BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale	)	**Docket No. UT -960369**
In the Matter of the Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale for U S WEST Communications, Inc. - Phase II	)	**Docket No. UT-960370**
In the Matter of the Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale for GTE Northwest Incorporated	)	**Docket No. UT-960371**

TESTIMONY OF

BARBARA J. BROHL

ON BEHALF OF U S WEST

JANUARY 31, 2000

EXECUTIVE SUMMARY

The purpose of this testimony and associated exhibits is to provide a detailed explanation of the projects undertaken by U S WEST to provide Competitive Local Exchange Carriers (CLEC) with access to U S WEST's Operational Support Systems (OSS) as ordered by this Commission on October 30, 1999.[1] This testimony discusses:

What OSS are and the types of systems and associated systems development projects that U S WEST has undertaken to provide OSS access to CLECs,

The types of costs associated with these systems development efforts,

The difference between startup and on-going maintenance costs,

And in the attached exhibits, detailed descriptions of each systems development project for which U S WEST seeks cost recovery, and why these projects are eligible for cost recovery.

The exhibits attached to this testimony provide task level detail for each OSS project included as line items in the cost studies filed by Teresa K. Million.

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[1] *See In the Matter of Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale,* WUTC Docket No. UT-960369, and *In the Matter of Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale for U S WEST,* WUTC Docket No. UT-960370, and *In the Matter of Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale for GTE Northwest Incorporated,* WUTC Docket No. UT-960371 ¶ 109 (rel. Oct. 30, 1999), (17th *Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference*).

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I. IDENTIFICATION OF WITNESS

PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

My name is Barbara J. Brohl. My business address is 1999 Broadway, 10th Floor, Denver, Colorado 80202.

BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

I am employed by U S WEST Communications, Inc. (U S WEST) as a Director in the Information Technologies Wholesale Systems Regulatory Support Group.

PLEASE DESCRIBE YOUR WORK EXPERIENCE AND EDUCATION.

Currently, my responsibilities include identifying and managing regulatory issues involving U S WEST's operational support systems (OSS) as a result of the Telecommunications Act of 1996, FCC orders, state commission decisions, and other legal and regulatory matters. Prior to my current assignment, I was involved in application development projects for 15 years in a variety of roles: programming and systems development, systems architecture, and project management. Each role is an essential step in traditional software development life cycle. In addition, I managed the Information Technologies department's compliance with the restrictions of the Modification of Final Judgment and the requirements of Open Network Architecture. During that time, I became certified by the Institute for Certification of Computing Professionals (ICCP) as a Certified Computing Professional (CCP), and then received a Bachelor of Science Degree in Business / Computer Science from Regis University in 1991. In 1995, I received a Juris Doctorate Degree from the University of Denver, School of Law. I then left U S WEST for approximately two years to work as a judicial law clerk for the Colorado Supreme Court. Since my return to U S WEST, I have worked in the Wholesale Systems Regulatory Support group in the Information Technologies organization.

II. INTRODUCTION

WHAT IS THE PURPOSE OF YOUR TESTIMONY?

The purpose of my testimony is to provide the information requested by the Washington Utility and Transportation Commission (The Commission) in its 17th Supplemental Order issued on October 30, 1999. The Commission requested greater detail regarding the costs of the projects undertaken by U S WEST to provide access to its Operational Support Systems (OSS) to Competitive Local Exchange Carriers

(CLECs) as required by the FCC in its First Report and Order[2] under the mandate of the Telecommunications Act of 1996.[3] While this Commission found that U S WEST was entitled to recover the cost of providing OSS access[4], it did so on an interim basis. As the Commission requested, I will provide greater detail regarding the estimating and tracking of U S WEST's OSS projects.[5] This will establish the validity of the costs that U S WEST has and will incur to provide required OSS access to the CLECs.

III. OPERATIONAL SUPPORT SYSTEMS BACKGROUND

WHAT ARE OPERATIONAL SUPPORT SYSTEMS?

U S WEST uses a variety of computer systems to support the operations of its telecommunications business. An operational support system is a computer system that does not directly provide telecommunications service to customers, but supports employees performing "operational" duties, such as issuing service orders, testing trunks and maintaining switching systems. These operational support systems are specialized; each performs different functions. Certain operational support systems allow for the ordering of products and services for customers, and others record and process trouble tickets. There are many other operational support systems that provide a wide variety of other functions.

WHAT ARE THE REQUIREMENTS OF THE FCC REGARDING OPERATIONAL SUPPORT SYSTEMS AND ELECTRONIC INTERFACES?

In its First Report and Order[6], the FCC required U S WEST to unbundle its operational support systems and provide electronic interfaces to support pre-ordering, ordering and provisioning, maintenance and repair, and billing for resold products and unbundled elements. It was also necessary for U S WEST to provide support for collocation in order to process requests for collocation and for billing of that function.

In order to meet the FCC's requirements, U S WEST had to change its operational support systems to support:

a multi-vendor environment, and

the introduction of unbundled elements, resale products and collocation functions, which essentially are new products and services.

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[2] *See In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, and In the Matter of Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, CC Docket No. 95-185, ¶ 516 (rel. Aug. 8, 1996), (*FCC First Report and Order*).

[3] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, *codified at* 47 U.S.C. §§ 151 *et seq*. (*Telecom Act*), §251.

[4] 17th *Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference,* ¶ 100.

[5] 17th *Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference,* ¶ 90.

[6] *FCC First Report and Order*. ¶ 516.

These changes have caused U S WEST to incur extraordinary costs. I will describe the necessary changes in the existing systems and then discuss electronic interfaces and their associated costs.

WAS WORK NECESSARY ON EXISTING OPERATIONAL SUPPORT SYSTEMS TO COMPLY WITH THE FCC REQUIREMENTS?

Yes. Certain operational support systems (OSS) had to be modified to add data about CLECs and to add the functionality necessary to handle that data. For example, U S WEST's service order processors (SOPs), which are OSS, were designed to handle U S WEST service orders. Now, service orders must be properly associated with a reseller. This requires a unique code. The SOPs had to be modified to handle this new data element. Another example is the creation of new universal service order codes (USOCs) and field identifiers (FIDs) to support resale products and their placement into the service order processing and billing production environments. USOCs and FIDs are codes that are put on service orders in order to allow systems to provision and bill for products and services.

WHAT HAS U S WEST DONE TO DATE IN ORDER TO MEET THE REQUIREMENTS ESTABLISHED BY THE FCC?

As discussed in prior testimony, U S WEST has made and will continue to make modifications in the following categories:

Unbundling - Unbundling allows a CLEC to obtain facilities from U S WEST at an unbundled rate. Unbundled network elements include the unbundled loop, local switching, transport elements and line ports. Capacity in various OSS had to be expanded to handle the additional data that identifies the unbundled elements and their features and to allow for their ordering, provisioning, repair and billing. Additionally, various tasks were completed on many systems. Such tasks include changes to systems such as, RSOLAR/SOLAR/SOPAD and SONAR[7] (to accommodate additional Universal Service Order Codes (USOCs) and Master Customer Numbers, and associated edits), and adding the ability to test unbundled loops in the Mechanized Loop Test (MLT) system. See Confidential Exhibit BJB-02 for further detailed descriptions of the projects initiated to support unbundling for CLECs.

Rebundling - Rebundling occurs when a CLEC wants to provide service to a customer and employs unbundled elements. In this case, the rebundling of unbundled elements gives service to that customer. Unbundled rates continue to apply. In the unbundling project scheduled for 1999, capacity will be increased on the same systems as mentioned in the resale and unbundling categories. Capacity will be expanded to handle the additional data that identifies unbundled elements and their features requiring rebundling. Examples of

[7] RSOLAR (Regional Service Order Logistics and Reference), SOLAR (Service Order Logistics and Reference), SOPAD (Service Order Processor and Distribution), SONAR (Service Order Negotiation and Retrieval).

systems to be changed include Customer Account Retrieval Systems (CARS) (programming changes to allow for the production of reports on outside plant troubles for unbundled elements), DELIVER (adding alternate provider information on pertinent screens) and Mechanized Installation History Reporting (MIHR) (marking missed installation credit data with reseller identifiers so that proper treatment can occur in Customer Records Information System (CRIS)). See Confidential Exhibit BJB-03 for detailed descriptions of the projects created to support rebundling for CLECs.

Local Interconnect Services (LIS) - LIS trunks are the interoffice facilities supporting interconnection traffic. Capacity was increased for TIRKS (trunk inventory) and WFA (circuit installation management and repair). For example, additional capacity was needed to support new data identifying traffic by a CLEC. An example of an additional task was updating the routing tables in the repair systems so that those systems would recognize the unique codes identifying each CLEC. Please see Confidential Exhibit BJB-04 for detailed descriptions of projects initiated to support LIS for CLECs.

Collocation - Collocation permits a CLEC's equipment to reside in leased space within a U S WEST central office. Specific examples of systems work include modifying the billing systems and the service order processors to mechanize the billing for collocation. Please refer to Confidential Exhibit BJB-05 for detailed information regarding projects initiated to create the system changes necessary to support collocation.

Systems Access - This term is used to describe the work and functions involved in creating and enhancing the human-to-computer and computer-to-computer interfaces. These interfaces allow a CLEC to access U S WEST's OSS to perform pre-ordering, ordering, provisioning, maintenance and repair, and billing functions. All of the software development tasks required to make these changes were included in these projects. Examples include defining functional requirements, producing design specifications, coding modules, developing and executing test scripts, planning and building interface releases, and moving application code into production environments. See Confidential Exhibit BJB-06 for further details regarding the projects initiated to create systems access for CLECs.

Cross Product Projects - Some projects involved efforts that applied to all products offered by U S WEST to the CLECs. These projects have been classified as cross program projects. One example is the expansion of U S WEST mainframe capacity to handle the increased data and access by CLEC representatives. See Confidential Exhibit BJB-07 for detailed descriptions of cross product projects.

Resale – Costs associated with projects for resale have been removed from the start-up cost charge calculated in the cost study submitted by Teresa K. Million. However, because these projects are listed in the detail of our cost study, and they have been included in our prior filings, they are included here for descriptive purposes only. Resale allows a CLEC to serve a customer with a finished service at a resale rate. The capacity or the ability to process work volumes, of many existing systems has been increased to account for the increased activity level and the need for additional storage of data. Such systems include CRIS (billing), BOSS/CARS (customer service records), RSOLAR/SOLAR/SOPAD (service order processors), FACS (facilities availability), TIRKS (trunk inventory), LMOS/WFA (repair). In addition, there are other tasks that must be performed on systems. For example, in 1998 the Listing Services System (LSS) had to be modified to provide recording and billing of CLEC ordered wholesale listings. Another example

would be that the Service Order Negotiating and Retrieval system (SONAR) and the service order processors, RSOLAR/SOLAR/SOPAD, had to be changed to add reseller IDs and associated resale edits. See Confidential Exhibit BJB-08 for more detailed information regarding the status of projects initiated to provide resale support for CLECs.

Please refer to Confidential Exhibits BJB-02 through BJB-08 for detailed discussions of all OSS Projects. All of these exhibits now include Project Numbers so that the data in this testimony can more readily be cross-referenced with the cost studies filed by Teresa K. Million. The purpose of all of these exhibits is to provide a detailed illustration of the work that U S WEST has performed to comply with the mandates of the FCC and this commission.[8]

DO THE CLECS BENEFIT FROM THE ENHANCEMENTS TO OSS YOU HAVE DESCRIBED?

Yes. The modifications to OSS were made to better enable CLECs to interconnect and resell U S WEST's telecommunications services. For example, the new USOCs and FIDs U S WEST has created for the order entry, provisioning and billing systems enable CLECs to bill these products to their customers at a price of the CLECs' choice. Also, new reporting functionality had to be created so that U S WEST can provide daily reports showing the customers that each CLEC has lost. This allows CLECs to determine their loss rate and perhaps fine-tune marketing campaigns and revise business processes. The report also tells the CLEC to stop billing the end-user customer. Another example of a modification for the CLECs' benefit involves expanding the capacity of certain operational support systems. In order to handle the increased traffic caused by CLEC transactions, the capacity of many systems had to be increased. This action allows for the processing of CLEC transactions, which facilitate their business functions.

DOES U S WEST BENEFIT FROM THESE ENHANCEMENTS?

No. U S WEST has been servicing its customers without the enhanced functionality described earlier. The modifications do not add any efficiencies or cost savings to U S WEST's business. On the contrary, the additional functionality and the additional data and systems infrastructure make increased demands on U S WEST's resources and require U S WEST to operate and maintain this more complex systems environment.

COSTS

WHAT OSS COSTS DOES U S WEST SEEK TO RECOVER IN THIS PROCEEDING?

U S WEST is requesting that (1) start-up costs related to the development of the human-to-computer and computer-to-computer interfaces, and (2) modifications of existing

[8] 17th *Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference,* ¶ 109.

operational support systems costs be recovered. Additionally, U S WEST seeks reimbursement of the ongoing maintenance and operations costs of the human-to-computer and computer-to-computer interfaces.

CAN U S WEST VALIDATE THE COSTS INCURRED TO DATE?

Yes. U S WEST Information Technologies currently tracks all of its costs by project. Projects were established at the beginning of 1996 that are associated with the various product types - resale, unbundled loop, LIS, etc. Confidential Exhibits BJB-02 through BJB-08 describe each project in detail by project category. Included in each project narrative are the project description and purpose as well as all major sub-tasks accomplished within the project. If the project spanned multiple years, the tasks are reported according to the year in which they were accomplished or are planned. This detail correlates with the project lists provided previously by Dean Buhler for this docket.

HOW DOES U S WEST ESTIMATE THE COST OF A PROJECT?

When a business need is identified, appropriate business experts collect the requirements from the individuals making the request to meet the need. This is known as an idea assessment. After the requestor has approved the idea assessment it is passed on to a systems analyst or team of systems analysts who create a document known as a work request. This document outlines the technical requirements and defines the overall technical solution necessary to meet the requirements. It is from this information that a project manager can make an estimate of the cost of the project. This estimate includes estimated labor hours, expenses and capital required for the project. The labor hours can be estimated based on experience with similar tasks, and is based on knowledge of the systems to be created or changed to meet the business need.

HOW DOES U S WEST TRACK THE ACTUAL COST OF A PROJECT?

Once a project is initiated, it is assigned a project code, and is entered into the Business Management System (BMS), along with projected expenses. All expenses related to this project will then be fed into BMS. All persons who work on the project enter their time into a time reporting system known as EZWARP. They enter their time by project code. This information is then transmitted from EZWARP into BMS through a monthly batch process. All expenditures including capital and equipment purchases are assigned by project code as well, and this too is entered into BMS. In this way, it is possible to keep track of actual costs for all activities by project, and to track actual performance against budgeted.

Q. CAN YOU GIVE AN EXAMPLE OF COSTS INCURRED FOR A SPECIFIC PROJECT AND HOW THOSE COSTS WERE TRACKED?

Yes. In 1998, project number 14692ZZ was established in order to provide flow-through for orders. This project was categorized as a system access project, because it involved

processing of orders from any source through to the downstream OSS electronically. A detailed description of this project can be found in Confidential Exhibit BJB-06. All direct, labor, and capital expenses were recorded in BMS, which is the ultimate source of the inputs to the cost study prepared by Teresa K. Million. In BMS this project was entitled 'IMA Order Flow-Through.' For this project, IMA referred to the gateway as a whole, not just to the GUI interface or the EDI. The work done here involved efforts to make sure that no matter how LSRs were entered, they would make their way electronically to the downstream OSS for action. Based on the ultimate purpose of the project, its costs were allocated as shared.

All time spent by programmers on this project was entered into the EZWARP time-keeping tool, using codes to identify the work as belonging to this project. These hours were then sent to BMS on a monthly basis. All direct and capital expenses were also tied to codes linked to this project and entered into BMS. The programmers' hours are then multiplied by an unloaded rate to arrive at the inputs provided for this project in the cost study. Because work on this project remained at the end of the year, the same project number was entered into BMS in 1999. It is reflected as a line item in the projected costs for 1999 OSS development.

HOW DOES U S WEST PROPOSE TO RECOVER THE START-UP COSTS?

U S WEST proposes a per service order charge for the recovery of start-up costs.

HOW DOES U S WEST PROPOSE TO RECOVER THE COSTS INCURRED FOR MAINTENANCE AND OPERATIONS ACTIVITIES?

U S WEST is proposing to establish a per service order charge for recovery of on-going maintenance and operations of the human-to-computer and computer-to-computer interfaces.

WHY DOES U S WEST PROPOSE PER SERVICE ORDER CHARGES RATHER THAN PER LOCAL SERVICE REQUEST (LSR) CHARGES?

U S WEST decided to recover start-up and ongoing maintenance and operations costs on a per service order basis because service order volumes are predictable, have been tracked for decades, have systems and processes in place for reporting purposes, and are predictable from line loss forecasts.

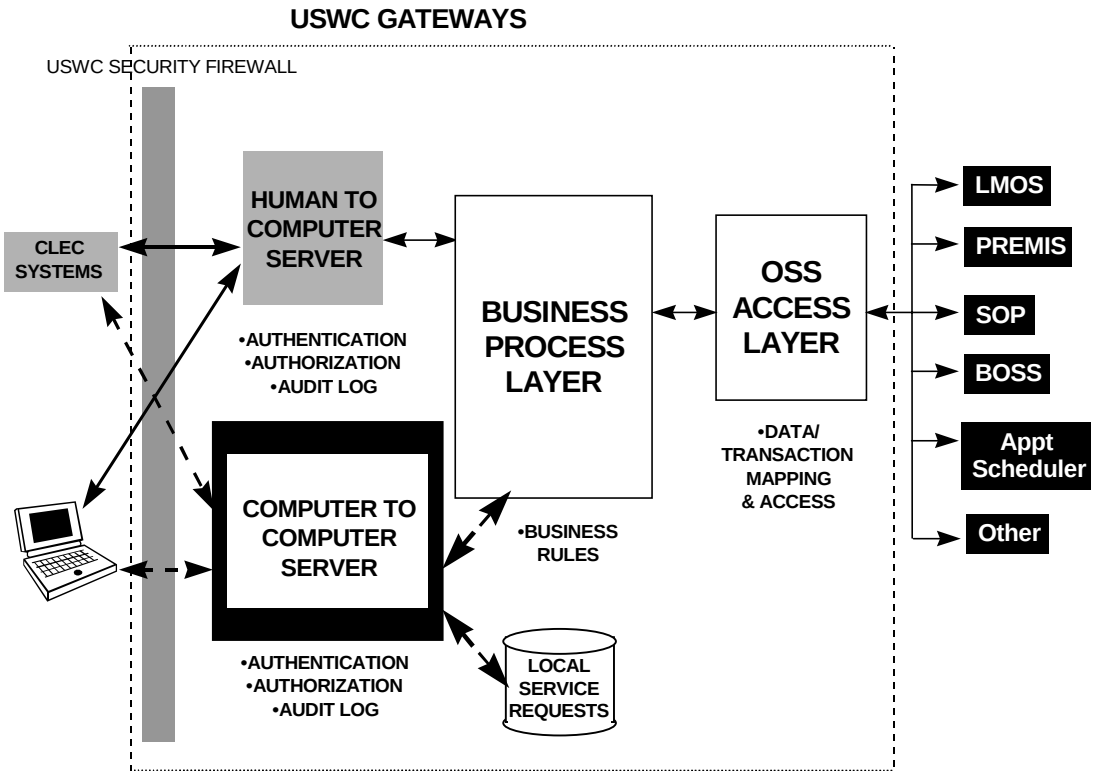
Q. CAN ALL OF THE OSS-RELATED START-UP COSTS BE SEPARATED BETWEEN THE IMA GUI AND THE IMA EDI ELECTRONIC INTERFACES?

No. There are OSS-related costs that can be attributed solely to the development of the IMA GUI electronic interface, as well as OSS-related costs that can be attributed solely to the development of the IMA EDI electronic interface. However, as shown in the following diagram, USWC MEDIATED ACCESS ARCHITECTURE, once the pre-

order, order, or repair request passes through either the human-to-computer server or the computer-to-computer server, the rest of the gateway structure is shared. In other words, the same business process layer (BPL) applies the business rules to the request, and the same OSS access layer (OAL) parses down the request and directs it to the appropriate downstream OSS, which are utilized regardless of whether the initial request was received manually, through IMA, or through the EDI. Certain changes had to be made to these shared downstream OSS so that all requests could access the systems appropriately. These changes are outlined in the project descriptions contained in Confidential Exhibits BJB-02 through BJB-08. The costs for these changes have therefore been classified as shared. The Commission ordered that separate charges be developed for IMA GUI costs (referred to by the commission as 'manual' and encompassing GUI, faxed, and manual orders) and EDI costs (referred to by the commission as 'electronic').[9] Those costs that can be attributed solely to the IMA GUI electronic interface or to the EDI electronic interface are thus reflected separately where applicable in the start-up charges discussed below. Those projects that could not be attributed solely to the IMA GUI or the EDI are considered shared. These shared costs are also reflected in the startup charges discussed below.

[9] 17th *Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference,* ¶ 112.

USWC MEDIATED ACCESS ARCHITECTURE



START-UP COSTS

PLEASE DESCRIBE START-UP COSTS.

Start-up costs are one-time costs related to modifying existing operational support systems and developing new operational support systems. Start-up costs are also associated with establishing electronic interfaces including design and construction costs. There are two types of start-up costs: expense and capital. Expense costs include salaries, benefits and overhead for employees who identify business needs, define systems to support those needs, project manage or design the systems, as well as code and test them. Expense costs also include charges for the purchase of software licenses and costs associated with other development/modification-related tasks. Capital costs include the cost of computer equipment ("hardware"), computer software, telecommunications links, and/or labor expenses incurred in setup of this hardware. Both expense and capital start-up costs apply to the projects described in my testimony and exhibits.

DO STARTUP COSTS INCLUDE TRANSACTION COSTS?

No. In its order, the Commission noted it believes Non-Recurring Costs are designed to

recover transaction costs, such as the taking of an order.[10] But the startup costs U S WEST seeks to recover do not include transaction costs. The startup costs presented here are based entirely on the costs of developing and implementing CLEC access to U S WEST's OSSs. The startup costs reported here do not include any element of the cost of a transaction, i.e. the cost to take an order.

IF STARTUP COSTS DO NOT INCLUDE TRANSACTION COSTS, WILL THE COST OF PLACING AN ORDER CHANGE BASED ON HOW STARTUP COSTS ARE BILLED?

No. U S WEST must recover the same amount of money whether this one-time pool of startup costs is recovered with a charge per service order or a charge per type of UNE ordered. This is explained further in the testimony of Teresa K. Million, which outlines how the startup charge is derived.

HOW MUCH HAS U S WEST ACTUALLY SPENT IN START-UP COSTS FOR THE ELECTRONIC INTERFACES AND OPERATIONAL SUPPORT SYSTEMS WORK?

In 1997, U S WEST spent $23,707,092 across U S WEST's fourteen state region. In 1998, U S WEST spent $42,833,221 across U S WEST's fourteen state region. U S WEST will ask for the recovery of additional costs, periodically, as they are incurred, until all start-up costs are recovered.

HOW MUCH DOES U S WEST ESTIMATE THAT IT WILL SPEND IN ADDITIONAL START-UP COSTS FOR HUMAN-TO-COMPUTER AND COMPUTER-TO-COMPUTER INTERFACES AND OPERATIONAL SUPPORT SYSTEMS WORK?

At this time, the total amount expected to be spent in 1999 across U S WEST's fourteen state region is $82,660,169.

Technical project managers who worked collaboratively with their technical teams to project the number of hours derived work estimates by work task. The estimates of hours were multiplied by the applicable labor rate. The results were totaled to produce summarized costs by project and product categories.

For a further detailed breakdown of costs, please refer to Confidential Exhibit BJB-1. The costs in this exhibit represent system dollars that were spent in 1997 and 1998 and those that are projected to be spent in 1999. The system dollars are broken down by

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[10] 17th *Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference,* ¶ 475.

product type (e.g. collocation, unbundling, etc.) for each of the three years.

MAINTENANCE AND OPERATIONS COSTS

PLEASE DESCRIBE ONGOING MAINTENANCE AND OPERATIONS COSTS.

U S WEST will also incur ongoing maintenance and operations costs associated with the usage of OSS and the interfaces. These costs are incurred in performing minor changes to the electronic interfaces' software programs and running OSS and the interfaces on a daily basis. Examples include salaries and travel and training expenses for people involved in making table updates, resolving error conditions, starting up the application software and other maintenance-and-operations-related tasks. U S WEST does operate and maintain the human-to-computer interfaces (IMA, fax, and manual) and the computer-to-computer (EDI) interface solely for the benefit of the CLECs. The interfaces enable the CLECs to compete and would be of no value to the CLECs if they were not properly maintained; therefore, the ongoing maintenance and operations dollars should be recovered from CLECs. The maintenance and operations cost of the electronic interfaces is included in a per service order charge discussed in the supplemental testimony of Teresa K. Million.

VII.CONCLUSION

COULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

Recovery of operational support system costs is provided by the Federal Telecommunications Act of 1996.[11] Building of the interfaces has been undertaken by U S WEST in accordance with regulatory mandate for the sole benefit of CLECs. Therefore, U S WEST is entitled to recover the OSS costs as proposed in this proceeding, and conditionally approved in the Commission's order.[12]

Many changes to U S WEST's operational support systems are needed to allow CLECs to compete in the local exchange markets. New interfaces have been built that will allow CLECs' employees to communicate with U S WEST's operational support systems in the categories of pre-ordering, ordering, maintenance and repair. Together, the operational support systems and the new interfaces support CLEC operations.

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[11] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, *codified at* 47 U.S.C. §§ 151 *et seq*. (*Telecom Act*), §251.

[12] 17th *Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference*, ¶ 539.

U S WEST has incurred and will continue to incur start-up costs to change its operational support systems and develop electronic interfaces. This work is massive and time consuming.

Both the human-to-computer and the computer-to-computer interfaces are up and running and have had scheduled implementations during 1999 which have provided additional functionality. U S WEST would recover the on-going costs of providing the maintenance and operations costs of the human-to-computer and computer-to-computer interfaces in a per order charge billed on a monthly basis.

U S WEST would recover the start-up costs related to deploying the human-to-computer and computer-to-computer interfaces and enhancing its OSS using a per order charge.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

Yes, it does.