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**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UT 155

In the Matter of)	
)	
UNITED TELEPHONE COMPANY OF THE)	ORDER
NORTHWEST dba SPRINT,)	
)	
Revised Tariff Sheets for Telecommunications)	
Service. Advice No. OR02-16.)	

DISPOSITION: STIPULATION ADOPTED; INVESTIGATION CLOSED.

Background. On July 31, 2002, United Telephone Company of the Northwest dba Sprint (Sprint or Company) filed Advice No. OR02-16 with the Public Utility Commission of Oregon (Commission). It significantly increased rates for price-listed Message Toll Service (MTS) and its price-listed feature packages. By Order No. 02-659, entered September 19, 2002, the Commission opened an investigation into the MTS rates of Sprint, the continuation of the Company's authority to price list its MTS services, and the Company's current earnings level.

By the Administrative Law Judge's (ALJ) Ruling of October 1, 2002, the proceeding was bifurcated and a procedural schedule set so that the investigation of the Company's authority to price list its MTS services and continue to offer them at current rates was to be considered first (Phase I of the proceeding) and the Company's current earnings level was to be considered at a later date (Phase II).

By Order No. 03-272, entered May 1, 2003, (the Phase I Order), the Commission allowed Sprint to continue to price list the services at issue, but attached conditions with respect to the Company's bill formatting. Phase I having been resolved, only Phase II, the Company's current earnings level, remained under investigation.

On May 9, 2003, Sprint and Staff executed an agreement in the form of a stipulation (the Stipulation) resolving all of the remaining issues in Phase II of this proceeding, Sprint's current earnings level. On May 12, 2003, Staff filed the Stipulation with supporting testimony that are attached to this Order as Appendix A, as follows:

- Staff Exhibit 11, Testimony in Support of the Stipulation (Staff/11, Lambeth 1-18)
- Staff Exhibit 12, Stipulation (Staff /12, Lambeth 1-4)
- Staff Exhibit 13, Exhibit in Support of Testimony (Staff/13, Lambeth/1-9)
- Staff Exhibit 14, Opening Testimony (Staff/14, Emmons/4 8)
- Staff Exhibit 15, Witness Qualification Statement, (Staff/15, Emmons/1)

Terms of the Stipulation. Section II of the Stipulation provides that Sprint will reduce its current intrastate earnings level by \$870,000. This revenue reduction will be accomplished by two methods:

(1) capital improvement expenditures

- Sprint agrees to capital improvement expenditures of \$1,552,000 in 2003, \$1,272,000 in 2004, and \$1,605,000 in 2005, which equate to an average intrastate revenue requirement reduction of \$285,000. Sprint agrees to replace analog carrier with digital carrier in certain exchanges to support Caller ID-based services, improve customers' dialup internet access, and better enable the company to offer DSL to customers who do not currently have access to the service. The improvements also include placement of interoffice fiber to certain exchanges. Sprint agrees to provide Staff with reports of the progress of capital improvements . . . the first by June 30, 2004, the second by June 30, 2005, and the third by June 30, 2006.

and

(2) filed tariff reductions

- Sprint agrees to file tariffs that reduce the annual intrastate revenues by the remaining \$585,000 Sprint will submit a rate design proposal to the Commission that sets for the specific tariff reductions within 30 days of the order approving this Stipulation After reviewing Sprint's rate design proposal, Staff reserves the right to offer its own rate design proposal. The tariff reductions will become effective upon a Commission order and will result in \$585,000 in annual intrastate revenue reductions.

Staff's Analysis of the Effects on Sprint's Earnings if the Stipulation is Adopted. Pursuant to Order No. 02-659, Staff conducted substantial discovery related to Sprint's current earnings level. Staff reviewed Sprint's intrastate Oregon financial operations, analyzed the capital structure of the regulated telecommunications operations of Sprint, and estimated that Sprint is currently producing a 9.48 percent return on its regulated Oregon intrastate investment.¹ Staff proposes a 9.33 percent rate of return on Sprint's intrastate rate base as a reasonable update from the 10.57 percent rate authorized by the Commission in Order 91-1786.² Staff reduced the revenue requirement through the imputation of yellow pages revenues and making other reductions via fee and tax adjustments.

As the most publicly-beneficial means to achieve the 9.33 percent rate of return, Staff agreed to Sprint undertaking a modernization plan in selected Sprint exchanges, rather than having Sprint reduce its rates to reflect these reductions. The proposed modernization plan consists of two projects. First, Sprint proposes replacement of analog carriers with digital carriers in the Mosier, Odell, Parkdale, Grass Valley and Wasco exchanges. The second project Sprint proposes would be to place interoffice fiber to Rufus, Wasco, Moro, Grass Valley and Fish Lake Exchanges. Staff approves of both projects.³

The Stipulating Parties negotiated the Stipulation as an integrated agreement. As is the usual circumstance in such stipulated agreements, in the event that the document is not adopted by the Commission in its entirety, the parties will consider the Stipulation to be void, and any stipulated agreements or provisions shall bind neither signatory.

Other Parties' Positions. There are three intervening parties in this proceeding. Petitions by Verizon Northwest Inc. and WorldCom, Inc. were granted without objection at the prehearing conference on September 30, 2002. Qwest Corporation subsequently sought intervention, which was conditionally granted on October 18, 2003. The intervening parties were not signatories on the Stipulation filed on May 12, 2003. A party has twenty days from the filing date to object to a stipulation.⁴ None of the intervening parties filed objections either prior or subsequent to the June 1, 2003 due date.

Disposition. The Commission has examined the Stipulation, Staff testimony, and the entire record in this case. The Stipulation submitted by Staff and Sprint serves the public interest and should be adopted in its entirety. The Stipulation is an appropriate resolution of the final outstanding issue in this proceeding (Phase II) and the investigation into the Company's current earnings level should be closed.

¹ Staff/11, Lambeth/8.

² *Id.*, p. 7.

³ Staff/14, Emmons/2-8.

⁴ OAR 860-014-0085(5).

ORDER

IT IS ORDERED that the Stipulation executed by Sprint and the Commission Staff attached to this Order as Appendix A, is ADOPTED. The investigation into the Company's current earnings level is closed.

Made, entered, and effective _____.

Roy Hemmingway
Chairman

Lee Beyer
Commissioner

A party may request rehearing or reconsideration of this order pursuant to ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-014-0095. A copy of any such request must also be served on each party to the proceeding as provided by OAR 860-013-0070(2). A party may appeal this order to a court pursuant to applicable law.

1 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.**

2 A. My name is Terry J. Lambeth. The Public Utility Commission of Oregon (OPUC)
3 employs me as a senior Revenue Requirement Analyst. My business address is
4 presented in Exhibit Staff/13, Lambeth/1.

5 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK
6 EXPERIENCE.**

7 A. My Witness Qualification Statement is found in Exhibit Staff/13, Lambeth/1.

8 **Q. ARE YOU SPONSORING EXHIBITS FOR THIS DOCKET?**

9 A. Yes, I am sponsoring two exhibits. Exhibit Staff/12 is a copy of the stipulation in
10 docket UT 155, Phase II, Earnings Investigation of United Telephone Company of
11 the Northwest d.b.a. Sprint.

12 I prepared Exhibit Staff/13, consisting of 9 pages. Page 1 contains my credentials,
13 and the remaining pages support OPUC staff's recommended revenue requirement.

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

15 A. My testimony supports the stipulation in docket UT 155, Phase II, Earnings
16 Investigation of Sprint, which staff and Sprint signed in May 2003.

17 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

18 A. My testimony is organized as follows:

	<u>Page</u>
19 Summary	3
20 Test Year	7
21 Rate of Return	8
22 Yellow Page Imputation	10
23 Gross Revenue Fees and Income Tax Adjustments	12
24 Uncollectible Revenues Adjustment	14
25 Other Test Year Adjustments.....	15
26 Modernization Plan – Revenue Requirement	19

SUMMARY**Q. PLEASE SUMMARIZE THE STIPULATION IN PHASE II.**

A. Staff and Sprint reached two agreements about revenue requirement. First, Sprint agreed to "reduce intrastate revenues by approximately \$285,000 through capital improvement expenditures." For three years, Sprint will "replace analog carrier with digital carrier in certain exchanges."

Second, Sprint agreed to file tariffs that reduce annual revenues by the remaining \$585,000 [1.5 percent]. See Exhibit Staff/12, Section 2, lines 20-21.

Neither Sprint nor Staff has "approved, admitted or consented to the facts, principles, methods or theories employed by any other party in arriving at the terms of this Stipulation. No Stipulating Party will be considered to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding." See Exhibit Staff/12, Section 6.

Q. WHAT IS THE HISTORY OF DOCKET UT 155, PHASE II?

A. On July 31, 2002, Sprint filed Advice No. OR 02-16 to increase the rates for its price-listed services¹ by an average of 23 percent. The price increases were effective August 1, 2002.

Staff reviewed Sprint's filing. At the Commission's Public Meeting on September 3, 2002, OPUC Staff Analyst, David Sloan, asked the Commission to open an investigative docket. The Commission agreed and issued Order 02-659 on September 19, 2002, to investigate "the Message Toll Service rates of Sprint, the continuation of the Company's authority to price list its Message Toll Services, and the Company's current earnings level."

¹ The price-listed services included the Basic MTS Rate Schedule, Calling Card and Operator Assisted Charges, Sprint Sense Local Toll, Advantage, Call Manager, Sprint Essentials, In Touch With Call Forward, and Sprint Elite.

1 The earnings review became Phase II of docket UT 155. Over the next several
2 months, staff examined Sprint's financial information. Settlement conferences were
3 held on January 17, 2003, and February 20, 2003.

4 **Q. PLEASE SUMMARIZE STAFF'S RECOMMENDATION IN PHASE II.**

5 A. The Commission should accept the stipulation offered in Exhibit Staff/12. Staff
6 believes the stipulated revenue requirement proposes a reasonable rate of return
7 (9.33 percent), as discussed at Lambeth/8. Acceptance of the stipulation would
8 reduce Sprint's intrastate revenues and begin some plant upgrades. Staff's
9 recommendation is based on its review of Sprint's intrastate Oregon financial
10 operations, as summarized below:

	Intrastate	
	Revenue	
	<u>Requirement</u>	
11	\$2,443,000	Test Year and Rate of Return
12	(567,000)	Yellow Page Imputation
13	(1,909,000)	Gross Revenue Fees and Income Taxes
14	(534,000)	Uncollectible Revenues
15	<u>(303,000)</u>	Other Test Year Adjustments
16	\$ (870,000)	Intrastate Revenue Requirement
17	<u>285,000</u>	Modernization Plan
18	<u>\$ (585,000)</u>	Net Available for Rate Design

19 **Q. IS THERE A DIFFERENCE BETWEEN TOTAL OREGON AND INTRASTATE**
20 **OREGON REVENUE REQUIREMENT?**

21 A. Yes. The Federal Communications Commission (FCC) regulates services and rates
22 for interstate telecommunications, where one end of a telephone call originates or ter-
23 minates outside Oregon. OPUC regulates only intrastate telecommunications. Oregon
24 Revised Statute 759.005(2)(b) defines intrastate telecommunications as "any telecom-
25 munications service in which the information transmitted originates and terminates
26 within the boundaries of the State of Oregon."

1 Because total Oregon consists of interstate and intrastate operations, every tele-
2 communications rate case must separate revenues and costs between the interstate
3 and intrastate jurisdictions. The FCC has developed rules to separate the jurisdictional
4 costs, Part 36,² which dictate the amount of plant and associated expenses and taxes
5 to be assigned to the interstate jurisdiction. The residual amounts are assigned to the
6 intrastate operations. The Part 36 cost assignments result in "separations factors,"
7 which are the percentages assigned to the jurisdictions.

8 **Q. BRIEFLY DESCRIBE STAFF'S REVIEW OF SPRINT'S EARNINGS.**

9 A. Staff reviewed Sprint's Annual Report of Oregon Separated Results of Operations
10 (Form I) for 2001, which was filed when due on October 31, 2002. In November 2002,
11 staff asked the company to provide its most recent twelve months' total Oregon and
12 intrastate Oregon financial data. Sprint responded with financial data for the twelve
13 months ended October 31, 2002. I will discuss staff's use of the data under "test year"
14 at Lambeth/7.

15 Staff compared these data with Sprint's prior years' data and with other Oregon
16 incumbent local exchange carriers' annual financial reports. Staff's analysis led to
17 further information requests. Staff presented its findings, questions, and recommend-
18 ations at the settlement conference on January 17, 2003. Sprint answered staff's
19 questions and provided additional information. As a result, staff recalculated several
20 adjustments.

21 Staff presented its revised proposal at the second settlement conference on
22 February 20, 2003. Sprint accepted staff's proposal to reduce intrastate revenue
23 requirement by \$870,000. Instead of proposing to cut customer rates by this annual

² Oregon Administrative Rules 860-027-0070(2) and 860-034-0395 require telecommunications utilities to file Form I, Annual Report of Oregon Separated Results of Operations. The instructions to Form I require the utilities to use 47 Code of Federal Regulations Part 36.

1 amount, Sprint asked to substitute \$285,000 of plant modernization, leaving a revenue
2 requirement reduction of \$585,000. After reviewing Sprint's proposal, staff agreed.
3 Staff Witness Emmons will explain staff's support for the modernization plan in Exhibit
4 Staff/14. I will explain the revenue requirement at Lambeth/19.

TEST YEAR**Q. WHAT IS A TEST YEAR?**

A. A test year is a forward-looking representation of the first year when rates will be in effect.³ It should present prospective recurring cost and revenue relationships that will fairly represent the period when rates from the docket will be in effect. It should comply with Commission orders and policies, as well as state and federal laws. It should contain relationships that will not substantially change as customers or access lines increase or decrease. It can be based on historic, future, or forecast data.

The test year is used to examine revenues from existing tariffs to determine if they will cover expenses and produce a reasonable rate of return on rate base. OPUC uses the test year's net operating income and rate base to develop revenue requirement.

Rate cases result in rates that last until the utility's next rate case. Therefore, it is important to establish a financial test year that reflects a reasonably normal operation. Nonrecurring expenses distort the revenue requirement and result in incorrect rate setting. Normalization adjustments remove the nonrecurring expense and thereby establish a "normal" level of operating costs for rate making in the test year.

Q. WHAT PERIOD DID STAFF USE FOR IT TEST YEAR (EXHIBIT STAFF/13, LAMBETH/2, COLUMN A)?

A. Staff used the 12 months from November 1, 2001, through October 31, 2002. In response to staff's request, Sprint provided the total Oregon, intrastate Oregon, and income tax data for this period. Staff adjusted the data for known and measurable events through December 31, 2003.

³ Retroactive ratemaking is prohibited. For OPUC's discussion, see Order 97-180, pages 3-5; and Order 87-406, page 126.

RATE OF RETURN (ROR)

1
2 **Q. WHAT RATE OF RETURN DOES STAFF'S INTRASTATE REVENUE REQUIRE-**
3 **MENT PRODUCE (EXHIBIT STAFF/13, LAMBETH/4, COLUMN R)?**

4 A. Staff's adjusted test year produces 9.33 percent ROR on intrastate rate base.

5 **Q. HOW DID STAFF DETERMINE THE COSTS OF CAPITAL (EXHIBIT STAFF/13,**
6 **LAMBETH/8)?**

7 A. Staff used Sprint's double-leveraged⁴ capital structure ratios from docket UT 101
8 and the long-term debt balances and costs from Sprint's Annual Report Form O,
9 Schedule B-4, at December 31, 2001. Staff did not include short-term debt, because
10 OPUC does not include short-term debt in capital structure.

11 For return on equity (ROE), staff estimated a current rate of 10.00 percent. Staff
12 believes this is a reasonable update of the 11.76 percent ROE allowed in docket
13 UT 101 in 1991. Although a simple updating of staff's 1991 Capital Asset Pricing
14 Model (CAPM) estimate would produce a lower number, staff understands that the
15 Commission expressed concerns about current CAPM estimates in its UE 115 and
16 UE 116 orders.

17 These capital factors produce 9.33 percent ROR. Staff believes this is a reason-
18 able update from 10.57 percent, which the Commission authorized in Order 91-1786.

19 **Q. HOW DOES STAFF'S PROPOSED CAPITAL STRUCTURE COMPARE WITH**
20 **SPRINT'S CURRENT CAPITAL STRUCTURE?**

⁴ "'Double leverage' refers to the situation where a utility, a subsidiary operating company, which has debt or preferred stock is owned by a holding company that also has debt and preferred stock. The effect of this arrangement is that the shareholders of the parent company are leveraged twice. Proponents of the 'double leverage' approach in the ratemaking context argue that the existence of double leverage requires an adjustment when calculating the subsidiary's cost of capital." (OPUC Order 94-336, page 31)

1 A. Staff's proposed capital structure is based on regulated telecommunications operations,
2 whereas much of Sprint Corporation's current debt appears to be related to risky
3 nonregulated operations.⁵ While the debt of the local operating company (United
4 Telephone Company of the Northwest) dropped from 36 percent of total capital in
5 1991 to 27 percent in 2001, Sprint Corporation's debt swelled from 18 percent of
6 total capital in 1991⁶ to 65 percent in 2001,⁷ as nonregulated losses rose.⁸

7 I estimate that double-leveraged total company costs would produce 9.48 percent
8 ROR, compared to staff's recommended 9.33 percent. For this estimate, I used Sprint
9 Corporation's capital costs from its 2001 Annual Report Form 10K/A to the United
10 States Securities and Exchange Commission (SEC), which are consolidated to
11 include regulated and nonregulated operations. I used the local operating company's
12 capital costs from the 2001 Annual Report Form O to OPUC.

⁵ According to Sprint Corporation's 2001 SEC Form 10K/A, page 12: "We have substantial indebtedness. We intend to incur additional indebtedness in the future as we implement the business plans of the PCS Group and the FON Group . . . The PCS Group has a history of operating losses and the FON Group has experienced declining revenues and net income . . . If the PCS Group does not achieve and maintain profitability on a timely basis or if the FON Group continues to experience declining operating revenues and net income, our credit rating will likely be adversely affected. If our credit rating is adversely affected, our future borrowing costs would likely increase, our access to capital may be adversely affected and, depending on the severity of the downgrade, we would have to repay certain financing arrangements and provide additional security in connection with other financing arrangements."

⁶ See docket UT 101, Exhibit Staff/5, Thornton/2. In 1991, Sprint Corporation was known as United Telecommunications, Inc.

⁷ See Sprint Corporation's 2001 SEC Form 10K/A, page 19.

⁸ For example, according to Sprint Corporation's 2001 SEC Form 10K/A, page 23: "FON Group recorded in Other expense, net, one-time charges of \$62 million which increased the loss from continuing operations by \$90 million. These amounts included a write-down of an equity investment of \$157 million which increased the loss from continuing operations by the same amount . . ."

YELLOW PAGE IMPUTATION**Q. PLEASE EXPLAIN STAFF'S YELLOW PAGE IMPUTATION ADJUSTMENT
(EXHIBIT STAFF/13, LAMBETH/2, COLUMN E).**

A. Staff relied on the stipulation in Sprint's last general rate case.⁹ According to UT 101 Exhibit Staff/8, Riordan/1-3, this stipulation included an adjustment for total Oregon revenue of \$495,300 and expense of \$122,700, in compliance with OPUC Order 88-954 and Oregon Administrative Rule 860-027-0052.

I calculated the average number of Sprint's local access lines during 1991, which was the UT 101 test year. I found that the UT 101 annual revenue imputation represented \$9.56654 per local access line. The UT 101 expense allowance was 24.76 percent of the revenue imputation.

For docket UT 155, I estimated the average number of local access lines during 2003 would be 70,526. Then, I calculated the total Oregon adjustment as follows:

70,526	UT 155 Average Local Access Lines
<u>\$9.56654</u>	UT 101 Revenue Imputation per Local Access Line
\$674,690	UT 155 Revenue Imputation (Exhibit Staff/13, Lambeth/5, Column E, line 5)
<u>24.76%</u>	UT 101 Ratio of Expenses to Revenues
\$167,080	UT 155 Directory Expense (Exhibit Staff/13, Lambeth/5, Column E, line 10)

This method reduces intrastate revenue requirement by \$0.6 million.

Q. WHY ARE YELLOW PAGES AN ISSUE?

A. When utilities have owned directory publishing operations (yellow pages), OPUC has consistently included yellow page revenues in calculating the revenue requirements.¹⁰ The Commission has preserved these revenues for customers when directory publishing operations are sold by imputing revenues as a revenue requirement offset. Yellow

⁹ See docket UT 101, Order 91-1786, Appendix A, Paragraph 10.

¹⁰ For examples, see Order 97-171 in docket UT 125, pages 37-43 (readopted by Order 00-191); Order 89-1807 in docket UT 85; Order 88-488, pages 7-9, in docket UI 54; and docket UI 54.

1 page operations have been highly lucrative and growing faster than access lines. Not
2 surprisingly, utilities try to give the profits to their stockholders, and the Commission
3 tries to keep the profits for customers of the regulated operations.

GROSS REVENUE FEES AND INCOME TAX ADJUSTMENTS**Q. WHAT FEE AND TAX ADJUSTMENTS DID STAFF INCLUDE (EXHIBIT STAFF/13, LAMBETH/2, COLUMN C)?**

A. Staff recalculated the OPUC annual gross revenue fee, Oregon corporate income tax adjustments other than interest, federal income tax adjustments other than interest, and the interest deduction for tax purposes (interest coordination).

Q. WHY DID STAFF ADJUST SPRINT'S OPUC FEE EXPENSE?

A. The test year appeared to include an estimate of an average OPUC fee that did not match the revenues. I calculated the annual gross revenue fee based on the test year revenues. This reduced expenses and intrastate revenue requirement about \$12,000. In subsequent revenue adjustments, I adjusted the OPUC fee as appropriate.

Q. WHY DID STAFF ADJUST SPRINT'S STATE AND FEDERAL INCOME TAX ADJUSTMENTS OTHER THAN INTEREST?

A. The test year data do not appear to contain a normal level of book-to-tax adjustments. The primary cause of such adjustments for a utility is depreciation. OPUC often prescribes different asset lives than required by generally accepted accounting principles, or allowed by the Internal Revenue Service and other regulatory jurisdictions. These differences create additions and deductions to total and intrastate Oregon taxable income, depending on the individual depreciation schedules.

A large company with many affiliates, such as Sprint, usually consolidates its operations for reporting purposes and prepares consolidated tax returns. Tax preparation takes considerable time, and companies generally receive extensions to file their tax returns in late October instead of mid-April. This means that Sprint's test year data included estimates based on unfiled or previous years' tax returns; and the data may include allocations that are not associated with Oregon's intrastate operations.

1 Therefore, I estimated a normalized level of income tax additions and
2 deductions for the test year. My calculations reduced intrastate income tax
3 expenses and intrastate revenue requirement by \$1.1 million.

4 **Q. WHY DID STAFF MAKE AN INTEREST COORDINATION ADJUSTMENT?**

5 A. Interest on long-term debt is deductible for income tax purposes. Staff's adjustment
6 coordinates the utility's authorized cost of debt with its tax deduction for ratemaking
7 purposes. The coordinated interest adjustment replaces the utility's interest deduction
8 with the utility's weighted cost of debt for regulated intrastate operations, thereby
9 removing any costs of debt related to nonregulated operations.

10 Interest should not be allocated from total Oregon to the intrastate operations,
11 because OPUC approves intrastate rates based on intrastate costs. Therefore,

12 I calculated the interest deduction as follows:

13 + Net Rate Base
14 x Interest at Staff's Recommended Weighted Cost of Debt (Exhibit Staff/13,
15 Lambeth/8)
16 = Allowable Interest Deduction
17 - Company's Reported Interest Deduction
18 = Interest Coordination Adjustment

19 Staff's interest coordination adjustment reduces intrastate tax expense and
20 revenue requirement by \$0.1 million. When rate base was subsequently adjusted,
21 I multiplied the net rate base change by staff's recommended weighted cost of debt of
22 3.249 percent to calculate the income tax deduction.

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UNCOLLECTIBLE REVENUES ADJUSTMENT

**Q. PLEASE EXPLAIN STAFF'S UNCOLLECTIBLE REVENUE ADJUSTMENT
(EXHIBIT STAFF/13, COLUMN L).**

A. Staff's adjustment normalizes the test year. The uncollectibles revenues or bad debts in Sprint's test year data included accruals for WorldCom's and Global Crossing's bankruptcies. Staff believes bankruptcies of this size are not normal annual events, and I removed the accruals from the test year. On the other hand, I normalized the uncollectible ratios to recognize the telecommunications industry's general increase in bad debts. The net reduction in intrastate revenue requirement is \$534,000.

**Q. DO THE UNCOLLECTIBLE FACTORS AFFECT STAFF'S CALCULATIONS OF
REVENUE REQUIREMENTS FOR OTHER ADJUSTMENTS?**

A. Yes. The uncollectible factors combine with other revenue-sensitive factors, such as income taxes, to create the gross-up multiplier factor. See Exhibit Staff/13, Lambeth/9. For the revenue requirement effects of revenues and expense adjustments, one multiplies the intrastate net operating income by the net-to-gross multiplier. For the net income effect of rate base adjustments, one multiplies net rate base by the rate of return.

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OTHER TEST YEAR ADJUSTMENTS

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Q. WHAT OTHER ADJUSTMENTS DID STAFF MAKE TO THE TEST YEAR?

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A. Exhibit Staff/ 13 shows that staff included the following other adjustments:

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Staff/13, Column

5

B, O	Jurisdictional Separations Factors
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D, K	Pensions and Other Postretirement Benefits
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G, H, I, J	Recurring Intrastate Revenues
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M	Nonrecurring Events
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F	Other Issues Raised in Docket UT 101
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Q. PLEASE EXPLAIN STAFF'S ADJUSTMENTS FOR JURISDICTIONAL

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SEPARATIONS FACTORS (EXHIBIT STAFF/13, COLUMNS B AND O).

12

A. Telecommunications utilities must follow the FCC's Part 36 to assign their plant and associated expenses and taxes to the interstate jurisdiction.¹¹ The residual amounts are assigned to the intrastate operations, such as Oregon. The Part 36 cost assignments result in "separations factors," which are the percentages assigned to the jurisdictions. Staff examined Sprint's proposed separations factors for compliance with Part 36.

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Staff applied the intrastate separations factors derived from Sprint's 2001 Annual Report of Oregon Separated Results of Operations (Form I) to the total Oregon test year data. Exhibit Staff/13, Lambeth/2, Column B, shows the differences between Sprint's proposed intrastate factors and the 2001 factors. Then, staff ran the total Oregon test year data and staff's adjustments through staff's own separations model. Column O shows the resulting adjustments.

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Staff's recommendation is consistent with staff's preparation of test years in other telecommunications utilities' rate case dockets. The net result of staff's adjustments in Columns B and O is about \$12,000 more revenue requirement than Sprint's proposed factors would have produced.

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¹¹ Oregon Administrative Rules 860-027-0070(2) and 860-034-0395 require telecommunications utilities to file Form I, Annual Report of Oregon Separated Results of Operations. The instructions to Form I require the utilities to use 47 Code of Federal Regulations Part 36.

1 **Q. PLEASE EXPLAIN STAFF'S ADJUSTMENT FOR POSTRETIREMENT**
2 **BENEFITS (EXHIBIT STAFF/13, COLUMNS D AND K).**

3 A. In Column D, staff proposed no adjustment for postretirement benefits other than
4 pensions, because Sprint appears to be reporting its costs in accordance with OPUC
5 Order 91-1786¹² and Statement of Financial Accounting Standards 106, Employers
6 Accounting for Postretirement Benefits Other Than Pensions.¹³

7 In Column K, staff restated the current and deferred pension expenses. Sprint
8 has been recording negative pension expenses since docket UT 101 was completed.
9 This has resulted in deferred expenses of \$11 million for total Oregon. Sprint has
10 reported the deferred expenses as a regulatory asset.

11 Staff does not believe that deferred pension expenses are assets. Therefore,
12 I removed the deferred pension expenses from rate base in Column K. For symmetry,
13 I also removed the test year accrual that led to the current rate base addition.¹⁴ As a
14 result, there are no pension costs in staff's adjusted rate base or income statement.

¹² Order 91-1786 adopted a stipulation between staff and Sprint as Appendix A. Paragraph 7 of the stipulation stated: "This agreement is subject to the conditions stated in [Appendix] E to this [order]." Appendix E contained the following conditions: "(1) [Sprint] and staff agree to a rate base adjustment for the difference between total postretirement benefits expense and [Sprint]'s annual contribution to a trust fund. (2) Staff reserves the right to examine the costs . . . (3) [Sprint] agrees that staff will have the opportunity annually to review approve the calculation . . . (4) [Sprint] and staff agree that the base year for calculating the accumulated postretirement benefit obligation is calendar year 1991. (5) [Sprint] agrees to report its annual costs . . . in its annual reports [Form O]."

¹³ OPUC has included the effects of Statement of Financial Accounting Standards (SFAS) 106, in utilities' revenue requirements since 1991. Before SFAS 106, most companies, including regulated utilities, recognized the cost of providing postretirement benefits when they actually made the payments. As health care costs escalated, Financial Accounting Standards Board (FASB) reconsidered how to account for postretirement benefits. In December 1990, FASB issued SFAS 106, Employers Accounting for Postretirement Benefits Other Than Pensions. FASB concluded that companies should stop cash accounting and begin accruing retiree welfare benefits (medical, dental, and life insurance). SFAS 106 required companies to amortize the transition benefit obligation over 20 years or less.

¹⁴ To remove expenses for prior years would be retroactive ratemaking, which is prohibited. For examples of OPUC's discussion, see Order 97-180, pages 3-5; and Order 87-406, page 126.

1 **Q. PLEASE EXPLAIN STAFF'S ADJUSTMENT FOR THE INTEREST DURING**
2 **CONSTRUCTION SIDE RECORD (EXHIBIT STAFF/13, COLUMN F).**

3 A. I added staff's side record adjustment from docket UT 101, which increases intrastate
4 revenue requirement by \$0.2 million. OPUC requires telecommunications utilities to
5 record certain events differently than the FCC allows. Because the telecommunica-
6 tions utilities must follow the FCC's uniform system of accounts for interstate
7 purposes, Sprint must track Oregon's conflicting requirements through side records.¹⁵

8 A major difference between part 32 accounting and OPUC practice has been
9 construction work in progress. OPUC allows utilities to capitalize interest during
10 construction on all construction. Utilities accumulate the interest in a side record
11 and add it to Oregon's rate base when the associated plant is placed in service.
12 The interest is then depreciated over the life of the associated plant.

13 **Q. PLEASE EXPLAIN STAFF'S ADJUSTMENTS TO INTRASTATE REVENUES**
14 **(EXHIBIT STAFF/13, COLUMNS G-J).**

15 A. Staff adjusted the revenues for known and measurable events. Column G annualizes
16 the August 2002 price increases for non-toll services. Column H reverses the effects
17 of the August 2002 price increases for the toll-related services,¹⁶ so staff could forecast
18 demand. Column I shows staff's forecasted effects of the continued decrease in toll
19 service revenue, minutes of use, and access expense through December 2003. Col-
20 umn J reapplies the toll service price increase on forecasted 2003 minutes, taking into
21 account the effects of the price increase on minutes of use (demand suppression due to
22 elasticity characteristics of toll service), toll revenues, and access expenses. The net
23 result of staff's adjustments is an increase in intrastate revenue requirement of \$66,000.

¹⁵ OPUC requires Sprint to follow 47 Code of Federal Regulations Part 32, Uniform System of Accounts for Telecommunications Companies, with the exceptions prescribed in Oregon Administrative Rules 860-027-0050 and 860-027-0052.

1 **Q. PLEASE EXPLAIN STAFF'S OTHER OUT-OF-PERIOD AND NORMALIZING**
2 **ADJUSTMENTS (EXHIBIT STAFF/13, COLUMN M).**

3 A. Staff made two other adjustments, which reduced intrastate revenue requirement
4 by a total of \$0.2 million. First, staff removed one-time, nonrecurring restructuring
5 expenses to normalize the test year. Second, staff reclassified some expenses from
6 administration to depreciation to determine more appropriate jurisdictional amounts.

¹⁶ Price-listed toll-related services include standard message toll, Sprint Sense, and toll operator.

MODERNIZATION PLAN – REVENUE REQUIREMENT**Q. HOW MUCH HAS SPRINT PLEDGED TO SPEND ON MODERNIZATION?**

A. Sprint's documentation shows that it plans to spend the following amounts in Oregon during 2003, 2004, and 2005:

\$ 578,000	Pair gain replacement for Grass Valley, Mosier, Odell, Parkdale, Wasco
<u>974,000</u>	Replacement of Copper IX T-carrier for Moro, Rufus
\$ 1,552,000	Total 2003
(453,000)	Retirements of analog carrier 2003
1,272,000	2004 Replacement of Copper IX T-carrier for Grass Valley, Wasco
<u>1,605,000</u>	2005 Replacement of Copper IX T-carrier for Fish Lake
\$ 3,976,000	Net Total Oregon for 2003-2005

Q. PLEASE EXPLAIN THE CALCULATION OF THE REVENUE REQUIREMENT EFFECT OF THE MODERNIZATION PLAN (EXHIBIT STAFF/13, COLUMN N).

A. Sprint calculated the average effects of its modernization plan over three-years, which is how long it expects the project to last. I calculated the average effects of Sprint's modernization plan over ten-years, which is about how long it has been since Sprint's last rate case was completed.

When compared to the company's proposal, my calculations developed higher average balances for plant in service and accumulated depreciation, because the plant would be in service for a longer period. (The ending balance in my calculation would apply for seven years instead of one year.) The higher average plant balances resulted in higher average annual depreciation expenses. I also added the effects of property taxes and accumulated deferred income taxes. When rounded to the nearest thousand dollars, however, my method produces the same intrastate revenue requirement change as the company's proposal, a reduction of \$285,000.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UT 155

In the Matter of the Revised Tariff Sheet Filed by)
United Telephone Company of the Northwest) STIPULATION
d/b/a Sprint for Telecommunications Service,)
Advice No. ORO2-16, and Investigation of the)
Company’s Current Earnings Level)

I. INTRODUCTION

United Telephone Company of the Northwest dba Sprint (“Sprint”) and the Commission’s staff (“Staff”) enter into this Stipulation to resolve the issues in Phase II of this docket. In Order No. 02-659, the Commission ordered Staff to conduct an investigation into Sprint’s Message Telecommunications Service (“MTS”) rates, its authority to price list MTS (“Phase I”), and its current earnings level (“Phase II”).

Staff has conducted substantial discovery related to Sprint’s current earnings level since the Commission issued Order No. 02-659. In addition, Staff and Sprint (“Stipulating Parties”) have had several conference calls during the past months and have participated in two settlement conferences in efforts to reach agreement on the appropriate Company earning level. The Stipulating Parties have agreed to conditions to resolve the Commission’s investigation of Sprint’s earning level. The Stipulating Parties submit this Stipulation to the Commission and request that the Commission enter an order approving the settlement as presented, and close the investigations into Sprint’s earnings level.

1 **11. TERMS OF THE STIPULATION**

2 1.

3 The written testimony of Staff, marked as Staff Exhibits Staff/11 and Staff/13 through
4 Staff/15, the Stipulation, marked as Staff Exhibit Staff/12 will be received in evidence pursuant
5 to this Stipulation without requiring any Stipulating Party to lay a foundation for its admission.

6 2.

7 The Stipulating Parties agree that Sprint will reduce its current intrastate earning level by
8 \$870,000, Sprint agrees to accomplish this revenue reduction by two methods: capital
9 improvement expenditures and filed tariff reductions.

- 10 • Sprint agrees to capital improvement expenditures of \$1,552,000 in 2003, \$1,272,000
11 in 2004, and \$1,605,000 in 2005, which equate to an average intrastate revenue
12 requirement reduction of \$285,000. Sprint agrees to replace analog carrier with
13 digital carrier in certain exchanges to support Caller ID-based services, improve
14 customers' dialup internet access, and better enable the company to offer DSL to
15 customers who do not currently have access to the service. The improvements also
16 include placement of interoffice fiber to certain exchanges. Sprint agrees to provide
17 Staff with reports of the progress of capital improvements under this Stipulation.
18 Sprint will provide three reports, the first by June 30, 2004, the second by June 30,
19 2005, and the third by June 30, 2006.
- 20 • Sprint agrees to file tariffs that reduce annual intrastate revenues by the remaining
21 \$585,000. If the Commission approves this stipulation, the Stipulating Parties agree
22 that a prehearing conference will be held as soon as practicable to identify parties and
23 establish the remaining schedule. In order to accomplish the tariff reductions, Sprint
24 will submit a rate design proposal to the Commission that sets forth the specific tariff
25 reductions within 30 days of a Commission order approving this Stipulation, should
26 the Commission decide to approve it, or within 30 days of a final order in Phase I of
this docket, whichever is later. After reviewing Sprint's rate design proposal, Staff

1 reserves the right to offer its own rate design proposal. The tariff reductions will
2 become effective upon a Commission order and will result in \$585,000 in annual
3 intrastate revenue reductions.

4 3.

5 The Stipulating Parties agree to support this Stipulation throughout this proceeding, in
6 any appeal, and recommends that the Commission issue an order adopting its terms.

7 4.

8 If this Stipulation is challenged by any other party to this proceeding, the Stipulating
9 Parties to this Stipulation reserve the right to cross-examine witnesses and introduce evidence to
10 respond fully to the issues presented, including the right to raise issues that are incorporated in
11 the settlements embodied in this Stipulation. Notwithstanding this reservation of rights, the
12 Stipulating Parties agree that they will continue to support the Commission's adoption of the
13 terms of this Stipulation.

14 5.

15 The Stipulating Parties have negotiated this Stipulation as an integrated document. In the
16 event the Commission does not adopt this Stipulation in whole, this Stipulation shall be void, and
17 no signatory shall be bound by any of the stipulated agreements or provisions. If the
18 Commission rejects this Stipulation in whole or in part, any Stipulating Party disadvantaged by
19 that action shall have the rights provided in OAR 860-014-0085 and shall be entitled to seek
20 reconsideration or appeal of the Commission's order.

21 6.

22 By entering into the Stipulation, no Stipulating Party will be considered to have
23 approved, admitted or consented to the facts, principles, methods or theories employed by any
24 other party in arriving at the terms of this Stipulation. No Stipulating Party will be considered to
25 have agreed that any provision of this Stipulation is appropriate for resolving issues in any other
26 proceeding.

7.

1 This Stipulation may be executed in counterparts and each signed counterpart shall
2 constitute an original document.

3 8.

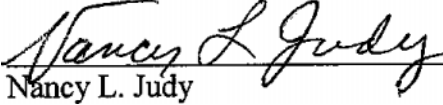
4 The Parties respectfully request the Commission to enter an order approving this
5 Stipulation, and closing the investigation into Sprint's **earnings** level.

6
7 DATED this _____ day of May 2003.

8 Respectfully submitted,
9 HARDY MYERS
10 Attorney General

11
12 _____
13 Jason W. Jones, #00059
14 Assistant Attorney General
15 **of** Attorneys for PUC Staff

16 DATED this 8 day of May 2003.

17 UNITED TELEPHONE COMPANY OF THE
18 NORTHWEST DBA SPRINT
19 
20 Nancy L. Judy
21 State Executive
22 902 Wasco Street
23 Hood River, Oregon 97031
24 (541) 387-9439
25
26

WITNESS QUALIFICATION STATEMENT**NAME:** TERRY J. LAMBETH**EMPLOYER:** PUBLIC UTILITY COMMISSION OF OREGON**ADDRESS:** 550 Capitol Street NE, Suite 215, Salem, Oregon 97301-2551
PO Box 2148, Salem, Oregon 97308-2148**EDUCATION AND TRAINING:** I graduated from Western Washington University in 1975 with a Bachelor of Arts degree in accounting. I received an Oregon Certified Public Accounting license in 1980, which I maintained until 1993. I attend annual programs on regulatory and accounting matters.**WORK EXPERIENCE:** I joined the Commission's Utility Program in August 1975. I worked in the Fiscal Audit Division until January 1980, where I performed audits of gas, electric, telecommunications, and water utilities and telecommunications cooperatives. For example, I was the lead auditor on Campbell Water, Cascade Natural Gas, Colton Telephone, Columbia Crest Water District, Community Water, Jan Ree Water, Molalla Telephone, Monitor Cooperative Telephone, Nehalem Telephone & Telegraph, North-State Telephone, Northwest Natural, Oregon Telephone, Roats Water System, and Scio Mutual Telephone. I also worked on Juniper Water.

I have worked in the Telecommunications Division since 1980, where my current duties include telecommunications auditing and accounting. I have testified before the Commission in utility property sale dockets UP 85 and UP 96; property tax rate change dockets DR 13 and UM 279; and general rate proceeding dockets UF 3711, UF 3724, UF 3781, UF 3805, UF 3807, UF 3859, UF 3867, UT 2, UT 4, UT 5, UT 7, UT 8, UT 13, UT 19, UT 33, UT 40, UT 51, UT 56, UT 61, UT 71, UT 76, UT 83, UT 85, UT 101, UT 102, UT 113, UT 125, UT 127, and UT 141.

I have prepared proposed rule changes and defended the proposals in many rulemaking dockets involving gas, electric, steam heat, telecommunications, wastewater, and water utilities and cooperatives. I maintain an analysis of the present rules structure for staff, and I review the rule changes that other staff members propose.

Phase 2, Earnings Review
Sprint/United Telephone Company of the Northwest
STAFF'S ADJUSTED TEST YEAR

	Company's Test Year Data <i>(A)</i>	Intrastate Separations Factors <i>(B)</i>	Gross Revenue Fees & Income Taxes <i>(C)</i>	SFAS 106, Other Post- employment Benefits <i>(D)</i>	Yellow Page Imputation <i>(E)</i>	Interest During Construction Side Record <i>(F)</i>
<u>INTRASTATE OREGON</u>						
1 Local Service & EAS	24,787,349					
2 Network Access	10,882,170					
3 Long Distance	953,730					
4 Other Revenues	671,013				674,690	
5 Total Operating Revenues	<u>37,294,262</u>	<u>0</u>			<u>674,690</u>	
6 Plant Specific	7,140,005	(50,947)				
7 Depreciation & Amortization	9,710,018	(12,747)				85,546
8 Plant Nonspecific & USF Contrib.	3,614,965	(69,032)				
9 Access	483,693	0				
10 Customer Operations (ex. B&C)	4,157,043	(126,775)			122,301	
11 Corporate & Other Expenses	3,842,442	(30,224)				
12 Total Operating Expenses	<u>28,948,166</u>	<u>(289,725)</u>			<u>122,301</u>	<u>85,546</u>
13 Net State Corporate Tax	574,540	110,709	(110,273)		36,346	(7,502)
14 Net Federal Income Tax	3,254,794	89,873	(1,003,448)		180,025	(37,155)
15 Other Taxes	1,404,074	4,150	(11,642)		1,687	
16 Total Operating Taxes	<u>5,233,408</u>	<u>204,732</u>	<u>(1,125,363)</u>		<u>218,058</u>	<u>(44,657)</u>
17 Net Operating Income	<u>3,112,688</u>	<u>84,993</u>	<u>1,125,363</u>		<u>334,331</u>	<u>(40,889)</u>
18 Telecom. Plant in Service	138,013,827	(156,438)				1,226,357
19 Accum. Deprec. & Amortization	(81,539,923)	85,473				(372,031)
20 Accumulated Deferred Taxes	(12,035,841)	13,465				10,972
21 Other Rate Base	4,339,149	(6,245)				
22 Net Average Rate Base	<u>48,777,212</u>	<u>(63,745)</u>				<u>865,298</u>
23 RETURN ON RATE BASE	6.38%	0.18%	2.31%	0.00%	0.69%	-0.25%
24 REVENUE REQUIREMENT	2,443,073	(154,273)	(1,909,032)	0	(567,149)	206,373

Docket UT 155
Phase II

ORDER NO. 03-382

Staff/13
Lambeth/2

Phase 2, Earnings Review
Sprint/United Telephone Company of the Northwest
STAFF'S ADJUSTED TEST YEAR

	Annualize Aug. '02 Non-Toll Price Increases <i>(G)</i>	Reverse Aug. '02 Toll Price Increases <i>(H)</i>	Toll Revenue Forecast <i>(I)</i>	Revenues with Aug. '02 Price Increases <i>(J)</i>	Pension Assets <i>(K)</i>	Uncollectible Revenues <i>(L)</i>
<u>INTRASTATE OREGON</u>						
1 Local Service & EAS	40,266					
2 Network Access						
3 Long Distance		(58,321)	(285,379)	94,531		
4 Other Revenues	(411)	2,637	12,902	(4,274)		518,330
5 Total Operating Revenues	<u>39,855</u>	<u>(55,684)</u>	<u>(272,477)</u>	<u>90,257</u>		<u>518,330</u>
6 Plant Specific					138,068	
7 Depreciation & Amortization					131,677	
8 Plant Nonspecific & USF Contrib.						
9 Access			(174,300)	40,172		
10 Customer Operations (ex. B&C)					185,277	
11 Corporate & Other Expenses					269,306	
12 Total Operating Expenses			<u>(174,300)</u>	<u>40,172</u>	<u>724,328</u>	
13 Net State Corporate Tax	2,580	(3,666)	(6,433)	3,290	(30,044)	34,210
14 Net Federal Income Tax	12,781	(18,155)	(31,861)	16,296	(148,809)	169,442
15 Other Taxes	757	(146)	(713)	236		
16 Total Operating Taxes	<u>16,118</u>	<u>(21,967)</u>	<u>(39,007)</u>	<u>19,822</u>	<u>(178,853)</u>	<u>203,652</u>
17 Net Operating Income	<u>23,737</u>	<u>(33,717)</u>	<u>(59,170)</u>	<u>30,263</u>	<u>(545,475)</u>	<u>314,678</u>
18 Telecom. Plant in Service						
19 Accum. Deprec. & Amortization						
20 Accumulated Deferred Taxes					(105,030)	
21 Other Rate Base					(8,177,979)	
22 Net Average Rate Base					<u>(8,283,009)</u>	
23 RETURN ON RATE BASE	0.05%	-0.07%	-0.12%	0.06%	0.56%	1.06%
24 REVENUE REQUIREMENT	(40,267)	57,197	100,374	(51,337)	(386,197)	(533,811)

Docket UT 155
Phase II

ORDER NO. 03-382

Staff/13
Lambeth/3

Phase 2, Earnings Review
Sprint/United Telephone Company of the Northwest
STAFF'S ADJUSTED TEST YEAR

	Out-of-Period & Normalizing Adjustments <i>(M)</i>	Modernization Plan <i>(N)</i>	Effects of Staff's Adjs. on Sep. Factors <i>(O)</i>	Adjusted Test Year <i>(P)</i>	Revenue Requirement <i>(Q)</i>	Adjusted Results of Operations <i>(R)</i>
<u>INTRASTATE OREGON</u>						
1 Local Service & EAS				24,827,615	(584,798)	24,242,817
2 Network Access				10,882,170	0	10,882,170
3 Long Distance				704,561	0	704,561
4 Other Revenues				1,874,887	5,965	1,880,852
5 Total Operating Revenues				<u>38,289,233</u>	<u>(578,833)</u>	<u>37,710,400</u>
6 Plant Specific			2,604	7,229,730		7,229,730
7 Depreciation & Amortization	60,115	123,564	4,021	10,102,194		10,102,194
8 Plant Nonspecific & USF Contrib.			115,445	3,661,378		3,661,378
9 Access				349,565		349,565
10 Customer Operations (ex. B&C)			52,410	4,390,256		4,390,256
11 Corporate & Other Expenses	(254,857)		(8,363)	3,818,304		3,818,304
12 Total Operating Expenses	<u>(194,742)</u>	<u>123,564</u>	<u>166,117</u>	<u>29,551,427</u>		<u>29,551,427</u>
13 Net State Corporate Tax	12,853	(11,403)	(10,883)	594,324	(37,477)	556,847
14 Net Federal Income Tax	63,661	(56,481)	(53,903)	2,437,060	(185,627)	2,251,433
15 Other Taxes		15,552		1,413,955	(10,994)	1,402,961
16 Total Operating Taxes	<u>76,514</u>	<u>(52,332)</u>	<u>(64,786)</u>	<u>4,445,339</u>	<u>(234,098)</u>	<u>4,211,241</u>
17 Net Operating Income	<u>118,228</u>	<u>(71,232)</u>	<u>(101,331)</u>	<u>4,292,467</u>	<u>(344,735)</u>	<u>3,947,732</u>
18 Telecom. Plant in Service		2,385,145	(15,764)	141,453,127		141,453,127
19 Accum. Deprec. & Amortization		(1,362,199)	(19,863)	(83,208,543)		(83,208,543)
20 Accumulated Deferred Taxes		13,138		(12,103,296)		(12,103,296)
21 Other Rate Base			(2,107)	(3,847,182)		(3,847,182)
22 Net Average Rate Base		<u>1,036,084</u>	<u>(37,734)</u>	<u>42,294,106</u>		<u>42,294,106</u>
23 RETURN ON RATE BASE	0.24%	-0.46%	-0.20%	10.15%	-0.82%	9.33%
24 REVENUE REQUIREMENT	(200,558)	284,889	165,920	(584,798)	584,798	0

Docket UT 155
Phase II

ORDER NO. 03-382

Staff/13
Lambeth/4

Phase 2, Earnings Review
Sprint/United Telephone Company of the Northwest
STAFF'S ADJUSTED TEST YEAR

	Company's Test Year Data <i>(A)</i>	Intrastate Separations Factors <i>(B)</i>	Gross Revenue Fees & Income Taxes <i>(C)</i>	SFAS 106, Other Post- employment Benefits <i>(D)</i>	Yellow Page Imputation <i>(E)</i>	Interest During Construction Side Record <i>(F)</i>
<u>TOTAL OREGON</u>						
1 Local Service & EAS	24,787,349					
2 Network Access	29,437,859					
3 Long Distance	1,015,717					
4 Other Revenues	758,217				674,690	
5 Total Operating Revenues	<u>55,999,142</u>				<u>674,690</u>	
6 Plant Specific	9,497,157					
7 Depreciation & Amortization	12,904,934					113,843
8 Plant Nonspecific & USF Contrib.	4,798,805					
9 Access	483,693					
10 Customer Operations (ex. B&C)	5,505,891				167,080	
11 Corporate & Other Expenses	5,098,900					
12 Total Operating Expenses	<u>38,289,380</u>				<u>167,080</u>	<u>113,843</u>
13 Net State Corporate Tax	1,211,000		(146,676)		33,391	(9,968)
14 Net Federal Income Tax	6,539,999		(1,336,365)		165,386	(49,372)
15 Other Taxes	1,714,530		(11,642)		1,687	
16 Total Operating Taxes	<u>9,465,529</u>		<u>(1,494,683)</u>		<u>200,464</u>	<u>(59,340)</u>
17 Net Operating Income	<u>8,244,233</u>		<u>1,494,683</u>		<u>307,146</u>	<u>(54,503)</u>
18 Telecom. Plant in Service	182,818,246					1,626,322
19 Accum. Deprec. & Amortization	(108,639,936)					(496,197)
20 Accumulated Deferred Taxes	(15,942,956)					14,514
21 Other Rate Base	5,749,829					
22 Net Average Rate Base	<u>63,985,183</u>					<u>1,144,639</u>
23 RETURN ON RATE BASE	12.88%	0.00%	2.34%	0.00%	0.48%	-0.25%

Docket UT 155
Phase II

ORDER NO. 03-382

Staff/13
Lambeth/5

Phase 2, Earnings Review
Sprint/United Telephone Company of the Northwest
STAFF'S ADJUSTED TEST YEAR

	Annualize Aug. '02 Non-Toll Price Increases <i>(G)</i>	Reverse Aug. '02 Toll Price Increases <i>(H)</i>	Toll Revenue Forecast <i>(I)</i>	Revenues with Aug. '02 Price Increases <i>(J)</i>	Pension Assets <i>(K)</i>	Uncollectible Revenues <i>(L)</i>
<u>TOTAL OREGON</u>						
1 Local Service & EAS	40,266					
2 Network Access						
3 Long Distance		(58,321)	(285,379)	94,531		
4 Other Revenues	(411)	2,637	12,902	(4,274)		265,498
5 Total Operating Revenues	<u>39,855</u>	<u>(55,684)</u>	<u>(272,477)</u>	<u>90,257</u>		<u>265,498</u>
6 Plant Specific					184,968	
7 Depreciation & Amortization					175,233	
8 Plant Nonspecific & USF Contrib.						
9 Access			(174,300)	40,172		
10 Customer Operations (ex. B&C)					253,114	
11 Corporate & Other Expenses					360,201	
12 Total Operating Expenses			<u>(174,300)</u>	<u>40,172</u>	<u>973,516</u>	
13 Net State Corporate Tax	2,580	(3,666)	(6,433)	3,290	(40,682)	17,523
14 Net Federal Income Tax	12,781	(18,155)	(31,861)	16,296	(201,500)	86,791
15 Other Taxes	757	(146)	(713)	236		
16 Total Operating Taxes	<u>16,118</u>	<u>(21,967)</u>	<u>(39,007)</u>	<u>19,822</u>	<u>(242,182)</u>	<u>104,314</u>
17 Net Operating Income	<u>23,737</u>	<u>(33,717)</u>	<u>(59,170)</u>	<u>30,263</u>	<u>(731,334)</u>	<u>161,184</u>
18 Telecom. Plant in Service						
19 Accum. Deprec. & Amortization						
20 Accumulated Deferred Taxes					(139,376)	
21 Other Rate Base					(10,852,300)	
22 Net Average Rate Base					<u>(10,991,676)</u>	
23 RETURN ON RATE BASE	0.04%	-0.05%	-0.09%	0.05%	0.56%	0.41%

Docket UT 155
Phase II

ORDER NO. 03-382

Staff/13
Lambeth/6

Phase 2, Earnings Review
Sprint/United Telephone Company of the Northwest
STAFF'S ADJUSTED TEST YEAR

	Out-of-Period & Normalizing Adjustments <i>(M)</i>	Modernization Plan <i>(N)</i>	Effects of Staff's Adjs. on Sep. Factors <i>(O)</i>	Adjusted Test Year <i>(P)</i>	Revenue Requirement <i>(Q)</i>	Adjusted Results of Operations <i>(R)</i>
<u>TOTAL OREGON</u>						
1 Local Service & EAS				24,827,615	(584,798)	24,242,817
2 Network Access				29,437,859	0	29,437,859
3 Long Distance				766,548	0	766,548
4 Other Revenues				1,709,259	5,965	1,715,224
5 Total Operating Revenues				<u>56,741,281</u>	<u>(578,833)</u>	<u>56,162,448</u>
6 Plant Specific				9,682,125		9,682,125
7 Depreciation & Amortization	80,000	173,000		13,447,010		13,447,010
8 Plant Nonspecific & USF Contrib.				4,798,805		4,798,805
9 Access				349,565		349,565
10 Customer Operations (ex. B&C)				5,926,085		5,926,085
11 Corporate & Other Expenses	(340,875)			5,118,226		5,118,226
12 Total Operating Expenses	<u>(260,875)</u>	<u>173,000</u>		<u>39,321,816</u>		<u>39,321,816</u>
13 Net State Corporate Tax	17,218	(15,800)		1,061,777	(37,477)	1,024,300
14 Net Federal Income Tax	85,280	(78,260)		5,191,020	(185,627)	5,005,393
15 Other Taxes		20,790		1,725,499	(10,994)	1,714,505
16 Total Operating Taxes	<u>102,498</u>	<u>(73,270)</u>		<u>7,978,296</u>	<u>(234,098)</u>	<u>7,744,198</u>
17 Net Operating Income	<u>158,377</u>	<u>(99,730)</u>		<u>9,441,169</u>	<u>(344,735)</u>	<u>9,096,434</u>
18 Telecom. Plant in Service		3,217,000		187,661,568		187,661,568
19 Accum. Deprec. & Amortization		(1,831,000)		(110,967,133)		(110,967,133)
20 Accumulated Deferred Taxes		17,800		(16,050,018)		(16,050,018)
21 Other Rate Base				(5,102,471)		(5,102,471)
22 Net Average Rate Base		<u>1,403,800</u>		<u>55,541,946</u>		<u>55,541,946</u>
23 RETURN ON RATE BASE	0.25%	-0.35%	0.00%	17.00%	-0.62%	16.38%

Docket UT 155
Phase II

ORDER NO. 03-382

Staff/13
Lambeth/7

Sprint/United Telephone Company of the Northwest
CAPITAL STRUCTURE AND RATE OF RETURN

<u>Line</u>	<u>Balance</u> <i>(A)</i>	<u>Cost of Capital</u> <i>(B)</i>	<u>Ratio of Capital Structure</u> <i>(C)</i>	<u>Weighted Cost of Capital</u> <i>(D)</i>
1 Series Q	\$29,000,000	8.770%		
2 Series T	<u>8,150,000</u>	<u>6.890%</u>		
3 Long-term Debt	\$37,150,000	8.358%	38.880%	3.249%
4 Short-term Debt	0	0.000%	0.000%	0.000%
5 Preferred Stock	526,500	5.080%	0.551%	0.028%
6 Stockholders' Equity	<u>57,873,900</u>	10.000%	<u>60.569%</u>	<u>6.057%</u>
7 Total Capital	<u><u>\$95,550,400</u></u>		<u><u>100.000%</u></u>	
8 RATE OF RETURN				<u><u>9.334%</u></u>

Sprint/United Telephone Company of the Northwest
REVENUE-SENSITIVE FACTORS

<u>Line</u>	<u>Rates</u> (A)		<u>Ratios Used for Staff's Revenue Requirements</u> (B)		<u>Weighted Rates</u> (C)
1 Local Service & EAS	1.020%	x	100.000%	=	1.0200%
2 Network Access	0.500%	x	0.000%	=	0.0000%
3 Long Distance	4.521%	x	0.000%	=	0.0000%
4 Directory	0.000%	x	0.000%	=	0.0000%
5 Billing & Collection	0.500%	x	0.000%	=	0.0000%
6 Miscellaneous	<u>3.217%</u>	x	0.000%	=	<u>0.0000%</u>
7 Total Uncollectibles	0.848%				1.0200%
8 Net State Corporate Tax	6.600%	x	97.100%	=	6.4086%
9 Net Federal Income Tax	35.000%	x	90.691%	=	31.7420%
10 Oregon PUC Fee	0.250%	x	100.000%	=	0.2500%
11 Franchise Fees	1.630%	x	100.000%	=	<u>1.6300%</u>
12 Total Revenue-Sensitive Factors					<u>41.0506%</u>
13 Net Income					<u>58.9494%</u>
14 GROSS-UP MULTIPLIER					<u><u>169.6370%</u></u>

1 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.**

2 A. My name is Irvin L. Emmons. I am employed by the Public Utility Commission of
3 Oregon (PUC) as a Senior Telecommunications Engineer in the Telecommunications
4 Rates and Service Quality Section, Telecommunications Division, Utility Program. My
5 business address is 550 Capitol Street NE Suite 215, Salem, Oregon 97301-2551.

6 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK
7 EXPERIENCE.**

8 A. My Witness Qualification Statement is found in Exhibit Staff/15.

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

10 A. I will provide a technical review of two projects proposed by United Telephone
11 Company of the Northwest d.b.a. Sprint (Sprint). The projects would be financed with
12 money from the revenue requirement reduction agreed to by Sprint in this docket. The
13 projects reflect additional spending on needed improvements beyond those already
14 budgeted. This testimony provides my assessment of the replacement of analog pair
15 gain with digital carrier in selected Sprint exchanges, and the placement of interoffice
16 fiber optic cabling for selected Sprint exchanges. Staff Witness Lambeth will address
17 revenue requirement effects in Exhibit Staff/11.

18 **Q. DID YOU PREPARE AN EXHIBIT FOR THIS DOCKET?**

19 A. Yes. I prepared Exhibit Staff/15, my Witness Qualification Statement.

20 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

21 A. My testimony is organized as follows:

- 22 Project 1, Sprint replacement of analog carrier with digital carriers in Mosier,
- 23 Odell, Parkdale, Grass Valley, and Wasco exchanges.Emmons/2
- 24 Project 2, Sprint placement of interoffice fiber to Rufus, Wasco,
- 25 Moro, Grass Valley, and Fish Lake central officesEmmons/6

**PROJECT 1: SPRINT REPLACEMENT OF ANALOG CARRIER
WITH DIGITAL CARRIERS IN MOSIER, ODELL, PARKDALE,
GRASS VALLEY, AND WASCO EXCHANGES**

Q. WHAT DOES SPRINT PROPOSE WITH THIS PROJECT?

A. Sprint provided the following narrative: "primarily, the projects in this plan address near-term requirements for modernization. Under this plan, analog carrier,¹ AMLs,² and CM-8s³ would be replaced with digital carrier in Mosier, Odell, Parkdale, Grass Valley, and Wasco. This will allow United to offer Caller ID-based services in these exchanges. It will also improve customers' dial-up Internet access, and will better position the company to deploy DSL. Analog carrier does not support more than one line into a home, and averages 10 troubles per 100 units annually (compared to 2 per 100 with digital). 151 subscribers will be taken off of analog systems under the modernization plan. All of the work and the retirements of analog carrier equipment would occur in the fourth quarter of 2003."

Q. WHAT ARE THE SERVICE QUALITY AND CONSUMER COMPLAINT SUMMARIES FOR THE GRASS VALLEY, MOSIER, ODELL, PARKDALE, AND WASCO EXCHANGES THAT APPLY TO THIS PROJECT?

A. **Grass Valley:** Grass Valley did not meet the trouble report rate of 2.0 for two months in 2002. The November 2002 report indicated that a CM8 (analog pair

¹ Analog Carrier: "The first carrier-loop system, which emerged during the 1970's and was used to provide improved voice-quality transmission to subscribers who were located at distances too remote to be served by the central office. In this system, multiplexing occurred at the central office, and there was little value added at the analog box deployed on the subscriber side. While analog carriers did provide an advantage over previous systems, they were difficult to install and often resulted in inconsistent quality of service" (quoted from Newton's Telecom Dictionary, 18th Edition).

² AML means Added Main Line. An AML analog pair gain that essentially provides two lines for one.

³ CM-8 (trademark of Reliance Telecommunication Electronic Co.). The CM-8 station carrier system provides eight subscriber circuits on one exchange-grade non-loaded cable pair. Each circuit is derived by analog carrier frequency techniques that use standard carrier frequencies and levels. The CM-8 station carrier transmission is bi-directional over a single subscriber cable pair.

1 gain) system went out-of-service generating three trouble reports. Replacing a
2 common card solved the problem. Since the card replacement, no relevant
3 complaints from the Commission's Consumer Services Division were received.

4 **Mosier:** Mosier did not meet the trouble report rate of 2.0 for five months in 2002. The
5 April 2002 report indicated that a 48-channel Seisor lost a span line, generating eight
6 trouble reports. The problem was corrected replacing the remote's T1⁴ card. No
7 relevant complaints from the Consumer Services Division were received.

8 **Odell:** Odell did not meet the trouble report rate of 2.0 for four months in 2002. No
9 relevant complaints from the Consumer Services Division were received.

10 **Parkdale:** Parkdale did not meet the trouble report rate of 2.0 for one month in 2002.
11 No relevant complaints from the Consumer Services Division were received.

12 **Wasco:** Wasco did not meet the trouble report rate of 2.0 for four months in 2002.
13 The January 2002 report indicated a digital carrier went out-of-service causing
14 multiple trouble reports. The problem was associated with a defective card that was
15 replaced. No relevant complaints from the Consumer Services Division were received.

16 **Q. WHAT IS AN ANALOG CARRIER SYSTEM?**

17 A. Almost every aspect of an analog carrier system is based on 1960's technology.

18 Analog carrier systems multiplex (i.e. combine) a number of phone conversations over
19 a lesser number of cable pairs. Loop carrier systems were basically developed to
20 solve two problems: reduce copper cable pair requirements and overcome electrical
21 constraints on long loops.

⁴ T-1: "Also spelled T1, which stands for Trunk level 1. A digital transmission link, with a total signaling speed of 1.544 Mbps (1,544,000 bits per second). T-1 was delivered to your business on two pairs of unshielded twisted copper wires – one pair for transmit and one pair for receive – the combination of these two simplex (unidirectional) circuits yields a full duplex (bi-directional) circuit" (the partial definition is quoted from Newton's Telecom Dictionary, 18th Edition).

1 The analog carrier architecture employs of an analog box in the central office,
2 where the multiplexing takes place. The signal is carried over existing copper cable to
3 a wall-mounted device that is usually positioned close to the customer's service drop.
4 There are usually two or three, and sometimes as many as eight, subscribers on a
5 copper loop. There was little need for many ancillary services, such as call forwarding
6 and other features, when this system was designed; therefore there was minimal
7 demand for the architecture required to support these services.

8 Analog carriers were an excellent solution for providing voice service before the
9 introduction of CLASS services⁵ and the demands of the Internet. The analog carrier
10 system severely limits modem speed throughput⁶ and has limited reach compared to
11 today's digital carrier systems. Additionally, spare parts for the various analog
12 systems have become difficult to locate.

13 **Q. WHAT SPECIFIC BENEFITS WOULD BE EXPECTED FROM THE**
14 **REPLACEMENT OF ANALOG CARRIERS?**

15 A. 151 rural customers would benefit from this project, allowing them the option of
16 installing extra lines, obtaining Internet connectivity above 9,600 bits per second, and
17 an opportunity to select various features and Caller ID-based services. This project
18 would complete the replacement of all analog carriers in Sprint's Oregon territory.

19 **Q. WHY CAN'T THIS PROJECT BE REASONABLY FINANCED OUT OF SPRINT'S**
20 **CURRENT CONSTRUCTION BUDGET?**

⁵ CLASS means Custom Local Area Signaling Services. It is based on the availability of channel interoffice signaling. CLASS consists of number-translation services, such as Call-Forwarding and Caller Identification, available within a local exchange of a Local Access and Transport Area (LATA). CLASS is a service mark of Bellcore, now Telcordia Technologies. Some of the phone services which Telcordia promotes for CLASS are Automatic Callback, Automatic Recall, Calling Number Delivery, Customer Originated Trace, Distinctive Ringing/Call Waiting, Selective Call Forwarding, and Selective Call Rejection (Newton's Telecom Dictionary, 18th Edition).

⁶ Analog carriers are limited to modem access speed of 9600 bits per second or less.

1 A. Sprint recognizes the benefits of replacing all the analog carrier systems in its
2 serving territory but this project did not meet its corporate criteria for adding the
3 project to its construction budget. The analog carrier systems will not be replaced
4 unless accomplished in this plan.

5 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS FOR**
6 **THIS PROJECT.**

7 A. The demand for fast modem access to the Internet and advanced CLASS has
8 exceeded the capabilities of the analog carrier systems. It is difficult to find replace-
9 ment parts for the various analog carrier systems. Sprint does not currently plan to
10 systematically replace existing analog carrier systems.

11 This project will replace all analog carrier systems within Sprint's Oregon territory.
12 The precedence for this upgrade was established in OPUC Order No. 01-272, in
13 docket UM 1015, when Qwest Communications Inc. replaced all of its analog carrier
14 systems. 151 subscribers will benefit from this project. This is a valid project that will
15 enhance the Sprint network and better serve its customers.

1 **PROJECT 2: SPRINT PLACEMENT OF INTEROFFICE FIBER TO**
2 **RUFUS, WASCO, MORO, GRASS VALLEY, AND FISH LAKE EXCHANGES**

3 **Q. WHAT DOES SPRINT PROPOSE WITH THIS PROJECT?**

4 A. Sprint provided the following narrative:

5 Additionally, the plan includes placement of interoffice fiber to
6 Rufus, Wasco, Moro, Grass Valley, Fish Lake over a three-year
7 period, beginning in the fourth quarter of 2003. These communities
8 are currently connected with copper T-carrier.⁷ There would be
9 minimal retirements associated with this activity. Some copper
10 t-carrier spans will be left in place for diversity and the rest will be
11 turned over for exchange plant. Many communities have told the
12 company that fiber connectivity is essential to their economic
13 development. Placing fiber will provide a cleaner signal and the
14 bandwidth necessary to accommodate current and future data
15 applications. Additionally, future capacity requirements are more
16 easily addressed with fiber optic routes than with the copper toll
17 cable routes currently in place.

18 **Q. WHAT ARE THE SERVICE QUALITY AND CONSUMER COMPLAINT**
19 **SUMMARIES FOR FISH LAKE, GRASS VALLEY, MORO, RUFUS, AND**
20 **WASCO EXCHANGES THAT APPLY TO THIS PROJECT?**

21 A. **Fish Lake:** Fish Lake met the Commission's final trunk group blockage standard in
22 2002. The wire center did not meet the trouble report rate of 2.0 for one month in
23 2002. No relevant complaints from the Commission's Consumer Services Division
24 were received.

25 **Grass Valley:** Grass Valley met the final trunk group blockage standard in 2002. It did
26 not meet the trouble report rate of 2.0 for two months in 2002. No relevant complaints
27 from the Consumer Services Division were received.

⁷ T-Carrier: T stands for trunk, meaning that the T-Carrier technology was developed for the "trunk side," or carrier side, of the network. In carrier (telco) parlance, the "line side" of the network is the end user, or local loop, side. T-Carrier is a generic name for any of several digitally multiplexed carrier systems (the partial definition is quoted from Newton's Telecom Dictionary, 18th Edition).

1 **Moro:** Moro met the final trunk group blockage standard in 2002. It did not meet the
2 trouble report rate of 2.0 for one month in 2002. No relevant complaints from the
3 Consumer Services Division were received.

4 **Rufus:** Rufus met the final trunk group blockage standard in 2002. It met the trouble
5 report rate standard for all months in 2002. No relevant complaints from the
6 Consumer Services Division were received.

7 **Wasco:** Wasco met the final trunk group blockage standard in 2002. It did not meet
8 the trouble report rate of 2.0 for four months in 2002. No relevant complaints from the
9 Consumer Services Division were received.

10 **Q. WHAT ARE THE ADVANTAGES OF PLACING FIBER CABLE?**

11 A. The placement of fiber optic cable and SONET⁸ terminals has numerous benefits to
12 Oregon customers. Fiber optic systems have the potential to provide unlimited
13 bandwidth to meet future capacity requirements and provide higher service quality
14 performance than copper systems. Fiber optic cable has the potential to provide
15 virtually unlimited bandwidth that meets existing digital demands and has the
16 capability of supporting future technologies. The fiber optic technology also typically
17 has low power consumption, and small space needs. It is totally insensitive to
18 electromagnetic interference and is insensitive to outside surveillance. All these
19 benefits are attractive to those needing vast, clean transmission capacity.

20 **Q. HOW DOES THIS CABLE REPLACEMENT DIRECTLY ENHANCE THE**
21 **SELECTED COMMUNITIES?**

⁸ SONET means Synchronous Optical NETWORK. SONET is a family of fiber optic transmission rates from 51.84 million bits per second to 39.812 gigabits (billion, or thousand million) per second (and going higher, as we speak), created to provide the flexibility needed to transport many digital signals with different capacities, and to provide a design standard for manufactures (the partial definition is quoted from Newton's Telecom Dictionary, 18th Edition).

1 A. The telecommunications network capabilities of a region, county, city, or town will
2 impact its attractiveness to businesses, institutions, and residents and determine the
3 type of industrial and commercial economic activity it can support. An infrastructure
4 that provides advanced telecommunications facilities and supports broadband
5 services provides a direct benefit to the economic growth, education, health, and
6 safety of communities.

7 **Q. WHY CAN'T THIS PROJECT BE REASONABLY FINANCED OUT OF SPRINT'S**
8 **CONSTRUCTION BUDGET?**

9 A. Sprint recognizes the benefits of adding fiber optic cable in the selected exchanges
10 but this project did not meet its corporate criteria for adding the project to its
11 construction budget. The new fiber cable will not be installed unless accomplished
12 in this plan.

13 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS FOR**
14 **THE PLACEMENT OF INTEROFFICE FIBER.**

15 A. Sprint's proposed fiber optic improvement plan would benefit the communities served.
16 This is a valid project that will enhance the Sprint network and better serve its
17 customers.

18 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

19 A. Yes.

WITNESS QUALIFICATION STATEMENT

I began my career in the communications field in 1965 as an airborne radio maintenance technician with the United States Air Force (USAF). I graduated from Auburn University in 1972 with a Bachelor of Science degree in Electrical Engineering, with emphasis in communications. After graduation I was commissioned in the USAF as a 2nd Lieutenant and attended an advanced communications electronics military school. My carrier specialty was Communications Electronics Engineer. The following two years I served as lead field engineer, evaluating seven radar systems; scripting, collecting, and analyzing evaluation data and writing technical reports. The following four years I was responsible for long-haul military telecommunications operations at a key network node in Spain, which included engineering support for a telephone switch.

My next USAF assignment was as liaison exchange officer to Canadian Forces Communication Command Headquarters; serving as system traffic manager for their military telecommunications switched network. I was the approval/design authority for countrywide four-wire telephone configurations. During my final five years with the USAF, 1984 to 1989, I managed a technical team that was responsible for providing high-altitude electromagnetic pulse protection for communications and telecommunications sites performing critical missions. I retired with the rank of Major.

I spent the next eight years, 1990 to 1998, as a senior communications engineer for Science Applications International Corporation (SAIC). I had primary responsibility for technical analysis, logistics, and management of communications maintenance personnel. During this period I also worked for one-year as the Program Manager for a small government contractor, Shield Rite, Inc. Managed \$9-million contract, ensuring efficient production and on-budget spending.

I joined the Oregon Public Utility Commission (OPUC) in 1998 as a telecommunications engineer and was promoted to senior telecommunications engineer in 2000. I served as principal in the preparation of current Oregon Administrative Rules governing service quality for telecommunications utilities. My responsibilities include the review and technical analysis of service quality reports received from Oregon's largest telecommunications utilities, Qwest, Verizon, Sprint, and CenturyTel. I summarize these service quality statistics in monthly reports and present them to staff management and the Commissioners. I also perform field audits of central offices and outside plant that have failed to meet standards and provide research and technical analysis for various Commission dockets and customer complaints.