INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. David Griffith, 1300 South Evergreen Park Drive Southwest, P. O. Box 47250, Olympia, Washington 98504.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Washington Utilities and Transportation Commission as a Telecommunications Engineer.

Q. PLEASE DESCRIBE YOUR EDUCATION BACKGROUND AND EXPERIENCE.

A. I hold a Bachelor's degree in electrical engineering from the University of Virginia and a Master of Science degree in electrical engineering from the University of Maryland. I have been employed at the Commission since May 1995. Prior to working at the Commission, I was an engineering manager at U S WEST Communications, Inc. and have more than 25 years of experience in the telecommunications industry. I have presented testimony as an expert witness before this Commission on behalf of Commission Staff in the following dockets: (1) U S WEST general rate case Docket No. UT-950200; (2) in the Matter of Determining the Proper Classification of United and Informed Citizen Advocates Network, Docket No. UT-971515; (3) MCI Metro Access Transmission Services, Inc., Complainant, v. U S WEST Communications, Inc., Docket

No. UT-971063; and (4) Phase II of the Generic Cost Study Proceeding, UT-960369, et. al.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to recommend several conditions that should become part of any merger agreement between U S WEST, Inc. (U S WEST), and Qwest Communications, Inc. (Qwest) that is approved by the Washington Utilities and Transportation Commission. I will address service quality needs and infrastructure requirements from Commission Staff's perspective.

U S WEST'S SERVICE QUALITY

Q. IN GENERAL, HOW DOES THE COMMISSION GAUGE CONSUMER ATTITUDES ABOUT U S WEST'S SERVICE QUALITY?

A. The success of a company is often measured by the reactions of its consumers to service quality issues. In the case of U S WEST this measure would be reflected, to some extent, by the complaints filed with the Consumer Affairs Section of this Commission, service quality reports filed by the company, and the general tone and frequency of articles published in local newspapers or aired by the broadcast media. Over the past decade both the quantity of complaints and severity of consumer problems has been increasing. Staff witness Suzanne Stillwell addresses these problems in more detail in her testimony. Along with this record of deteriorating service quality, U S WEST made a number

commitments to this Commission to invest in new technology, to increase the capacity of the existing infrastructure, and to improve service.

Q. HAS U S WEST FOLLOWED THROUGH ON COMMITMENTS IT HAS MADE TO THE COMMISSION?

A. In many cases U S WEST's commitments were not met. U S WEST's record has been one of making statements that were aimed at temporarily keeping the Commission and consumers satisfied. Later the commitments were often modified, sometimes without informing the Commission. Ultimately, several decisions to defer investments in infrastructure led to severe service problems that resulted in numerous complaints to the Commission. Many customers complained of annoying service disruptions that interfered with normal day to day business transactions.

Q. WHAT SPECIFIC INSTANCES ARE YOU AWARE OF WHERE U S WEST HAS PROVIDED SCHEDULES FOR INFRASTRUCTURE IMPROVEMENTS AND NOT FOLLOWED THROUGH?

A. An example is U S WEST's commitment to retire obsolete and aging analog switching equipment in exchange for a faster depreciation rate. In 1996, in the 3-way depreciation case between the Commission, the FCC, and U S WEST (Docket UT-951425), U S WEST provided a table showing a replacement schedule for twenty-six analog #1AESS (22), #2BESS (3), and Remote (1) switches. The schedule presented for switch

retirement listed four switch replacements in 1996, eleven in 1997, four in 1998, and the remaining seven switches were scheduled for replacement in 1999 and 2000. According to U S WEST's schedule, the switches scheduled for retirement during 1996 through 1998 included approximately 650,000 access lines.

Q. HOW MANY OF THESE NEW SWITCHES WERE ACTUALLY INSTALLED ON SCHEDULE?

A. Instead of the nineteen switch replacements originally scheduled for 1996 through 1998, only nine switches were replaced, including mostly smaller switches having a total line count of less than 265,000 access lines. U S WEST replaced three 3 #2BESS switches, one remote switch, and only five #1AESS switches. The #2BESS switch is a smaller version (less than 13,000 access lines) of the #1AESS.

Q. WHAT DID U S WEST PROPOSE TO THE COMMISSION IN ITS 1999 DEPRECIATION STUDY?

A. At the end of 1998, U S WEST presented the Commission with another list of analog offices with a revised schedule as part of its 1999 Depreciation Study. This time the schedule for analog replacement was stretched out two years beyond the end of the next three-year study into the year 2003. The total capacity of the analog switches remaining to be replaced at the beginning of 1999 was 622,000 access lines.

Q. WHAT HAVE BEEN THE CONSEQUENCES OF U S WEST'S DECISION TO DEFER THE SCHEDULED REPLACEMENT OF THESE ANALOG SWITCHES?

A. During the last few years the Commission has received numerous complaints associated with at least three switches whose replacements were deferred. In all three cases, the complaints dealt with problems due to inadequate switch capacity. These capacity problems could have been avoided if the switches had been replaced on schedule.

Q. WHAT AREAS WERE AFFECTED BY U S WEST'S DECISIONS, AND HOW WERE CUSTOMERS IMPACTED?

A. The most severely affected areas were Maple Valley, Vancouver Orchards, and Seattle Emerson, which includes Lake Forest Park and Shoreline. Although the original schedule from the 1996 Depreciation Study was October 1997, the Maple Valley switch was not replaced until mid-1998. The Vancouver Orchards switch was scheduled for June 1997, and was not replaced until June of 1999. The Seattle Emerson switch, originally scheduled for May 1997, is now scheduled for replacement in February 2000. Service problems in the Maple Valley area continued from 1996 through the middle of 1998, when that switch was finally replaced.

In the Vancouver Orchards exchange, U S WEST placed a digital switch in the same wire center for growth, but continued offering service to existing customers on the #1AESS switch. Customers had difficulty calling between the two switches because U S WEST

was not able to provide adequate trunk capacity between the two machines. Earlier this year, the Orchards #1AESS also encountered some dial tone delays. With the final replacement of the Orchards analog switch, service problems in that office appear to have dropped significantly.

U S WEST also placed a digital switch in Seattle Emerson to handle growth, while retaining existing customers on the #1AESS switch. At the beginning of 1999, Emerson customers encountered significant dial tone delays during the evening hours that were far worse than what occurred in the Orchards office. Many customers were not able to place calls during those peak calling periods. The lack of sufficient capacity to provide dial tone continued for several months. U S WEST moved certain customers from its analog switch to the digital switch to help reduce the dial tone delay. However, the additional load on the digital switch caused it to have dial tone delays during some of the evening hours.

Q. ARE THERE OTHER INSTANCES, BESIDES ANALOG SWITCHES, THAT YOU ARE AWARE OF WHERE U S WEST HAS PROVIDED SCHEDULES FOR INFRASTRUCTURE IMPROVEMENTS AND NOT FOLLOWED THROUGH?

A. Yes. Similar commitments have been made for adding capacity to interoffice facilities. One example is the exhaust of facilities between Olympia and Rochester. During 1998, the Olympia-to-Rochester trunk group consistently appeared on lists provided to the

Commission indicating periods where peak blockage exceeded 1%. This indication was a trigger point where U S WEST needed to begin planning an addition to the Olympia-to-Rochester trunk group. During the week of January 4, 1999, the Olympia-to-Rochester trunk group had the highest peak blocking rate of any trunk group in the state. In a report dated February 16, 1999, U S WEST indicated "A trunk augment job is scheduled for April 1999, to add 168 trunks" to the Olympia-to-Rochester trunk group. At the time there were 144 trunks in this trunk group. U S WEST's report dated June 2, 1999, indicated the completion date would be July 21, 1999. U S WEST's blocking data for November 29, 1999, showed that the Olympia-to- Rochester trunk group still only had 144 trunks. For the first eleven months of 1999 this trunk group consistently ranked among the top five worst trunk groups in the state. Peak blocking rates were in excess of 10% during this reporting period. Facility additions were completed in early December 1999, and this trunk group no longer appears on the US WEST trunk blocking reports.

INFRASTRUCTURE - SWITCHES

Q. WHAT AREAS, IF NEGLECTED, CAN ADD TO SERVICE QUALITY PROBLEMS IN THE FUTURE?

A. Delays in switch replacement could ultimately result in continued service problems for customers using outdated switches. We are beginning to receive service quality complaints from consumers in Longview, Pasco, and Puyallup. These areas also are served by #1AESS switches. There is the potential for further deterioration in service

quality if U S WEST does not replace these switches on an accelerated schedule. Staff also is concerned that continued slow response to interoffice trunk congestion makes it difficult for some consumers to conduct normal business operations, and will lead to additional consumer complaints. Some of the trunk congestion is due to a shortage of trunk ports for U S WEST's analog switches.

Q. WHAT DOES COMMISSION STAFF RECOMMEND FOR ANALOG SWITCH REPLACEMENT?

A. U S WEST is the only local exchange carrier in Washington that continues to use analog switching equipment. Staff proposes that, as one of the conditions to U S WEST's proposed merger with Qwest, that U S WEST/Qwest be ordered to replace all remaining #1AESS switches by June 30, 2001. Staff's suggested schedule is as follows (U S WEST projected dates from their 1999 Depreciation Study are in parentheses):

<u>By the end of 1st Quarter 2000, if not already completed</u>:

Bellevue Sherwood (1999),

Bremerton Essex (1999),

Orchards (1999), and

Seattle Cherry (1999),

Seattle Emerson (2001).

By the end of 2nd Quarter 2000

Longview (2003),

Seattle Main (2001),

Seattle West (2000), and

Spokane Walnut (2000) .

By the end of 4th Quarter 2000

Seattle Duwamish (2001),

Spokane Hudson (2000),

Spokane Keystone (2000), and

Tacoma Skyline (2001).

By the end of 2nd Quarter 2001

Pasco (2003),

Puyallup (2002),

Tacoma Lenox (2003),

Yakima Chestnut (2002), and

All Tandem switches including E911 tandems (routers).

INFRASTRUCTURE - INTEROFFICE FACILITIES

Q. ARE U S WEST'S INTEROFFICE FACILITIES ADEQUATE?

A. In most parts of the state interoffice facilities are adequate. Inadequate capacity in interoffice facilities may contribute to network congestion problems. However,

interoffice facilities in the major metropolitan regions of Washington are robust, and in general, do not appear to have significant capacity limitations. In some rural areas fiber optic facilities are not as readily available as in the more densely populated areas of the state. Where fiber cables are not available, adding interoffice facility capacity often means placing a new cable. In these sparsely settled areas, even where fiber optic cables are in use, diverse routing is not provided. Cable cuts in Eastern Washington frequently isolate communities, and sometimes entire counties, until service can be restored. In many cases availability of emergency services is limited, or nonexistent, while these interoffice facilities are out of service.

Q. WHAT DOES COMMISSION STAFF RECOMMEND FOR ENHANCEMENTS TO U S WEST'S INTEROFFICE FACILITIES?

A. Commission Staff recommends that as another condition of U S WEST's proposed merger with Qwest, that U S WEST/Qwest be ordered to install diverse fiber optic rings, or an equivalent technology, in every U S WEST central office in Washington within three years after the merger close. U S WEST/Qwest may use alternative carriers or seek out partnerships to establish the fiber rings. Both U S WEST and Qwest are well known for pioneering the use of fiber optic facilities for transporting voice and high speed data products. The new Qwest Communications Company appropriately will be continuing to "Ride the Light" by providing diverse fiber optic routing to all Washington communities where U S WEST provides service.

INFRASTRUCTURE - E911 SERVICES

Q. PLEASE DESCRIBE OTHER AREAS WHERE U S WEST SERVICE COULD BE IMPROVED.

A. One area is in the offering of Enhanced 911 (E911) call completion. The rapid expansion of new telephone numbers, the addition of new area codes, and the requirement for local number portability is placing strains on the current E911 operation. The equipment U S WEST is using for the routing of calls, and the subsequent identification of customers is rapidly becoming obsolete. Although this State was one of the early adopters of E911 service, the equipment U S WEST uses for number identification is only capable of handling 7-digit numbers for up to four area codes. With area code expansion, it is becoming difficult for E911 equipment to recognize the difference between calls from cellular users and U S WEST's own customers. In King County where four area codes already exist, cellular phone numbers occasionally appear with a wireline subscriber's address. When this happens, the E911 operators may dispatch emergency response vehicles to the wrong address. Thus, U S WEST's equipment needs to be capable of processing the full 10-digit number.

Q. WHAT DOES STAFF RECOMMEND TO REMEDY THE E911 SITUATION?

Staff recommends that as another condition of U S WEST's proposed merger with Qwest, that U S WEST/Qwest be ordered to take the following actions to upgrade its E911 network by June 30, 2001:

1. Provide SS7 from all serving end offices to the respective Tandem (E911 router) switches;
2. Provide Enhanced Multi-Frequency Pulsing from the serving Tandem (E911 router) switch to each PSAP (Public Safety Answering Point);
3. Reprogram the E911 system to pass 10 digits;
4. Reprogram the Automatic Location Identifier (ALI) system to accept and sort on 10 digits; and
5. Install and test inter-tandem transfer functions.

The above steps are expected to improve the E911 network to meet the State E911 Office's requirements for 10-digit number identification, area code overlays and local number portability.

INFRASTRUCTURE - OUTSIDE PLANT

Q. WHAT IS THE CURRENT TECHNICAL CAPABILITY OF OUTSIDE PLANT IN THE STATE OF WASHINGTON?

A. The Commission continues to receive complaints from customers who are unable to use higher speed modems at their specified bit rate (e. g,. 28.8 kbps rates and higher). Other customers indicate that neither ISDN service nor the newer DSL services from U S WEST are available in their area.

In January 1999, U S WEST, GTE and Sprint provided a joint presentation to the Commission on infrastructure needed to guarantee a 28.8 kbps connect rate for all outside plant loops in the State of Washington. U S WEST made the following points:

1. Upgrading would take 5 to 10 years;
2. Approximately 70% of the lines currently meet the 28.8 kbps standard;
3. Current staffing is sized to handle 56,000 lines of growth per year;
4. Approximately 30% of the lines (745,000 to 945,000) will require upgrading, replacing, or redesigning;
5. Estimated capital cost is $313 million; and
6. Estimated maintenance cost is $85 million.

Commission Staff believes that similar expenditures also would be required to make outside plant loops in Washington capable of handling DSL services.

Q. ARE THERE ANY CAPACITY PROBLEMS WITH OUTSIDE PLANT IN WASHINGTON?

A. Yes. The Commission continues to receive a number of complaints about held orders due to a lack of facilities. Staff witness Suzanne Stillwell provides detailed information about held order complaints in her testimony.

Q. IS IT THE CASE THAT U S WEST REDUCED THE NUMBER OF HELD ORDERS IN WASHINGTON IN 1999?

A. No. The CEO of U S WEST recently issued a news release claiming that the number of held orders was reduced by 60% in 1999, but in fact the number of customers who failed to get timely installation of service actually increased in 1999 relative to 1998. The total number of orders held in 1999 was 41,009, 22% above the 1998 figure of 33,554. Moreover, for those orders held more than 30 days, the increase was 46% -- from 10,231 to 14,939. In addition, the U S WEST held orders for 1998 include a strike that lasted about three weeks. The company's claim that held orders were down apparently is based on a year-end snapshot. On the last day of 1999, 1,380 orders were pending. That number is 23% less than the 1,803 orders pending on the last day of 1998. However, that snapshot view is not a realistic measure of the overall experience of US WEST customers over the entire year. Even the snapshot view is less than positive, since the number of orders pending more than 60 days actually increased 61% in 1999, from 378 to 610. .

Q. WHAT DOES COMMISSION STAFF RECOMMEND FOR OUTSIDE PLANT LOOP ENHANCEMENT?

A. Commission Staff believes that U S WEST's investment per line in Washington should be retained at or above the current level. Staff recommends that as another condition of U S WEST's proposed merger with Qwest, that U S WEST/Qwest be ordered to commit an additional $100 million per year for the five years following merger close, to be used for service quality remediation projects. These projects will include the fiber optic upgrades to interoffice facilities as previously discussed. Additionally, the projects need

to address interoffice trunk blocking, held orders, repairs, and enhancements to upgrade loops for advanced digital services, such as DSL. Staff also recommends that these funds be used to replace aging and obsolete analog carrier systems. Since funding for the analog switch replacements and E911 upgrades should already be available under U S WEST's current budgeting process, these two investment items should be separate from the $100 million per year increase.

Commission Staff recommends that the merged company work closely with Staff to identify areas where funding is most critical. Staff recognizes that even the funding Staff is recommending may not cover all needs for Washington State. Staff would emphasize that the company needs to strike a balance between rural areas and metropolitan areas when making its planning decisions. Staff also wants to see a concerted effort on the part of the company to invest in both high income and low income areas of the State. Staff also recommends that the company provide the Commission with a detailed plan of action showing office-by-office dollar commitments, specific projects, and anticipated dates for implementation. Staff believes that it should be provided periodic updates on the company's plans at least once each quarter, and that the plans be subject to an annual review by the Commission. Staff also recommends that the Commission assess penalties of up to $1,000 per day for each instance where the company does not meet due dates established by the Commission for key infrastructure improvements.

Q. HOW SHOULD THE COMMISSION DEFINE THE BASELINE LEVEL OF INVESTMENT FOR PURPOSES OF THIS ADDITIONAL $100 MILLION ANNUAL REQUIREMENT?

A. Staff recommends that the Commission establish a baseline equal to the average level of investment in telephone plant during the last five years. According to U S WEST's reports to the FCC, its gross additions to telephone plant in Washington during the four-year period 1995-1998 were an average of $330 million. Staff recommends that a five-year figure be calculated by including the 1999 value once it becomes available. Further, Staff recommends that this baseline level be adjusted each year based on growth in the number of access lines in service. In other words, if the number of access lines in service as of December 31, 2000, is 5 percent higher than the number of access lines a year earlier, the baseline investment level should be increased by 5 percent.

OTHER RECOMMENDATIONS

Q. DOES COMMISSION STAFF HAVE ADDITIONAL RECOMMENDATIONS?

A. Yes. Commission Staff recommends that as a concluding condition of U S WEST's proposed merger with Qwest, that U S WEST/Qwest be ordered to increase its engineering and construction workforce. Staff recommends that Qwest increase, relative to the 12/31/99 level, its Washington state engineering and construction workforce by 30% within six months after the merger close and maintain that level of employment for the first seven years after the merger close. This additional workforce will allow the

company to meet the Commissions's objectives for improved service and infrastructure deployments.

SUMMARY

Q. PLEASE SUMMARIZE STAFF'S RECOMMENDATIONS REGARDING INFRASTRUCTURE IMPROVEMENTS.

A. Commission Staff recommends the following conditions of approval of U S WEST's proposed merger with Qwest. The Commission should order U S WEST/Qwest to:

1. Replace all analog switches with digital switches by June 30, 2001;

2. Incorporate fiber ring technology with route diversity to all of U S WEST's central offices within three years after the the merger close;

3. Commit an additional $100 million per year for the next five years following merger close to be used for service quality remediation projects and enhancements for advanced digital services, and excluding analog switch replacements and E911 upgrades;

4. Establish a base line investment based on the 1995-1999 five-year average (adjusted annually for growth) level investment in telephone plant;

5. Upgrade E911 services to accommodate 10-digit number identification, area code overlays and local number portability;

6. Increase, relative to the 12/31/99 level, its Washington state engineering and construction workforce by 30% within six months after merger close and maintain that level of employment for the first seven years after merger close;

7. Provide quarterly updates on progress and annual reviews of the company's planning and implementation process for infrastructure investments; and

8. Be subject to penalties of up to $1,000 per day for each instance where the company does not meet deadlines established by the Commission for key infrastructure improvements.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.