *14 (WorldCom sought rehearing of decision to use two-tier rate structure for switching – New Jersey Board rejected petition); Tentative Order, *Generic Investigation Re Verizon Pennsylvania, Inc.'s Unbundled Network Element Rates*, Docket No. R-00016683, 2002 WL 31664693 (Pennsylvania PUC, November 4, 2002) ("*Pennsylvania UNE Order*") at 142-46.

[18] *Ohio Switching Order* at *47.

[19] *Id.*

[20] *Pennsylvania UNE Order* at 143.

1   the number of ports. The commission stated that this "does not transform these costs into

2   non-traffic sensitive costs"[22] and concluded that 55% of switch costs are traffic sensitive,

3   while 45% are non-traffic sensitive.[23]

4   **D. Switch Fill Factors**

5   Q.   **IS IT APPROPRIATE TO USE THE FILL FACTORS ADOPTED BY THE FCC**

6   **FOR ITS SYNTHESIS MODEL IN A TELRIC STUDY?**

7   A.   No. The Synthesis Model ("SM") fill factor cited by Mr. Gose was developed for universal

8   service purposes and does not develop TELRIC data. In fact, the use of a 94% fill factor

9   would be in direct violation of the FCC's TELRIC rules. In its First Interconnection Order,

10   the FCC stated:

11   Per-unit costs shall be derived from total costs using reasonably accurate "fill
12   factors" (estimates of the proportion of a facility that will be "filled" with network
13   usage); that is, the per-unit costs associated with a particular element must be derived
14   by dividing the total cost associated with the element by a *reasonable projection of*
15   *the actual total usage of the element.*[24] (emphasis added)

16   A 94% fill factor certainly does not reflect a "reasonable projection of the actual total usage

17   of the element." Not even the most efficient telephone company could operate its switches

18   at this level.

---

[21] *Id.* at 145.

[22] *Id.* at 146.

[23] *Id.* at 146, 149.

[24] First Interconnection Order, ¶ 682.

1   Further, in its recent order granting Verizon's Section 271 application in Vermont, the FCC

2   specifically rejected AT&T's argument that Verizon's switching rates should be calculated

3   using the 94% fill factor from the *Inputs Order*:

4   AT&T's only evidence to support this claim is that "the Synthesis Model uses a 94%
5   fill factor." This record is insufficient for us to determine whether AT&T is making
6   a valid comparison between Verizon's Vermont fill factors and *the Synthesis Model*
7   *fill factors, which we have indicated should not be used for setting rates.*[25] (emphasis
8   added)

9   In fact, in its order approving Verizon's request for Section 271 approval in Vermont, the

10   FCC *rejected* an AT&T claim that Verizon switching rates based upon fill rates of 72% for

11   IDLC lines and 81% for analog lines were not TELRIC-compliant.[26] Moreover, in a recent

12   cost proceeding in Minnesota, AT&T/WorldCom witness, Douglas Denney, testified that

13   AT&T operates its switches at a fill level of approximately 50%.

14   Finally, in Utah, Mr. Denney acknowledged that in December 2002 the Arizona

15   Commission reversed an ALJ recommendation to adopt a 94% fill rate and substituted 80%

16   in its place.[27] The Arizona Commission stated:

---

[25] Memorandum Opinion and Order , *In the Matter of Application by Verizon New England Inc., Bell Atlantic Communications, Inc., NYNEX Long Distance Company, Verizon Global Networks Inc., and Verizon Select Services Inc., for Authorization to Provide In-Region, InterLATA Services in Vermont*, CC Docket No. 02-7, FCC 02-118, ¶ 36 (rel. April 17, 2002) (emphasis added).

[26] Memorandum Opinion and Order , *In the Matter of Application by Verizon New England Inc., Bell Atlantic Communications, Inc., NYNEX Long Distance Company, Verizon Global Networks Inc., and Verizon Select Services Inc., for Authorization to Provide In-Region, InterLATA Services in Vermont*, CC Docket No. 02-7, FCC 02-118, ¶ 36 (rel. April 17, 2002) (emphasis added).

[27] *In the Matter of the Determination of the Cost of the Unbundled Loop of Qwest Corporation*, Docket No. 01-049-85 (Utah PSC), Tr. 706-07 (Denney), (January 9, 2003).

1   With respect to fill factors, we agree that Qwest's recommendation reflects the actual
2   costs an efficient provider would incur....We agree with Qwest that some degree of
3   spare capacity allows an efficient carrier to meet short-term growth from additional
4   customers....We therefore adopt Qwest's proposed fill factors for purposes of this
5   proceeding.[28]

6   Thus, it is clear that this Commission should reject Mr. Gose's recommendation to use a

7   94% switching fill factor and instead adopt Qwest's proposed 80% fill factor in this

8   proceeding as well.

9   Q.   **ARE THERE OTHER FACTORS THE COMMISSION SHOULD CONSIDER IN**

10   **DETERMINING THE APPROPRIATE SWITCH UTILIZATION FOR QWEST'S**

11   **FACILITIES?**

12 A.   Yes. TELRIC switch utilization (fill) should also account for idle dedicated facilities in

13   addition to administrative spare and growth/modularity spare. Idle dedicated facilities are

14   the most efficient way to operate the network because they minimize the cost of

15   disconnecting and reconnecting service and allow new customers to receive service almost

16   immediately—they are both efficient and customer friendly.

17 Q.   **PLEASE EXPLAIN WHAT IDLE DEDICATED CAPACITY IS.**

18 A.   A large percentage of customers change locations frequently, and, as they move, their

19   previous or prospective locations remain vacant for some period of time. Rental properties

---

[28] Phase IIA Opinion and Order, *In the Matter of the Investigation Into Qwest Corporation's Compliance with certain Wholesale Pricing Requirements for Unbundled Network Elements and Resale Discounts*, Docket No. 00000A-00-0194 (AZ. Corp. Comm'n, December 12, 2002) at 8-9 (citations omitted).

1   in particular often experience periods of vacancy. During the times these locations are

2   vacant it is frequently more efficient to leave the telephone facilities connected to the switch

3   even though they are not generating revenue. These "ready to serve" but non-revenue-

4   generating lines are referred to as "soft dial tone" lines. This practice lowers the percent of

5   working lines (i.e., lines generating revenue) on the switch and thereby decreases the line-

6   based switch utilization. Soft dial tone is a more efficient and cost effective way to operate

7   the network because, assuming the provider remains the same at a given location, it

8   minimizes service rearrangements and technician dispatches, and allows new customers to

9   receive service almost immediately.

10   Q.   IN ADVOCATING A 94% FILL, IS MR. GOSE CONSISTENT WITH THE

11   POSITIONS OF MESSRS. GATES AND MORRISON?

12   A.   No. The fill level proposed by Mr. Gose is inconsistent with Messrs. Gates and Morrison,

13   who assume the existence of idle dedicated facilities for purposes of the loop and

14   nonrecurring charges. It would be inappropriate for the Commission to allow Mr. Morrison

15   to assume a high percentage of soft dial tone for purposes of lowering Qwest's nonrecurring

16   costs and, at the same time, allow Mr. Gose to eliminate those costs from the recurring

17   switch rates by virtue of assuming a fill factor that is too high.

18   Q.   HOW DO YOU KNOW THAT THE 94% FILL ASSUMPTION IS INCONSISTENT

19   WITH AN ASSUMPTION OF IDLE DEDICATED?

1   A.   As discussed above, leaving idle dedicated capacity connected to vacant locations is the

2   efficient way to provide telephone service.   Therefore, a forward-looking, efficient

3   assumption would equate the idle dedicated capacity with the vacancy rate. The vacancy

4   rate in the recent past according to the Housing Vacancy Survey provided on the Census

5   Bureau's website is 10.6% or more in both residences and office buildings; as much as 17%

6   in rural areas. So, in order to recognize idle dedicated spare alone, the fill factor would have

7   to be no more than 89.4% (100% less 10.6%). Acceptance of Mr. Gose's assumption of

8   94% understates the TELRIC costs associated with the efficient practice of maintaining soft

9   dial tone.

10   Q.   **PLEASE EXPLAIN WHY EVEN THE MOST EFFICIENT CARRIER COULD**

11   **NEVER OPERATE ITS SWITCHES AT A 94% FILL LEVEL.**

12   A.   No efficient carrier would ever maintain anywhere near this level of fill in its switches. As

13   demonstrated in the SCM User Manual that Qwest provided with its ICM on December 23,

14   2002, it is necessary to maintain spare capacity in order to provision service in a timely and

15   efficient manner. In addition to the idle dedicated spare discussed previously, it is necessary

16   to maintain at least 5% spare capacity for administrative purposes.   Also, an efficient

17   provider must account for equipment modularity and allow spare capacity for growth.

18   Modular equipment (e.g., IDLC termination equipment) comes in large capacity increments

19   and cannot be installed to comport with a 94% fill. Growth equipment (e.g., line cards)

20   could be installed in very small increments, but it is much more efficient to install this

21   equipment in increments that will last 1.5 to 2 years. Very high engineering and installation

1 costs would be incurred if Qwest were to install line cards in such tiny increments. Thus, it

2 would make no economic sense to keep the switch at 94% fill, which would require Qwest

3 to essentially add one line at a time when demand occurs—resulting in a held order for

4 every line. It is much more cost effective in the long run to add more capacity at a given

5 time to serve growth than to add equipment in very small increments. A 94% fill rate is

6 simply not realistic for an efficient carrier.

7 A 94% fill factor makes no provisions for this requirement to serve new demand and,

8 therefore, effectively assumes that customers can wait six to twelve months for the required

9 switch additions to have their demand met. The actual analog line fill for the state of South

10 Dakota is 78%. While it is reasonable to expect some deviation from this fill rate in a

11 TELRIC study, driving the rate to 94% would result in severe delays in providing service to

12 most new customers. TELRIC does not permit designing a network that would provide an

13 inferior level of service, but that is exactly what Mr. Gose advocates with his assumption of

14 94% switching fill. If Qwest were to actually operate its network at that level on a forward-

15 looking basis, I suspect this Commission would have significant and legitimate concerns

16 about the quality of service that would result – and that it would consider serious regulatory

17 actions, including the possibility of imposing penalties.

18   **VI. CONCLUSION**

19 **Q.   PLEASE SUMMARIZE YOUR TESTIMONY.**

1   A.   The Commission should reject the unsupported assertions of Mr. Morrison to reduce the

2   time estimates and probabilities provided by Qwest's SMEs, and contained in its

3   nonrecurring studies. Mr. Morrison provides nothing but conjecture and speculation without

4   concrete evidence that his proposed adjustments are appropriate. The Commission should

5   also disregard the suggestion of Mr. Stacy that Qwest should be required to perform time

6   and motion studies in support of its time estimates. Time and motion studies only measure

7   the status quo and are therefore not TELRIC compliant. The Commission should recognize

8   that the evidence supports the usage-based nature of switching costs and reject Mr. Gose's

9   proposal for a flat-rated switching charge. The Commission should accept Qwest's $5 rate

10   for the high frequency portion of the line-shared loop based on my direct testimony and the

11   three factors discussed above in this rebuttal testimony.

12   Finally, the Commission should accept the remainder of Qwest's charges for all of its UNE

13   elements and interconnection services. Qwest has a right under the Act to seek recovery of

14   the costs for the UNEs that it is required to provide to the CLECs. Qwest's TELRIC studies

15   properly apply the FCC's TELRIC principles and none of Staff's witness in this proceeding

16   have presented evidence to the contrary. Thus, the Commission should set prices for

17   unbundled network elements based on the TELRIC data as summarized in Exhibit TKM-01

18   submitted with my direct testimony in this proceeding.

19   Q.   **DOES THIS CONCLUDE YOUR TESTIMONY?**

20   A.   Yes, it does.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF DETERMINING PRICES	)	DOCKET NO. TC01-098
FOR UNBUNDLED NETWORK ELEMENTS	)	
(UNEs) IN QWEST CORPORATION'S	)	
STATEMENT OF GENERALLY AVAILABLE	)	
TERMS (SGAT)	)	

EXHIBITS OF

TERESA K. MILLION

QWEST CORPORATION

JULY 28, 2003

INDEX OF EXHIBITS

EXHIBIT	DESCRIPTION
TKM-REB1	NRC Backup Pages
TKM-REB2 (Confidential)	Job Aid Guidelines
TKM-REB3	NRC Comparison
TKM-REB4	Summary of QPF Documentation
TKM-REB5 (Confidential)	Staff DR 01-174, Attachments A, B & C
TKM REB6 (Confidential)	SW1 & SW2 CCS Usage Analysis

EXHIBIT TKM-REB1 TO REBUTTAL TESTIMONY OF
TERESA K. MILLION

NRC BACKUP PAGES

TAB 18 = Interconnect Service Center (ISC)
TAB 19 = Loop Provisioning Service Center (LPC)
TAB 21 = Central Office (CO)

TAB 18

INTERCONNECT SERVICE CENTER

Serves as the primary order provisioning contact for Competitive Local Exchange Carrier (CLEC) customers who purchase unbundled network elements products and services (i.e. Number Portability, Unbundled Loop, Unbundled Lineside Port, Resale) from Qwest.

The center provides end-to-end order coordination from request through order completion and serves as the primary liaison for the customer for all downstream organizations.

TIME ESTIMATES AND PROBABILITIES OF OCCURRENCE

Nonrecurring cost studies are developed to include work activity time estimates and probabilities of occurrence as determined by Subject Matter Experts (SME) that represent a work center or work group identified in the processing and provisioning of a service. The SME is a recognized expert in regard to the processes and has experience with the work activities being estimated and in addition will consult with other subject matter experts that either manage or currently perform the work activities being studied.

Instructions provided to the SME's for the determination of time, estimates and probability of occurrence include the following key assumptions:

- The time estimates and probability of occurrence are forward-looking. If possible, a 12-18 month time horizon should be considered. Anticipated process efficiencies and/or mechanization are examples of forward-looking assumptions the estimates are to include.

- The time estimates are based on an average that does not include problems encountered during the work activities to process the service order. System downtime or times spent resolving internal order flow procedures are examples of time that is excluded.

- The time estimates do not include supplements to the initial order.

- The time estimates do not include any maintenance or repair times.

INTERCONNECT SERVICE CENTER
LOOP SERVICE REQUEST (LSR) PROCESS AND TIME ESTIMATES
REVIEW
MAY – JUNE 2001

SUBJECT MATTER EXPERTS PROVIDING INPUT TO REVIEW
JOANNE GARRAMONE   STAFF MANAGER
LINDA MILES   STAFF MANAGER
SAMI HOOPER   STAFF MANAGER
MARLENE DIMANNA   STAFF MANAGER
MARK EARLY   STAFF MANAGER
CHERYLL GILLIAN   STAFF CONSULTANT – PROCESS
MARK ANDREWS   SERVICE DELIVERY COORDINATOR
MARY ANDERSON   SERVICE DELIVERY COORDINATOR
CRYSTAL SODERLUND   SERVICE DELIVERY COORDINATOR
DANIEL DEFFLEY   COST ANALYST

During May and June 2001 a number of conference calls were held to
conduct a review of the Interconnect Service Center LSR (Loop Service
Request) process and time to issue service orders. The purpose was to
assure consistency with assumptions made when estimating times for
processes that pertain to unbundled element products.

Key assumptions considered include:
• Forward looking process, 12-18 months if possible
• Time estimate based on average that does not include internal order flow
  problem solving, system down
• High skilled experience level of subject matter experts making time
  estimates
• Time estimates should not include supplements to initial order.

IMA flow through was addressed and flow through percentage weightings
has been applied to the product that will have flow through.

DVD
June 2001

Date: June 4, 2001
From: Joann Garramone
Title: Staff Manager-Service Delivery
Interconnect Service Center

UNBUNDLED LOOP
PROCESS, TIME ESTIMATES, PROBABILITIES

INSTALL

Work activity begins:	May include these tasks:	First (minutes)	Ea. Addl (minutes)	Probability of occurrence (%)
Receive LSR	Reviews LSR for completeness and accuracy, contractual entries (analyze request to determine co-provider, type of order and installation option)	3		100
	Verifies CFA or facility/circuit availability	1		5
	Exchange Info-Obtain Central Office, name, address and office type, Access Telephone Address Guide to obtain the central office address	4		100
	CPPD-lookup billing USOC's for co-provider	2		100
	Summary Bill List-Look up BTN#, tax code, and Bill date	2		100
	Analyzes request to determine the co-provider, type of order and installation option.	2.5		100
	Verify Qwest end user Customer Service Record to determine if order issuance is applicable to provide the product. If applicable, may include rejecting the LSR.	N/A		
	Determine if the end user has Qwest directory advertising	N/A		
	Determine if the end user has Qwest retail contract	N/A		
	Determine critical dates	1		100
Issue appropriate forms and/or orders	If there is either directory advertising or a retail contract or both, issue the order to remove the information from the account. An estimate of 50% of the accounts will have these.	3		50
Customer Request Management (CRM)	Populate required fields	3	3	100
Review FOC	Type, review and submit to customer the Firm Order Confirmation (FOC)	3		100
Issue service order	Input unbundled loop order into service order processor (manually typing and formatting of all order for billing and provisioning of the loop)	10	5	100
Service Order Analysis & Control (SOAC/SOP)	Ensure order is successfully distributed to the systems and is ready for provisioning	3	3	100
Call Handling	Includes handling calls from other departments working the order.	5	1	60
Error on Service Order (ESOI)	Handling of problems on the LSR, provisioning issues such as conditioning, facility problems, cable & pair, and typing problems handled by the center.	5	1	8

DISCONNECT

Work activity begins:	May include these tasks:	Time used: (minutes)		
Receive LSR	Reviews LSR for completeness and accuracy, validate circuit belongs to the co-provider	3		100
	Verifies existing account (accesses CSR in BOSS/CARS) and obtains closing bill address if applicable	2		100
Review FOC	Type, review and submit to customer the Firm Order Confirmation (FOC)	2		100
Issue service order	Input disconnect of loop order into the service order processor (manually typing and formatting of all order for billing and provisioning of the loop)	10	5	100

Customer Request Management (CRM)	Populate required fields	3	3	100
Service Order Analysis & Control (SOAC/SOP)	Ensure order is successfully distributed to the systems and is ready for provisioning	3	3	100

The times described in this chart are for all unbundled loops. These times are based on the projected savings with the order creation by IMA and increased experience level in the ISC. IMA does not create a complete order for all types of Unbundled Loop; some manual typing is required.

The Job Title and Job Function/Account Code for the individuals performing these tasks is:
SDC (Service Delivery Consultant) Job function code 6623.123
ISC Work Time for Unbundled Loops

Key Assumptions:
The times documented are forward looking.
The times documented here are average times.
They do not reflect problems encountered during the processing of the service order.
They do not include supplements to the initial order.
These estimates do not include any maintenance or repair time.
This process is as of today and the current functionality if IMA for ordering formatting.
IMA partial order creation. IMA will create a portion of the service order and may vary by Unbundled Loop product.

TAB 19

LOOP PROVISIONING CENTER
(LPC)

Utilizing the Facility Assignment Control System (FACS), ensures customer service order activity is provisioned with outside plant and central office facilities. FACS automatically processes the order with the facilities assignments.

Assignment Consultants are responsible for FACS component exception messages. A Request for Manual Assistance (RMA) is generated when all conditions for a customer service cannot be met. The assignment consultant resolves the RMA and the order is placed back into the system.

TIME ESTIMATES AND PROBABILITIES OF OCCURRENCE

Nonrecurring cost studies are developed to include work activity time estimates and probabilities of occurrence as determined by Subject Matter Experts (SME) that represent a work center or work group identified in the processing and provisioning of a service. The SME is a recognized expert in regard to the processes and has experience with the work activities being estimated and in addition will consult with other subject matter experts that either manage or currently perform the work activities being studied.

Instructions provided to the SME's for the determination of time, estimates and probability of occurrence include the following key assumptions:

- The time estimates and probability of occurrence are forward-looking. If possible, a 12-18 month time horizon should be considered. Anticipated process efficiencies and/or mechanization are examples of forward-looking assumptions the estimates are to include.

- The time estimates are based on an average that does not include problems encountered during the work activities to process the service order. System downtime or times spent resolving internal order flow procedures are examples of time that is excluded.

- The time estimates do not include supplements to the initial order.

- The time estimates do not include any maintenance or repair times.

May 10, 2001

TO: Dan Deffiey

FROM: Jeanette S. Cain
      IT Development-FACS
      (402) 422-8319

RE: Loop Provisioning Center (LPC) Service Order Flow Through Rates and Error Resolution
      Times

The LPC is responsible for ensuring customer service order activity is provisioned with outside
plant and central office facilities in a timely and accurate manner. The Facility Assignment
Control System (FACS) which is comprised of components; Service Order Analysis and Control
(SOAC), Position Analysis Workstation (PAWS), Loop Facilities Assignment and Control (LFACS)
and SWITCH is the provisioning application supported by the LPC. Assignment Consultants are
the employees responsible for FACS component exception messages.

Brief descriptions of the FACS components are;

SOAC - maintains control and status information on all service order requests, as well as the
input image and certain data resulting from processing. This system interfaces with the service
order processor (SOP) and the other service provisioning systems. SOAC generates assignment
requests to LFACS for outside plant and to SWITCH for central office facilities. After assignments
are made. SOAC receives responses from LFACS and SWITCH, merges and formats this data
into a service order assignment section and automatically returns it to the SOP. SOAC sends the
formatted assignments to Work Force Administration/Dispatch Out (WFA/DO). For switched
customer service requests SOAC sends the telephone number, office equipment and features to
MARCH for translation to the physical switch.

PAWS - a software system linked to SOAC to receive messages on service order activity. The
primary function of PAWS is to distribute exception messages to Assignment Consultants for
resolution.

LFACS - maintains a mechanized inventory of outside plant facilities (i.e., customer addresses,
cables, cable pairs, cross box and customer serving terminals, assembled loops and loop
makeup) and assigns the outside plant facilities to assignment requests received from SOAC.
LFACS also generates work sheets for cable transfers and reconcentrations. These activities are
updated mechanically upon notification of completion. In addition, LFACS is used to make repair
changes to working customer service.

SWITCH - used to inventory and assign central office switching equipment and related facilities
i.e., range extension equipment , tie pairs and bridge lifters. Assignment requests are received
from SOAC after successful LFACS assignments are made.

When all conditions for a customer service request cannot be met by the FACS components a
Request for Manual Assistance (RMA) is generated. An RMA indicates service order processing
has been stopped. The RMA identifies the reason the service order cannot be automatically
processed, the FACS component that failed processing and provides an image of the customer
service request.

All RMAs are sent from SOAC to PAWS. PAWS places the RMAs into a 'next work package'
queue. Assignment Consultants using an intelligent work station (IWS) terminal access PAWS to
retrieve RMAs for resolution. Assignment Consultants are trained to resolve all RMA types for all

service requests. Meaning, they can resolve exception messages for POTS, non-designed specials, specials and Wholesale product/services(s) service order activity. The objective for RMA resolution per Assignment Consultant is forty (40) per day.

U S WEST has developed two (2) applications which utilize artificial intelligence to resolve various RMAs. The applications are ARMAR (Automatic RMA Resolution) and APP (Automated Provisioning Platform). ARMAR is used to resolve working left-in RMAs. APP resolves RMAs which are a result of; exact match for address cannot be found, no available/compatible cable facilities, restricted terminals and loop makeup not available . These applications have reduced the number of RMAs sent to Assignment Consultants for resolution. Assignment Consultants will get these RMAs only if the artificial intelligence applications cannot resolve.

FACS flow through objectives have been established for; total customer service requests, special service orders and artificial intelligence (mechanical) applications. The overall flow through objective is based on total service order volume that includes; POTS, non-designed specials, coin, specials, Wholesale product/service(s) and artificial intelligence applications. Individual flow through objectives have been established for Special Services (orders provisioned in TIRKS) and artificial intelligence RMA resolution. No individual flow through objectives have been established for POTS, non-designed specials, coin or Wholesale product/service(s). The flow through and RMA objectives consider all order activity types: inward, outward and change as well as, single and multi-line requests. There is a single objective for Assignment Consultant RMA resolution, this objective does not differentiate between type of customer service requests (inward, outward, change) or number of lines per requests.

The following summarizes the flow through (FT) and Assignment Consultant objectives for 2001:

	2001
Overall FT*	85%
Special Services FT	60%
Mechanical FT	85%
Assignment Consultant	40 RMA's per day
Avg clearing time per RMA**	11.25 min

*POTS flow through is included in this objective, there is no individual objective for POTS.
**Average clearing time per RMA includes all activity types; inward, outward and change as well as single and multi-line requests.
The flow through and Assignment Consultant objectives as well as average clearing time are based on all service order activity types; inward, outward and change. Specific objectives have not been established for inward/change or outward activity

TAB 21

CENTRAL OFFICE

Responsible for service connection in the central office and associated testing and administrative functions. Places cross-connects (jumpers), performs cross-office testing, and provides support to field installation and control center for circuit testing as required.

TIME ESTIMATES AND PROBABILITIES OF OCCURRENCE

Nonrecurring cost studies are developed to include work activity time estimates and probabilities of occurrence as determined by Subject Matter Experts (SME) that represent a work center or work group identified in the processing and provisioning of a service. The SME is a recognized expert in regard to the processes and has experience with the work activities being estimated and in addition will consult with other subject matter experts that either manage or currently perform the work activities being studied.

Instructions provided to the SME's for the determination of time, estimates and probability of occurrence include the following key assumptions:

- The time estimates and probability of occurrence are forward-looking. If possible, a 12-18 month time horizon should be considered. Anticipated process efficiencies and/or mechanization are examples of forward-looking assumptions the estimates are to include.

- The time estimates are based on an average that does not include problems encountered during the work activities to process the service order. System downtime or times spent resolving internal order flow procedures are examples of time that is excluded.

- The time estimates do not include supplements to the initial order.

- The time estimates do not include any maintenance or repair times.

COT TIMES

Steve Hillary STAFF MANAGER
MAY, 2000

Central Office Technician	Basic (Reuse) Installation	Each Additional	Basic with Performance Testing Installation	Each Additional	Coordinated Installation with Cooperative Testing	Each Additional	Coordinated Installation with No Testing	Each Additional	Basic Installation with Cooperative Testing Final	Each Additional
2 WIRE OR 4 WIRE ANALOG LOOP										
2 OR 4 WIRE NON-LOADED LOOP										
BRI ISDN CAPABLE LOOP										
1. Analyze Order										
2. Complete Cross-connect	5 min	5 min	5 min	5 min	5 min	5 min	5 min	5 min	5 min	5 min
3. Complete Loop Qualification	4 min	4 min	4 min	4 min	4 min	4 min	4 min	4 min	4 min	4 min
4. Record DVA Test Results	NA	NA	2 min	2 min	2 min	2 min	2 min	2 min	4 min	4 min
5. Post DVA work complete in WFA-DI	NA	NA	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min
6. Analyze DD WFADI work Request	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min
7. Set up of DD test with I&M tech	NA	NA	2 min	1 min	2 min	1 min	2 min	2 min	2 min	2 min
8. Complete DD work status with CCT	NA	NA	2 min	1 min	2 min	1 min	NA	NA	2 min	1 min
DS1/DS3 CAPABLE LOOP	NA	NA	3 min	1 min	3 min	1 min	NA	NA	2 min	1 min
1. Analyze Order									3 min	1 min
2. Complete Cross-connect	5 min	5 min	5 min	5 min	5 min	5 min	5 min	5 min	5 min	5 min
3. Complete Loop Qualification	4 min	4 min	4 min	4 min	4 min	4 min	4 min	4 min	4 min	4 min
4. Record DVA Test Results	NA	NA	2 min	2 min	2 min	2 min	2 min	4 min	4 min	4 min
5. Post DVA work complete in WFA-DI	NA	NA	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min
9. Perform Continuity Stress testing	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min	2 min
7. Set up of DD test with I&M tech	NA	NA	10 min	10 min	10 min	10 min	2 min	2 min	2 min	2 min
8. Complete DD work status with CCT	NA	NA	2 min	1 min	2 min	1 min	NA	NA	NA	NA
	NA	NA	3 min	1 min	3 min	1 min	NA	NA	NA	NA

Central Office Technician	Disconnect Order	Each Additional
ALL LOOP TYPES		
1. Analyze Order		
2. Remove Cross-connect	5 min	5 min
3. Complete work request in WFA-DI	2.5 min	2.5 min
	2 min	2 min

Steve Hillrary STAFF MANAGER
MAY, 2000

Install

1. **Analyze work request.**
   The COT accesses the WORD/CDOC document.
   The COT determines if assignments/equipment requested by the work order are available
   The COT verifies the Circuit Design is complete.

2. **Complete Cross-Connect.**
   The COT places the cross-connect(s) between the ICDF and the MDF or DSX frames. The type of loop ordered determines the number of cross-connect needed.

3. **Perform Loop Qualification**

   The COT performs a facility test with 77S or comparable test set.

4. **Record Test Results**

   The COT records the facility test results in the WFA-C OSSLOG

5. **Post work request complete in WFA-DI**
   The COT accesses the DITSC screen in WFA-DI to complete the WFA-DI work request.

6. **Analyze Due Date work request & call CCTI**
   The COT analyzes WFADI work request for appointment time and tests then calls the CCT-I to notify they are ready to perform at location.

7. **Set up for Due Date tests with I&M tech. *2**
   COT sets up test equipment for DD tests

8. **Complete work request with CCT-I. *2**
   The COT calls the CCT-I to notify the physical work and testing in the Central Office has been complete.

9. **Complete Continuity Stress Testing**
   Digital pattern testing end to end over facility

   *2 = Orders with coordinated Due Date testing only.

Disconnect

1. **Analyze Order.**
   The COT accesses the WORD/CDOC document.
   The COT determines if assignments/equipment requested by the work order are accurate.
   The COT verifies the Circuit Design notifies CCT-I of order inaccuracy.

2. **Remove Cross-Connects.**

   The COT removes the cross-connect(s) between the ICDF and the MDF or DSX frames. The type of loop ordered determines the number of cross-connect that will be removed.

`. **Complete work request in WFA-DI**
   The COT accesses the DITSC screen in WFA-DI to complete the WFA-DI work request.

ACRONYM	DEFINITION
CCT-I	Customer Communication Technician-Implementor
CDOC	CI Prep Document (Central Office version of the WORD document)
CORAC	Central Office Resource Allocation Center
COT	Central Office Technician
CRON	Automated order load in WFA-DI
CWL	Circuit Work Location (each Central Office location involved on the order)
DD	Due Date Critical Date
DITSC	An Installation or Trouble Work Request screen in WFA-DI
DOSOI	Service Order Installation screen in WFA-DO
DS I&M Technician	Designed Services Installation and Maintenance Technician
DSX	Digital Services Cross-Connect
DVA	Designed, Verified, and Assigned Critical Date
I&M	Installation and Maintenance field forces
ICDF	Interconnector Distributing Frame
LNO	Local Network Operation (typically includes the Central Office and I&M work forces
LRAC	Load Resource Administration Center
MDF	Main Distributing Frame
OCO	Overall Control Office
OSSCN	Circuit Notes screen in WFA-C
OSSCWL	Circuit Work Location screen in WFA-C
OSSLOG	Work Request Log screen in WFA-C
OSSLST	Order List screen in WFA-C
OSSOI	Order Installation screen in WFA-C
OWDDOC	WORD Document screen in WFA-C
SCR	Screener Critical Date
SDC	Service Delivery Coordinator
USW	U S WEST
WFA-C	Work Force Administration-Control Module
WFA-DI	Work Force Administration-Dispatch In Module
WFA-DO	Work Force Administration-Dispatch Out Module
WORD Document	Work Order Record Detail Document

SOUTH DAKOTA

Qwest Corporation
Docket No. TC01-098
Rebuttal Testimony of Teresa K. Million
Exhibit No. TKM-REB3
July 28, 2003

South Dakota Non-Recurring Rates Comparison

South Dakota Non-Recurring Rates Comparison (Loop Installation-First)-SBC

Ln	Rate Element	Source	TX Analog	TX Digital	4-Wire	OK Analog	OK Digital	4-Wire	KS Analog	KS Digital	4-Wire	MO Analog	MO Digital	4-Wire	SD Staff Proposal
	Nonrecurring Rate-First														
1	Analog Loop	Rate Sheet	$ 15.03	$ 15.03	$ 15.03	$ 24.38	$ 60.61	$ 28.13	$ 23.06	$ 15.03	$ 47.60	19.55	43.33	$ 21.58	
	Cross Connect														
2	Cross Connect-Collocation w/o Testing	Rate Sheet	$ 6.91	$ 6.91	$ 29.56	$ 35.15	$ 35.15	$ 43.78	$ 13.69	$ 17.29	$ 20.45	14.97	14.97	$ 25.38	
	Service Order Charges														
3	Manual	Rate Sheet	$ 2.58	$ 2.58	$ 2.58	$ 23.38	$ 95.55	$ 95.55	11.25	11.25	11.25	$ 5.00	$ 5.00	$ 5.00	
4	Mechanized	Rate Sheet	$ 5.00	$ 5.00	$ 5.00	$ 3.33	$ 3.33	$ 3.33	$ 2.35	$ 2.35	$ 2.35	$ 5.00	$ 5.00	$ 5.00	
	Disconnection														
5	Manual	Rate Sheet	$ 1.22	$ 1.22	$ 1.22	$ 11.69	$ 52.41	$ 52.41	11.25	11.25	11.25	$ 5.00	$ 5.00	$ 5.00	
6	Mechanized	Rate Sheet	$ 5.00	$ 5.00	$ 5.00	$ 3.33	$ 3.33	$ 3.33	$ 2.35	$ 2.35	$ 2.35	$ 5.00	$ 5.00	$ 5.00	
	Installations-Including Disconnection														
7	Manual	L1+L2+L3+L5	$ 25.74	$ 25.74	$ 48.39	$ 94.60	$ 243.72	$ 219.87	$ 59.25	$ 54.82	$ 90.55	$ 44.52	$ 68.30	$ 56.96	$ 27.05
8	Mechanized	L1+L2+L4+L6	$ 31.94	$ 31.94	$ 54.59	$ 66.19	$ 102.42	$ 78.57	$ 41.45	$ 37.02	$ 72.75	$ 44.52	$ 68.30	$ 56.96	$ 27.05
9	Percent Manual Orders	Assumption	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
10	Weighted	L7*L9+L8*(1-L9)	$ 31.20	$ 31.20	$ 53.85	$ 69.60	$ 119.38	$ 95.53	$ 43.59	$ 39.16	$ 74.89	$ 44.52	$ 68.30	$ 56.96	$ 27.05
	Coordination and Testing														
11	Cross Connect-Collo w/ Testing	Rate Sheet	$ 4.72	$ 4.72	$ 29.56	$ 30.25	$ 30.25	$ 46.51	$ 17.29	$ 17.29	$ 29.56	$ 26.87	$ 26.87	31.22	
12	Cross Connect-Collo w/o Testing	Rate Sheet	$ 6.91	$ 6.91	$ 29.56	$ 35.15	$ 35.15	$ 43.78	$ 13.69	$ 17.29	$ 20.45	$ 14.97	$ 14.97	25.38	
13	Testing Additive	L.11 - L.12	$ (2.19)	$ (2.19)	$ -	$ (4.90)	$ (4.90)	$ 2.73	$ 3.60	$ -	$ 9.11	$ 11.90	$ 11.90	5.84	
	Time and Materials Charged for Coordination & Testing														
14	Basic Time-per quarter hour	Rate Sheet	$ 21.44	$ 21.44	$ 21.44										
15	Basic Time-per half hour	Rate Sheet / L.14*2	$ 42.88	$ 42.88	$ 42.88	$ 37.11	$ 37.11	$ 37.11	$ 46.76	$ 46.76	$ 46.76	$ 30.93	$ 30.93	30.93	
	Basic Installation with Testing (1.5 Hours)														
16	Manual	L7+L13+L.15*3	$ 152.19	$ 152.19	$ 177.03	$ 201.03	$ 350.15	$ 333.93	$ 203.13	$ 195.10	$ 239.94	$ 149.21	$ 172.99	$ 155.59	$ 70.33
17	Mechanized	L8+L13+L.15*3	$ 158.39	$ 158.39	$ 183.23	$ 172.62	$ 208.85	$ 192.63	$ 185.33	$ 177.30	$ 222.14	$ 149.21	$ 172.99	$ 155.59	$ 70.33
18	Weighted	L16*L9+L17*(1-L9)	$ 157.65	$ 157.65	$ 182.49	$ 176.03	$ 225.81	$ 209.59	$ 187.47	$ 179.44	$ 224.28	$ 149.21	$ 172.99	$ 155.59	$ 70.33
	Total Coordinated Installations (15 Min)														
19	Manual (1)	L7+ L.15*.5	$ 47.18	$ 47.18	$ 69.83	$ 113.16	$ 262.28	$ 238.43	$ 82.63	$ 78.20	$ 113.93	$ 59.99	$ 83.77	$ 72.43	$ 28.35
20	Mechanized (1)	L8+L.15*.5	$ 53.38	$ 53.38	$ 76.03	$ 84.75	$ 120.98	$ 97.13	$ 64.83	$ 60.40	$ 96.13	$ 59.99	$ 83.77	$ 72.43	$ 28.35
21	Weighted	L19*L9+L20*(1-L9)	$ 52.64	$ 52.64	$ 75.29	$ 88.15	$ 137.93	$ 114.08	$ 66.97	$ 62.54	$ 98.27	$ 59.99	$ 83.77	$ 72.43	$ 28.35
	Total Coordinated Cut with Testing (2 Hours)														
22	Manual	L7+L13+L.15*4	$ 195.07	$ 195.07	$ 219.91	$ 238.14	$ 387.26	$ 371.04	$ 249.89	$ 241.86	$ 286.70	$ 180.14	$ 203.92	$ 186.52	$ 89.99
23	Mechanized	L8+L13+L.15*4	$ 201.27	$ 201.27	$ 226.11	$ 209.73	$ 245.96	$ 229.74	$ 232.09	$ 224.06	$ 268.90	$ 180.14	$ 203.92	$ 186.52	$ 89.99
24	Weighted	L22*L9+L23*(1-L9)	$ 200.53	$ 200.53	$ 225.37	$ 213.14	$ 262.92	$ 246.70	$ 234.23	$ 226.20	$ 271.04	$ 180.14	$ 203.92	$ 186.52	$ 89.99

Note 1: Incremental testing charges are applied in one half hour increments for OK, KS and MO

Note 2: It is Qwest's understanding that the time and materials charges apply to coordination activities. If not then the coordinated installation rates would = the basic rates.

Changed since original filing of Thompson Exhibit

Based on Qwest interpretation of the rates in the other RBOCs published SGATs

South Dakota Non-Recurring Rates Comparison (Loop Installation-First)-Verizon

Ln	Rate Element		2 Wire Analog Loop	4 Wire Analog Loop (3)	NY "Hot Cut" (4)	ADSL Compatible (3)	HDSL Compatible (3)	SD Staff Proposal
	Rate Ordered By NY Commission							
	Nonrecurring Rate-First							
1	Provisioning	Rate Sheet	$ 0.13	$ 0.13	See Below	$ 0.13	$ 0.13	
	Cross Connect							
2	Service Connection CO Wiring	Rate Sheet	$ 39.59	$ 40.14	See Below	$ 39.60	$ 39.60	
	Service Order Charges							
3	Manual Intervention	Rate Sheet	$ 26.56	$ 26.56	$ 26.56	$ 29.09	$ 29.09	$ 27.05
4	Mechanized	Rate Sheet	$ 9.01	$ 9.01	$ 9.01	$ 10.94	$ 10.94	$ 27.05
5	Composite Assuming 12% Manual Surcharge	L4+L3*12%	$ 12.20	$ 12.20	$ 12.20	$ 14.43	$ 14.43	$ 30.30
6	**Total Basic Installations**	**L1+L2+L5**	$ **51.92**	$ **52.47**	N/A $	$ **54.16**	$ **54.16**	
7	Disconnect Simple							
8	**Installations-Including Disconnection**	**L6+L7**	$ **51.92**	$ **52.47**	$ -	$ **54.16**	$ **54.16**	$ **30.30**
	Coordination and Testing							
9	Installation Dispatch-Testing	Rate Sheet	$ 114.06	$ 114.06		$ 114.06	$ 114.06	
	Hot Cut Charges-Replace Basic Charge							
10	Provisioning	Rate Sheet			$ 107.09			
11	Service Connection CO Wiring	Rate Sheet			$ 69.44			
12	**Basic Installation with Testing**	**L.8 + L.9**	$ **165.98**	$ **166.53**	$ -	$ **168.22**	$ **168.22**	
	First Loop - manual							$ 70.33
	First Loop - mechanized							$ 70.33
13	**Total Coordinated Installations**	**L5+L10+L11**	Note (5)	Note (5)	$ 188.73	Note (5)	Note (5)	
	First Loop - manual							$ 28.35
	First Loop - mechanized							$ 28.35
14	**Total Coordinated Cut with Testing Order**		Note (5)	Note (5)	Note (1) & (2)	Note (5)	Note (5)	
	First Loop - manual							$ 89.99
	First Loop - mechanized							$ 89.99
15	**Total Coordinated Installations-Compromise (1)**		N/A	N/A	$ 35.00	N/A	N/A	N/A
16	**Total Coordinated Cut w/ Testing Compromise**		N/A	N/A	Note (1) & (2)	N/A	N/A	N/A

Note (1): Verizon agreed to a credit (reduction to $35 for a 2 year period) to the cost-based hot cut rate in their regulatory reform docket Cases 00-C-1945 and 98-C-1357.

Note (2): Based on the declaration of Paul A Lacouture and Virginia P Ruesterholz the function performed for the $35.00 rate are identical to the functions performed for the Coordinated Install without Testing rate of $59.81 for Qwest.

Note (3): The hot cut rate does not apply to new loop installations

Note (4): The hot cut rate only applies to the transfer of POTS services that are currently up and running (i.e. "hot").

Note (5): Qwest could not identify a separate charge for coordination. Rate appears to be the same as a basic installation with and without testing.

Based on Qwest interpretation of the rates in the other RBOCs published tariffs or SGATs

[ ] Corrected since original filing.

South Dakota Non-Recurring Rates Comparison (Loop Installation-First)-Verizon

Ln	Rate Element		New Jersey			Pennsylvania		SD Staff
	Rate Ordered By NY Commission		2 Wire Analog Loop	"Hot Cut" (3)	xDSL Compatible	2 Wire Analog Loop	xDSL Compatible	Proposal
	Nonrecurring Rate-First							
1	Installation without Premise Visit CCS Design per Order	Rate Sheet	$ 23.15		$ 44.02	$ 3.01	$ 3.01	
	Service Order Charges							
2	Manual Intervention	Rate Sheet	$ 15.02	$ 15.02	$ 15.53			
3	Mechanized	Rate Sheet	$ 2.31	$ 2.31	$ 9.36	$ 1.06	$ 1.06	
4	Composite Assuming 12% Manual	L3 +L2*12%	$ 4.11	$ 4.11	$ 11.22	$ 1.06	$ 1.06	
5	Access to Operational Support Systems	Rate Sheet				$ 3.35	$ 3.35	
6	**Total Basic Installations-No Premise Visit**	L1+L4+L5	$ 27.26	N/A	$ 55.24	$ 7.42	$ 7.42	
7	Disconnect Simple	Rate Sheet				$ 1.34	$ 1.34	
8	**Basic Installations with Disconnection-No Premise Visit**	L6+L7	$ 27.26	$ -	$ 55.24	$ 8.76	$ 8.76	
	First Loop - manual							$ 27.05
	First Loop - mechanized							$ 27.05
9	Premise Visit	Rate Sheet	$ 73.36	$ 73.36	$ 73.36	$ 67.66	$ 67.66	
10	**Basic Installations with Premise Visit**	L8+L9	$ 100.62		$ 128.60	$ 76.42	$ 76.42	
	First Loop - manual							$ 27.05
	First Loop - mechanized							$ 27.05
	Coordination and Testing							
11	Cooperative Testing-CO	Rate Sheet	$ 1.60			Note (4)	$ 31.72	
12	Cooperative Testing-Premise	Rate Sheet	$ 30.12			Note (4)	$ 31.72	
13	Coordinated Cutover - No Premise Visi						$ 3.28	
14	Coordinated Cutover - Premise Visi						$ 12.25	
	Hot Cut Charges-Replace Basic Charge							
15	Installation	Rate Sheet		$ 157.45				
16	**Basic Installation with Testing**	L.8 + L.11	$ 28.86		$ 55.24		$ 40.48	
	First Loop - manual							$ 70.33
	First Loop - mechanized							$ 70.33
17	**Basic Installation with Testing-Customer Premise**	L.10 + L.12	$ 130.74		$ 128.60		$ 108.14	
	First Loop - manual							$ 70.33
	First Loop - mechanized							$ 70.33
18	**Coordinated Installations-NJ**	L15+L4		$ 161.56				
19	**Coordinated Installations-No Premise Visit-PA**	L13 + L8	Note (5)		Note (5)	Note (5)	$ 12.04	
	First Loop - manual							$ 28.35
	First Loop - mechanized							$ 28.35
20	**Coordinated Installations-Premise Visit-PA**	L10+L14					$ 88.67	
	First Loop - manual							$ 28.35
	First Loop - mechanized							$ 28.35
21	**Total Coordinated Cut with Testing-No Premise Visit**	L11 +L19	Note (5)	Note (2)	Note (5)	Note (5)	$ 43.76	
	First Loop - manual							$ 89.99
	First Loop - mechanized							$ 89.99
22	**Total Coordinated Cut with Testing-Premise Visit**	L14 +L12 +L10					$ 120.39	
	First Loop - manual							$ 89.99
	First Loop - mechanized							$ 89.99
23	Voluntary Reduction-Note (1) & (2)			$35.00				
24	Total Coordinated Cut w/ Testing Compromise			Note (1) & (2)				

Note (1): Verizon agreed to a credit (reduction to $35 for a 2 year period) to the cost-based hot cut rate in their regulatory reform docket Cases 00-C-1945 and 98-C-1357.

Note (2): Based on the declaration of Paul A Lacouture and Virginia P Ruesterholz the function performed for the $35.00 rate are identical to the functions performed for the Coordinated Install without Testing rate of $59.81 for Qwest.

Note (3): The hot cut rate does not apply to new loop Installations

Note (4): There is no Cooperative testing option under the Analog 2-Wire loop portion of the rate sheet

Note (5): Qwest could not identify a separate charge for coordination

Based on Qwest interpretation of the rates in the other RBOCs published SGAT:

Corrected since original filing

South Dakota Non-Recurring Rates Comparison (Loop Installation-First)-BLS

Ln	Rate Element		Louisiana						Georgia						SD Staff
			SL1	Analog SL2	4-Wire	ISDN	ADSL	HDSL	SL1	Analog SL2	4-Wire	ISDN	ADSL	HDSL	Proposal
	Sevice Order Charge														
1	Mechanized-OSS		$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 3.50	$ 27.05
2	Manual		$ 15.20	$ 15.20	$ 15.20	$ 15.20	$ 15.20	$ 15.20	$ 18.94	$ 18.94	$ 18.94	$ 18.94	$ 18.94	$ 18.94	$ 27.05
3	Percent Manual-Qwest Studies		12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%
4	Composite Service Order Charge	L2*L3+L1*(1-L3)	$ 4.90	$ 4.90	$ 4.90	$ 4.90	$ 4.90	$ 4.90	$ 5.35	$ 5.35	$ 5.35	$ 5.35	$ 5.35	$ 5.35	$ 27.05
	Nonrecurring Rate-First														
5	Loop		$ 36.54	$ 102.10	$ 127.40	$ 113.34	$ 117.08	$ 125.50	$ 42.54	$ 104.17	$ 206.95	$ 233.38	$ 44.69	$ 44.69	
6	**Total Basic Installations incld Disconnect**	L5+L4	$ 41.44	$ 107.00	$ 132.30	$ 118.24	$ 121.98	$ 130.40	$ 47.89	$ 109.52	$ 212.30	$ 238.73	$ 50.04	$ 50.04	$ 27.05
	Coordination Charge														
8	Coordination Charge-Specific Time		$ 17.56	$ 17.56	$ 17.56	$ 17.56	$ 17.56	$ 17.56	$ 35.74	$ 35.74	$ 35.74	$ 35.74	$ 35.74	$ 35.74	
	Time and Materials Charged for Coordination & Testing														
9	Basic Time-First Half Hour		$ 33.17						$ 78.92						
10	Basic Time-Each Additional Half Hour		$ 19.28						$ 23.33						
11	**Basic Installation with Testing (1.5 Hours)**	L6+L9+L10*2	$ 113.17	Note (1)	Note (1)	Note (1)	Note (1)	Note (1)	$ 173.47	Note (1)	Note (1)	Note (1)	Note (1)	Note (1)	
	First Loop - manual														$ 70.33
	First Loop - mechanized														$ 70.33
12	**Total Coordinated Installations**	L6+L8	$ 59.00	$ 124.56	$ 149.86	$ 135.80	$ 139.54	$ 147.96	$ 83.63	$ 145.26	$ 248.04	$ 274.47	$ 85.78	$ 85.78	
	First Loop - manual														$ 28.35
	First Loop - mechanized														$ 28.35
13	**Total Coordinated Cut with Testing (1.5 Hrs)**	L12+L9+L10*2	$ 130.73	Note (1)	Note (1)	Note (1)	Note (1)	Note (1)	$ 209.21	Note (1)	Note (1)	Note (1)	Note (1)	Note (1)	
	First Loop - manual														$ 89.99
	First Loop - mechanized														$ 89.99

Note (1): It appears that central office testing is included in the standard rates. Testing that requires dispatch to customer premises results in additional charges.

Based on Qwest interpretation of the rates in the other RBOCs published SGATs

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF DETERMINING PRICES FOR UNBUNDLED NETWORK ELEMENTS (UNEs) IN QWEST CORPORATION'S STATEMENT OF GENERALLY AVAILABLE TERMS (SGAT)	TC 01-098 **Qwest's Request for Confidential Treatment of Information**

1.   Pursuant to ARSD 20:10:01:41, Qwest Corporation ("Qwest") requests

confidential treatment for the following documents filed in connection with Qwest's

rebuttal testimony in this docket:

- Confidential Exhibit 2 to the rebuttal testimony of Teresa K. Million – Tasks

   That Must be Performed by a Service Technician During an Analog

   Unbundled Loop Installation

- Confidential Exhibit 4 to the rebuttal testimony of Teresa K. Million –

   Summary of Quote Preparation Fee Documentation Provided with June

   28, 2002 Revised Filing

- Confidential Exhibit 5 to the rebuttal testimony of Teresa K. Million,

   including Attachments A, B, and C – response to Staff Data Request 1-

   174.

- Confidential Exhibit 6 to the rebuttal testimony of Teresa K. Million – SW1

   & SW2 Usage Analysis

The pages are marked as confidential and are provided in a sealed envelope.

2.   The exhibits must be protected for the life of this docket. When this docket is closed, all protected information must be returned to Qwest.
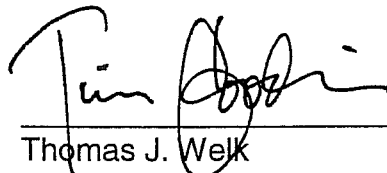
3.   The person to be notified is Colleen Sevold, Qwest Corporation, 125 S Dakota Avenue, 8th Floor, Sioux Falls, South Dakota 57194, telephone (605) 335-4596.

4.   The claim for protection is based on ARSD 20:10:01:39(4) and SDCL 37-29-1(4).

5.   The exhibits contain confidential financial and business information of Qwest. Disclosure of this information would provide actual and competitors with information that would provide them with a unique and unfair competitive advantage.

Accordingly, Qwest respectfully requests that the Commission grant this request for confidential protection.

Dated this 25th day of July, 2003.

_____
Thomas J. Welk
BOYCE, GREENFIELD, PASHBY & WELK, L.L.P.
P.O. Box 5015
Sioux Falls, SD 57117-5015
Telephone: (605) 336-2424

Tim Goodwin, Senior Attorney
QWEST CORPORATION
1801 California Street 47th floor
Denver, CO 80202

ATTORNEYS FOR QWEST CORPORATION

CONFIDENTIAL
[1]