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VIA FEDEX DELIVERY

September 24, 2003

Arizona Corporation Commission
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Arizona Corporation Commission
Docket Control – Utilities Division
1200 West Washington Street
Phoenix, AZ 85007

Re: ACC Docket No. T-000000A-00-0194

Enclosed for filing in the above-referenced docket, please find the original and thirteen (13) copies of ***Exceptions to Phase II and Phase II-A (Supplemental) Opinion and Order Regarding Transport and Analog Port Rate Issues***.

Please note that this is an **Exception**.

If you have any questions, please contact me at (206) 628-7593.

Sincerely yours,

Davis Wright Tremaine LLP

Melissa K. Geraghty

Melissa K. Geraghty
Assistant to Mary E. Steele

Enclosures
cc: Mary E. Steele
Rick Wolters
Caroline Butler, ACC
William Dunkel, Dunkel & Associates

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BEFORE THE ARIZONA CORPORATION COMMISSION

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IN THE MATTER OF INVESTIGATION INTO QWEST CORPORATION'S COMPLIANCE WITH CERTAIN WHOLESALE PRICING REQUIREMENTS FOR UNBUNDLED NETWORK ELEMENTS AND RESALE DISCOUNTS	DOCKET NO. T-00000A-00-0194 EXCEPTIONS TO PHASE II AND PHASE II-A (Supplemental) OPINION AND ORDER REGARDING TRANSPORT AND ANALOG PORT RATE ISSUES

I. INTRODUCTION

The Supplemental Recommended Opinion and Order ("ROO") with respect to the analog port rate in this proceeding is rooted in the past. Because carriers have historically recovered switching costs through a combination of flat-rated and per-minute charges, the ROO adopts a presumption that this rate structure should continue in the future. As the FCC has recently recognized, however, modern switches have virtually no usage constraints. Imposing switching costs based on usage, therefore, violates the FCC's rules requiring that unbundled network element rates be structured consistently with the manner in which costs are incurred. Perhaps more to the point, imposing usage based switching charges on competitive carriers places those carriers at a competitive disadvantage for serving residential users.

For these reasons, AT&T Communications of the Mountain States, Inc. ("AT&T") takes exception to the determination of the ROO that switching costs should be allocated between a fixed port rate and a per-minute usage charge.[1] AT&T requests that the ROO be revised to establish a flat-rated local switching rate of $4.06.

[1] AT&T has no exception to the determinations of the ROO with respect to transport rates.

II. DISCUSSION

A. Industry and Commission Views Regarding the Appropriate Way To Recover Switching Costs Have Changed.

Until recently, the telecommunications industry assumed that there were switching costs that varied based on usage. The testimony in this proceeding reflects that view. When testimony was initially filed in this case in 2001, AT&T and MCI filed testimony recommending that switching costs should be recovered on both a flat-rated and a per-minute-of-use basis. However, the industry and commissions across the United States are now realizing that this view is outdated and wrong. Two years later, therefore, AT&T and MCI proposed here that Qwest's charges for switching should be based on the manner in which its costs for switching are incurred – a single, flat rate with no component for usage. The FCC's own Wireline Competition Bureau adopted this approach only a few weeks ago in an order resolving Verizon's unbundled element rates for Virginia.[2] Far from being the CLEC's position "du jour," as the ROO holds, this approach reflects a considered analysis of both current technology and the state of competition in the industry.

The reason that industry views have changed regarding switching cost is that switches themselves have improved and changed over time. For example, the Lucent 5ESS switch has increased in processor capacity to permit 25 times the number of call completions per hour than were possible when the switch was first introduced in 1982.[3] The result of these changes in technology is that there are, today, virtually no usage-based constraints on a modern switch.[4] The Commission's Order here should reflect this technological reality.

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[2] *See In the Matter of Petition of WorldCom Inc. pursuant to § 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission regarding Interconnection Disputes With Verizon Virginia Inc., CC Docket No. 00-218, DA 03–2738* , Memorandum Opinion and Order (released August 39, 2003) at ¶¶ 458–483 (attached as Appendix A) ("*Virginia UNE Rate Order*").

[3] Ex. AT&T/MCI 3 (Gillan-Chandler Direct) at 14.

[4] Ex. AT&T/MCI 3 (Gillan-Chandler Direct) at 3-4.

B. Failure To Base Charges on How Costs Are Incurred Will Distort the Market.

Charges for local switching provided as an unbundled network element must be based on the cost of providing that element.[5] Moreover, those rates "must recover costs in a manner that reflects the way they are incurred."[6] The undisputed record in this proceeding is that Qwest does not incur switching costs on a per minute basis. Instead, Qwest purchases switching by paying a flat rate.[7] For this reason alone, the Commission should reject the ROO's holding.

Charging new entrance on a per minute basis for something that Qwest buys at a flat rate hampers the ability of a new entrant to compete with Qwest. As AT&T/MCI witnesses Mr. Gillan and Mr. Chandler explained, charging a new entrant by the minute for each and every call that their customers make creates

> "very different cost implications for CLECs than Qwest for calls that are identical, introducing a serious distortion to the market. This is particularly critical in a local market where the dominant provider (Qwest) offers flat-rate service and the market is moving towards *more* flat-rate offerings. In such an environment it is absolutely critical that CLECs not be penalized through a contrived usage rate for local switching.[8]

The FCC's Wireline Competition Bureau recognized these facts directly in its recent *Virginia UNE Rate Order*. In that case, Verizon, like Qwest, argued that switching costs should be a combination of per-port charges and usage-based charges. Verizon argued that usage affects the costs of providing many of the services associated with switching and that this should be reflected in the rate structure.[9]

The FCC's Wireline Competition Bureau reviewed all of the costs that Verizon contended were usage-based. For example, Verizon argued that initial switch costs were usage-based because central processor costs are usage sensitive. The FCC rejected this argument. The FCC determined that "modern switches typically have large amounts of excess central processor

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[5] 47 U.S.C. § 252(d)(1).
[6] *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* CC Docket No. 96-98, First Report and Order, 11 FCC Record 15499, at ¶ 743 (1996).
[7] Exhibit AT&T/MCI 3(Gillan/Chandler Direct at 20).
[8] *Id.* at 19-20 (footnote omitted).
[9] *Virginia UNE Rate Order,* ¶ 460.

memory capacity,"[10] meaning that usage will not ordinarily trigger a need for additional capacity.[11] According to the FCC, therefore, principles of cost causation required recovery of these costs on a flat-rated basis.[12]

The FCC specifically found that recovery of cost in this manner was "competitively neutral." In contrast, the FCC determined that a usage-based price for central processor and switch memory would not be competitively neutral. According to the FCC,

> the incumbent LEC's central processor and memory costs do not vary with respect to whether a subscriber connected to its switch is a high or low volume user, a residential or business user, or a peak period or off-peak-period user. A competitive LEC suffers a competitive disadvantage for high volume users relevant to the incumbent LEC if the incumbent LEC recovers central processor and memory costs from the competitive LEC on a per-MOU basis. The competitive LEC would pay more to serve the high volume users, while the incumbent LEC could recover the central processor and memory costs, which do not vary with usage, on a per-line basis from all its subscribers, including high volume users.[13]

The FCC made the same determination for all of Verizon's proposed usage-based switching charges.

C. The ROO Is Based on Arguments Rejected by the FCC.

In adopting usage-based switching prices, the ROO accepts all of the same arguments that the FCC explicitly rejected in its *Virginia UNE Rate Order*. For example, the ROO relies upon testimony from Qwest witness Philip Linse providing his opinion that "the amount of central processor capacity needed is a direct function of switch usage."[14] The ROO also relies on the testimony of Mr. Dunkel for Staff who claimed that the switch fabric is for the purpose of switch usage.

The FCC's order mirrors the testimony of AT&T and MCI in this proceeding and demonstrates the fallacy of Qwest's and Staff's reasoning as adopted in the ROO. As the FCC

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[10] *Id.*, ¶ 463.
[11] *Id.*
[12] *Id.*
[13] *Id.*, ¶ 465.
[14] ROO at 10.

held, the relationship between central processor capacity and usage does not mean that Qwest incurs switching costs on a usage basis. Qwest engineers its entire network to have sufficient capacity to serve current and anticipated future demand, and overall investment, of course, will generally increase when greater network capacity is needed. This engineering, however, does not make Qwest's entire network "usage sensitive." Qwest constructs outside loop plant, for example, to have sufficient facilities to serve its customers, but loop rates are flat-rated because that is how Qwest incurs the cost of providing those loops. Switching is no different. Qwest does not pay its vendors for switches on a per-unit of use basis. Rather, Qwest pays flat rates to its vendors for switches with prescribed levels of capacity.

Because Qwest incurs switching costs on a flat-rated basis, it should recover those costs the same way from its competitors.[15] Other commissions in Qwest's territory have recently come to the same conclusion. For example, the Utah Public Service Commission found in May 2003 that switching should be billed on a flat rated basis with no usage charges to prevent sending "distorted price signals that will artificially induce or retard the development of competition for the related services."[16] Minnesota, the only other state within Qwest's region that has considered the issue, has also held that flat-rated switching is appropriate.[17]

D. The Commission Should Adopt a Flat Rate for Local Switching to Avoid Injury to Competitors and Consumers.

AT&T and MCI have proposed a flat-rated UNE local switching rate of $4.06 in this proceeding. That rate will fully compensate Qwest for its forward-looking switching costs. Qwest has agreed in other proceedings that switching costs can be "reasonably recovered entirely as fixed monthly charges."[18] Staff witness Mr. Dunkel also agreed that a flat-rated port charge could recover all switching costs.[19]

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[15] *Virginia UNE Rate Order* at ¶ 463.
[16] Order, Utah Public Service Commission, Docket No. 01-049-85, May 5, 2003, p. 16.
[17] *Order Setting Prices and Establishing Procedural Schedule*, MPUC Docket Nos. P-421/CI-01-1375, *et al.*(October 2, 2002).
[18] Exhibit AT&T/MCI 3 (Gillan-Chandler direct) at 24 (quoting Qwest witnesses Paul McDaniel in a Colorado proceeding and Harry M. Shooshan III in a proceeding before this Commission).
[19] Tr. at 39-40.

While Qwest will be fully compensated under AT&T's proposal, the approach proposed by Qwest and adopted by the ROO will harm both competitors and consumers in Arizona. The FCC has recognized the market distortions that arise from usage-based switching charges. Those market distortions will create an incentive for new entrants to reduce their costs by targeting customers with lower than average levels of usage. The record in this proceeding shows that residential customers have higher usage (while paying lower retail rates) than small business customers.[20] The effect of the current rate structure, therefore, will be to limit the availability of competition for residential consumers. This result is fundamentally inconsistent with this Commission's goal of bringing effective choice among local service providers to all Arizona consumers.

III. CONCLUSION

This Commission should join the FCC and other state commissions in adopting a rate structure for local unbundled switching that will prevent market distortions and encourage competition. AT&T requests that the ROO be revised to establish a flat-rated UNE local switching rate of $4.06.

RESPECTFULLY SUBMITTED on September 24, 2003.

AT&T COMMUNICATIONS OF
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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration	)	CC Docket No. 00-218
	)	
In the Matter of Petition of AT&T Communications of Virginia Inc., Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia Corporation Commission Regarding Interconnection Disputes With Verizon Virginia Inc.	)	CC Docket No. 00-251

MEMORANDUM OPINION AND ORDER

Adopted: August 28, 2003 **Released:** August 29, 2003

By the Chief, Wireline Competition Bureau:

TABLE OF CONTENTS

compared the 2001 tandem switching DEMs that we calculated against the billable MOU estimate in Verizon's cost study. This comparison shows that Verizon's billable MOU estimate in its tandem switching study is approximately twenty-four percent lower than the 2001 DEMs estimate for tandem switching.[1164] Accordingly, we find Verizon's number of equivalent annual busy days in the BHAR, and therefore the BHAR, unreasonable.

457. Because we find that Verizon's BHAR calculation is unreasonable, but neither AT&T nor WorldCom proposed an alternative calculation, we depart from baseball arbitration and require Verizon to use 339 days as the number of equivalent annual busy days in the BHAR. Verizon's proposed tandem switching rate is an average rate that effectively spreads expected costs for the study period (2001-2003) over expected demand at the mid-point of this three-year period.[1165] As we explain above, based on ARMIS DEM data and the tandem to end-office switch busy hour MOU ratio reflected in Verizon's switching cost studies, we calculated the 2001 tandem switching DEMs for Verizon. Spreading Verizon's tandem switching costs over these DEMs, which we adjust to account for our tandem switch MOU growth rate, and accepting Verizon's proposed BHTD, requires that the BHAR be based on 339 equivalent busy days. We thus direct Verizon to use in its compliance filing 339 equivalent busy days in its BHAR calculation.[1166]

D. Rate Structure

1. Background

458. The Commission's general rate structure rules specify that UNE rates be structured consistently with the manner in which the costs of providing them are incurred.[1167] In other words, the basis on which the element is sold to the competitive LEC should reflect the basis on which the cost is incurred by the incumbent LEC. If, for example, the incumbent LEC were to pay the switch manufacturer a per line fee for some of the switch hardware or software,

(Continued from previous page)
Verizon proposes applying an originating switching rate and a terminating switching rate to both intra-switch and inter-switch calls. Verizon Ex. 107, at 201. DEMs are therefore billable MOU for Verizon.

[1164] The billable MOU are lower than the 2001 DEMs even though Verizon assumed an annual tandem switching MOU growth rate between 2001 and 2003. *See* Verizon Ex. 161P, Attach. H, CD-ROM "VZ-VA FCC ARB (Additional Cost Studies)," folder "VA UNBUNDLED REC&SWITCH," file "Back-Up_VAMOUR_10_31 Part C-8," worksheet "Tdm MOU" (confidential version).

[1165] Verizon Ex. 107, at 200-01, 207-08; Verizon Ex. 161P, CD-ROM "VZ-VA FCC ARB (Additional Cost Studies)," folder "VA EXCEL & WORD STUDIES," folder "VA SWITCHING SUPPORT FILES," folder "VA UNBUNDLED REC&SWITCH," file "VAMOURRECIPCOMP0_3l01," worksheet "Assumptions," cell B17 (confidential version). The mid-point for this three-year period is June 30, 2002.

[1166] We also direct Verizon to use in its compliance filing the same BHTD that it used in its original cost study filing. *See* Verizon Ex. 100P, Vol. VI, Part C-8-1, Busy Hour to Annual Ratio – Back-Up (confidential version).

[1167] 47 C.F.R. § 51.507(a); *Local Competition First Report and Order*, 11 FCC Rcd at 15874, para. 743.

then the incumbent LEC should recover these switch costs from the competitive LEC on the same basis. If the incumbent LEC were to recover these costs on a per MOU basis, then this would provide the competitive LEC's subscribers with an uneconomic incentive to reduce usage of this switch hardware or software.

459. The Commission's general rate structure rules also specify that the costs of shared facilities should be recovered in a manner that efficiently apportions them among users, either through usage-sensitive charges or capacity-based flat-rated charges.[1168] That is, these costs should be allocated among subscribers on the basis of their causal responsibilities. The Commission's specific rate structure rule for local switching specifies that costs for this element be recovered through a combination of a flat-rated charge for line ports and one or more flat-rated or per MOU charges for the switching matrix and trunk ports, but it does not specify a particular combination or means for determining the appropriate combination.[1169]

2. Positions of the Parties

460. Verizon proposes to recover the non-traffic-sensitive costs of the switch through a per port charge and the traffic-sensitive costs through a per MOU charge.[1170] According to Verizon, usage affects the costs of providing many of the services associated with switching and thus should be reflected in the rate structure. Verizon states that, when assessing the network demand and purchasing switches and switch upgrades, it is required to forecast switch usage and purchase sufficient capacity to accommodate that usage.[1171] Verizon proposes to recover the following costs on a per MOU basis: "getting started" costs, EPHC costs, RTU software costs, and "shared peak-period costs."[1172]

[1168] 47 C.F.R. § 51.507(c); *Local Competition First Report and Order*, 11 FCC Rcd at 15874, para. 755.

[1169] 47 C.F.R. § 51.509(b); *Local Competition First Report and Order*, 11 FCC Rcd at 15874, para. 757. In reviewing section 271 applications, the Commission has rejected arguments that the TELRIC pricing rules require that at least a certain percentage of shared switching costs must be recovered through flat-rated charges. *See, e.g., Application of Qwest Communications International, Inc. for Authorization to Provide In-Region InterLATA Services in the States of Colorado, Idaho, Iowa, Montana, Nebraska, North Dakota, Utah, Washington, and Wyoming*, WC Docket No. 02-314, Memorandum Opinion and Order, 17 FCC Rcd 26303, 26422, para. 209 (2002) (*Qwest Multistate 271 Order*). In the section 271 context, however, the Commission does not engage in a *de novo* review of a state commission's decision. Rather, the Commission simply determines whether the end result is within the range of rates that a reasonable application of TELRIC principles would produce. As noted above, the Commission's rules give state commissions flexibility to permit recovery of switching matrix and trunk port costs through "one or more flat-rated *or* per minute usage charges." 47 C.F.R. § 51.509(b) (emphasis added).

[1170] Verizon Ex. 115 (West Rebuttal), at 2-3.

[1171] Verizon Ex. 109, at 52-54.

[1172] Verizon Ex. 122, at 191. Shared peak-period costs include non-ISDN line CCS and ISDN CCS, D channel access PPS, PPB channel access PPS, inter-switch PPS, and SS7 link and trunk CCS. AT&T/WorldCom Ex. 12, at 109.

461. AT&T/WorldCom assert that much of the total cost of a switch is associated with memory and processors and is incurred at the time a switch is placed in operation.[1173] According to AT&T/WorldCom, these "getting started" costs do not vary with usage.[1174] They further assert that the majority of the costs of today's generation of digital switches is driven by ports, rather than usage, and only a very small percentage of the overall equipment in current digital switches is engineered based on peak-period usage.[1175] According to AT&T/WorldCom, based on actual Verizon total switch costs, most costs are non-usage sensitive and should be allocated to the port rather than MOU rate elements.

462. AT&T and WorldCom diverge slightly with regard to the precise allocation between usage and non-usage sensitive rate elements. AT&T recommends that Verizon continue to assess switching charges using the rate design currently in place, *i.e.*, a separate fixed monthly port charge to recover the non-usage sensitive switch costs as well as a per MOU charge to recover the usage sensitive costs.[1176] Specifically, AT&T agrees with Verizon that shared, peak-period costs should be recovered on a usage sensitive basis.[1177] WorldCom argues that all costs, even the shared, peak-period costs, should be recovered through a flat-rated port charge.[1178]

3. Discussion

a. "Getting Started" Costs

463. We conclude above, for purposes of determining the appropriate switch discount, that the "getting started" cost of the switch is a fixed cost, meaning that it does not vary with the number of ports or the level of usage on the switch.[1179] We find here that the "getting started" costs of the switch should be recovered on a per line port basis. "Getting started" costs are incurred for capacity that is shared among subscribers. Verizon incurs these costs to be ready to provide service upon demand. Given the record evidence that modern switches typically have large amounts of excess central processor and memory capacity,[1180] the usage by any one subscriber or group of subscribers is not expected to press so hard on processor or memory capacity at any one time as to cause call blockage, or a need for additional capacity to avoid such

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[1173] AT&T/WorldCom Ex. 4, at 7.

[1174] *Id.*

[1175] *Id.*

[1176] AT&T Ex. 4 (Kirchberger Direct), at 13-14.

[1177] *Id.*

[1178] WorldCom Ex. 6, at 7.

[1179] *See supra* section V(C)(1)(b)(i).

[1180] *See supra* para. 391.

blockage. Thus, no one subscriber or group of subscribers is any more or any less causally responsible for the processor or memory capacity costs. Principles of cost causation, therefore, support a per line port cost recovery approach because, more than any other approach, it spreads getting started costs to carriers in a manner that treats equally all subscribers served by a switch.

464. In addition, charging a per line port price for the central processor and memory recovers these costs from competitive LECs on a competitively neutral basis, thereby potentially extending to many different subscribers the benefits of competition. The incumbent LEC incurs central processor and memory costs in order to provide service to all of the subscribers served by the switch's line ports. A competitive LEC may serve some of these subscribers and the incumbent LEC may serve some of these subscribers. The incumbent LEC's central processor and memory costs do not vary with respect to whether a subscriber connected to its switch is a high or low volume user, a residential or business user, or a peak-period or off-peak-period user. A competitive LEC faces no advantage or disadvantage in competing against the incumbent LEC if it pays for use of the central processor and memory on a per line port basis. If the incumbent LEC chooses to recover relatively more or less of the central processor and memory cost from high volume business users or low volume residential users, for example, the competitive LEC is able to compete with the incumbent LEC (or another competitive LEC) by doing the same.

465. A per MOU price for the central processor and memory, in contrast to a per line port price, would not recover these costs on a competitively neutral basis. Again, the incumbent LEC's central processor and memory costs do not vary with respect to whether a subscriber connected to its switch is a high or low volume user, a residential or business user, or a peak-period or off-peak-period user. A competitive LEC suffers a competitive disadvantage for high volume users relative to the incumbent LEC if the incumbent LEC recovers central processor and memory costs from the competitive LEC on a per MOU basis. The competitive LEC would pay more to serve the high volume users, while the incumbent LEC could recover the central processor and memory costs, which do not vary with usage, on a per line basis from all of its subscribers, including high volume users. Principles of cost causation do not, therefore, support a per MOU price, because it would recover proportionately more of the "getting started" costs from high usage subscribers than from low usage subscribers.

466. We disagree with Verizon's argument that it "grows" or replaces virtually all of the components of a switch over its life and that, therefore, costs for the central processor are usage sensitive and should be recovered on a per MOU basis.[1181] Verizon fails to show that it would expect to replace the central processor of a modern switch for the specific reason that usage increases over the life of the switch. It identifies three reasons why the processor would be replaced. First, manufacturers continuously upgrade switch software to improve the operational and administrative efficiency of the switch.[1182] These software upgrades at some point require an upgrade to the processor. Second, software is added frequently over time to add

[1181] Verizon Ex. 123, at 6-12.

[1182] Tr. at 5435.

the capability to provide new vertical features as they are developed or to accommodate new regulatory mandates such as number portability.[1183] The software added to the switches over time for these reasons at some point requires a processor upgrade. Third, an increase in subscriber usage per line or the number of lines connected to the switch may increase to the point at which the processor must be augmented.[1184]

467. The first two reasons for replacing or upgrading the processor relate to obsolescence, not to the level of subscriber usage over time. Switch obsolescence is accounted for in the useful life of the switch prescribed for estimating the depreciation expense recovered in the switch prices. Showing that the central processor may be replaced due to obsolescence does not demonstrate that processor capacity costs are usage sensitive or should be recovered on that basis. We note that for purposes of determining depreciation expense we have adopted an asset life at the low end of the Commission's safe harbor range: 12 years.[1185] We believe that this relatively short switch life is adequate to reflect the need to upgrade the processor for reasons of obsolescence.[1186]

468. With respect to the frequency with which Verizon would expect to augment the central processor or memory of the switch as usage increases, the only evidence adduced is that processor switch blocking occurred in New Hampshire.[1187] Verizon did not indicate, however, how many switches or subscribers connected to these switches experience blocking, or even whether these switches were modern digital switches. Instead, most of the written and oral testimony and evidence supplied by Verizon and AT&T/WorldCom, as discussed above, indicates that the central processor and memory of a modern switch installed today are unlikely to exhaust as a result of increased subscriber usage.[1188]

b. EPHC Costs

469. EPHC costs relate only to the Lucent 5ESS switch.[1189] The 5ESS switch is based

[1183] *Id.*

[1184] *Id.* at 5435-36.

[1185] *See infra* section III(D).

[1186] The useful life for estimating depreciating expense reflects the average life of the various components of a switch. There is no separate useful life for each separate component of the switch, such as the central processor.

[1187] Tr. at 5448.

[1188] Verizon also provided in its surrebuttal testimony examples of various "getting started" components of the switch that it has grown or replaced. Verizon Ex. 122, at 176-78. Verizon explains that the majority of these components were upgrades developed by the switch manufacturer. Again, the fact that Verizon upgrades the "getting started" equipment does not demonstrate that these costs are incurred as a result of increases in subscriber usage. As we discuss above, moreover, Verizon does not provide empirical evidence to quantify the extent to which it has grown or replaced the "getting started" components of the switch. *See supra* section V(C)(1)(b)(i).

[1189] Verizon Ex. 123, at 10. EPHC stands for "equivalent POTS half call."

on a distributed processor architecture. The primary building block of the Lucent 5ESS distributed processor architecture is the switching module.[1190] The common equipment of the switching module consists of a processor complex and equipment designed to terminate line interface and trunk interface equipment.[1191] These common equipment costs are referred to as EPHC costs in the SCIS model output work papers.

470. The parties agree that in general port capacity is reached before processor capacity in the Lucent 5ESS switch modules.[1192] The SCIS model user guide indicates that the switch modules in the Lucent 5ESS switch by design have excess call capacity and that they therefore are expected to be port limited rather than terminal limited.[1193] AT&T/WorldCom argue that there is excess call capacity for every switch in the Verizon switch cost study.[1194] When the number of ports on the switch module reaches capacity, a new switch module is purchased. That is, according to AT&T/WorldCom, the port capacity exhausts before the call capacity of these modules. Verizon states that Lucent has evolved the processor capacities of these modules to stay one step ahead of call volume demand, thereby enabling the modules to avoid processor exhaust.[1195] It did claim, however, that there are circumstances where the processor capacity is reached before the port capacity of the module.[1196]

471. We conclude that EPHC costs should be recovered on a per line port basis. EPHC costs, like "getting started" costs, are incurred for capacity that is shared among subscribers. Verizon incurs these costs to be ready to provide service upon demand. The balance of the record evidence supports a finding that the Lucent 5ESS switch module costs do not vary with respect to usage. Verizon states that there are circumstances when the processor capacity of the module may be increased before its port capacity is reached, or when port demand is limited in order to avoid processor exhaust, thereby suggesting that the EPHC costs vary with usage.[1197] It did not quantify the frequency with which this occurs, however, nor did it provide any other details regarding these situations. Absent such evidence, we cannot conclude that the EPHC costs vary with usage, given the other evidence and testimony in the record. Accordingly, consistent with our analysis of cost causation and competitive neutrality with respect to "getting started" costs, we require that EPHC costs be recovered on a per port basis.

[1190] *Id.*

[1191] *Id.*

[1192] *Id.* at 11; AT&T/WorldCom Ex. 24, at 16-17.

[1193] AT&T/WorldCom Ex. 24, at 17; *see also* Verizon Ex. 123, at 10.

[1194] Tr. at 5446-47.

[1195] Verizon Ex. 123, at 11.

[1196] *Id.* at 12-14.

[1197] *Id.*

c. RTU Fees

472. Verizon pays RTU fees to switch vendors for switch software. Verizon states that it generally does not pay RTU fees on a per MOU or on a per line basis.[1198] Rather, Verizon most often pays the RTU fees on a per switch basis.[1199] Verizon also states that, in contracts for Lucent switches, which require software to be loaded into discrete service modules, payment might be made on the basis of the number of service modules.[1200] Accordingly, we find that RTU fees should be recovered on a per port basis for reasons similar to those set forth above with respect to "getting started" costs and EPHC costs.

d. Shared Peak-Period Costs

473. The parties agree that shared, peak-period costs – non-ISDN line CCS and ISDN CCS, D channel access PPS, PPB channel access PPS, inter-switch PPS, and SS7 link and trunk CCS – vary with usage.[1201] They are shared capacity costs. AT&T/WorldCom emphasize, and Verizon does not dispute, that these costs are incurred for equipment that is engineered and purchased based on peak-period demand.[1202] The record supports a finding that the equipment for which these costs are incurred is a limiting resource and that congestion or blocking will occur as usage increases.[1203]

474. Peak-period users are causally responsible for shared capacity that is engineered to satisfy peak-period demand. The need to install additional capacity to avoid call blocking (or an unacceptably high rate of blocking) by installing more of this equipment results entirely from usage at its peak. If off-peak usage were to decrease to zero, no costs would be saved whatsoever. Although the parties all agree that peak-period pricing is correct in principle,[1204] no party proposes a peak-period rate structure because such an approach is extremely difficult to

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[1198] Tr. at 5492-93.

[1199] *Id.* In response to a record request, Verizon states that it generally pays for the right to use software on a "buyout basis" for base generic software. Verizon Ex. 231 (Verizon response to record request no. 47 (requested Nov. 29, 2001)). We understand the term "buyout basis" as used by Verizon to be equivalent to a per switch or per module basis. Tr. at 5494. Buyout basis may also refer to payment on the basis of all or a subset of a carrier's switches. Tr. at 5155.

[1200] Tr. at 5493.

[1201] Verizon Ex. 122, at 195; AT&T/WorldCom Ex. 12, at 109.

[1202] Verizon Ex. 109, at 53; AT&T/WorldCom Ex. 12, at 109.

[1203] Verizon Ex. 109, at 53; AT&T/WorldCom Ex. 12, at 109.

[1204] Tr. at 5475; AT&T/WorldCom Switching Cost Brief at 26.

implement in practice.[1205] Instead, Verizon and AT&T propose recovery of these costs through a per MOU price that is developed by dividing total cost by total annual minutes of use, not peak-period minutes of use, and imposed on all minutes of use.[1206] In contrast, WorldCom proposes a flat per port price for recovery of these shared, peak-period driven costs.[1207]

475. Although neither approach is ideal, we believe that the flat per port price advocated by WorldCom is the better approach. A per MOU price for recovery of these shared, peak-period driven capacity costs, as proposed by Verizon and AT&T, would fail to signal to competitive LECs that these costs vary with subscribers' usage during the peak period in particular. Competitive LECs paying for subscribers' off-peak usage based on a price developed by spreading costs over all minutes of use would pay too much relative to the costs for which they bear causal responsibility. Competitive LECs paying this same price for subscribers' peak-period usage would pay too little. A per MOU rate therefore could result in under-utilization of Verizon's switches during non-peak periods and over-utilization during peak periods.

476. A per MOU price for recovery of shared, peak-period costs also may place the competitive LEC at a competitive disadvantage, as WorldCom points out.[1208] Because Verizon's costs vary with peak-period usage, Verizon may be able to recover shared, peak-period costs from its subscribers by offering a per MOU price for peak-period minutes of use and a zero price for unlimited off-peak minutes of use. A competitive LEC may not be able to recover its costs by offering the same peak/off-peak prices that Verizon offers, however, because the competitive LEC's costs would reflect how Verizon bills the competitive LEC and not how Verizon actually incurs the cost.

477. A flat per port price for recovery of these shared, peak-period driven costs, as proposed by WorldCom, avoids the competitive concerns that arise with a per MOU charge. A flat per port price for recovery of shared, peak-period costs also avoids problems in Verizon's switch cost study associated with estimating the minutes of use over which to spread its switching costs. The Verizon study uses a ratio of busy hour minutes of use to annual minutes of minutes of use (BHAR ratio) to convert its estimate of switch costs per busy hour to switch costs per annual minutes of use. As explained above, the BHAR ratio that Verizon proposes is flawed because it significantly underestimates the annual minutes of use over which the switching costs are spread.[1209] By spreading switching costs over line ports, rather than annual minutes of use,

[1205] For example, different switches would have different peak periods. Peak-period pricing would require either different prices for different switches based on the probabilities of peak-period usage for each switch, or developing some meaningful way to reflect peak-period usage probabilities in statewide or UNE zone average rates.

[1206] AT&T Ex. 4, at 14; Verizon Ex. 115, at 2-3.

[1207] WorldCom Ex. 6, at 5.

[1208] *Id.* at 5-6.

[1209] *See supra* section V(C)(8); *see also New Jersey 271 Order*, 17 FCC Rcd at 12295, para. 48 (noting "serious questions" regarding Verizon's assumptions underlying its busy hour determinations).

this problem is avoided.

478. Verizon argues that flat-rated recovery of costs that vary with usage would result in low volume subscribers subsidizing high volume subscribers.[1210] We have no basis on the record to conclude that Verizon is correct. We do not know the extent to which low or high volume subscribers' usage occurs during the peak period or non-peak periods, and, therefore, we do not know whether a flat per port price or a per MOU price imposed on all subscriber minutes is more likely to recover these shared, peak-period driven costs from subscribers in proportion to their peak-period usage. Thus we cannot assess the extent to which low volume users would be subsidizing high volume users, or vice versa, under either rate structure. We acknowledge that the approach we adopt is imperfect in the sense that it would fail to signal to competitive LECs the costs that Verizon would incur if subscriber usage were to increase, which could result in over-utilization of Verizon's switches, and blocked calls, during peak periods. Given that Verizon already offers flat-rated calling to its own end-users,[1211] however, we do not believe that offering similar pricing to competitive LECs would increase the likelihood of blocked calls due to increased calling by competitive LEC customers.

479. AT&T/WorldCom suggest that we adopt different results for the two different agreements before us.[1212] AT&T and Verizon agree that shared, peak-period costs should be recovered through a per MOU charge on all usage. As noted above, however, WorldCom argues, and we agree, that these costs should be recovered on a flat, per port basis. Thus, consistent with "baseball arbitration," we could adopt a per MOU charge for the AT&T-Verizon agreement and a flat, per port charge for the WorldCom-Verizon agreement.

480. Verizon argues, however, that prescribing two different rate structures raises the possibility that a competitive LEC paying the flat, per port rate would target high volume users, while a competitive LEC paying the combined flat, per port and per MOU rates would target low volume users,[1213] which might preclude Verizon from recovering all of its shared costs.[1214] Verizon is correct in theory. The per port price is an average price and the per MOU price is an average price. A carrier serving low volume subscribers would pay Verizon an amount that is less than the overall cost per subscriber, if it pays for the shared peak-period driven capacity costs on a per MOU basis; a carrier serving high volume subscribers would pay Verizon an amount equal to the overall cost per subscriber, if it pays for the shared peak-period driven capacity costs on a per port basis. Verizon would not recover all of its shared costs under this scenario if it were to lose enough high volume and low volume subscribers to these competitive

[1210] Verizon Switching Cost Brief at 23.

[1211] AT&T/WorldCom Switching Cost Brief at 26.

[1212] *See* AT&T/WorldCom Switching Cost Brief at 27.

[1213] Tr. at 5474-75.

[1214] *Id.*

LECs and is unable to recover a disproportionate share of these costs from its own subscribers.

481. AT&T/WorldCom respond that the risk of under-recovery that Verizon would face if it offers two different rate structures is no different from the risk it currently faces by offering its residential subscribers a choice between flat-rated or message unit pricing plans.[1215] They also note that a competitive LEC paying the per MOU price for unbundled switching bears the risk of paying peak-period driven capacity costs for off-peak usage , while Verizon does not incur these costs in off-peak periods or face that risk.[1216]

482. We agree with Verizon that a requirement to offer unbundled switching on both a flat-rated, per port basis and a combined flat-rated, per port and per MOU basis creates the potential for under-recovery of switching costs. AT&T/WorldCom's analogy to retail rates is not convincing. The Commonwealth of Virginia has jurisdiction over the risk of under-recovery that Verizon faces by offering its own residential subscribers flat-rated and message unit pricing options. The matter before the Bureau is the risk of under-recovery that Verizon would face if required to offer unbundled switching on both a flat-rated, per port basis and a combined flat-rated, per port and per MOU basis to wholesale customers. AT&T/WorldCom allege that the relative risk faced by Verizon due to its retail flat-rated and message unit pricing options is similar to the risk associated with offering competitive LECs both flat-rated, per port and per MOU pricing options, but they did not quantify this risk. Nor could we know, based on the record, whether this is an acceptable level of risk for Verizon to bear when selling unbundled switching to competitors. We therefore reject AT&T/WorldCom's arguments that in this proceeding we should require Verizon to offer unbundled switching on both a flat-rated, per port basis and a combined flat-rated, per port and per MOU basis.[1217]

483. Based on the potential for under-recovery that might exist if we require two different rate structures, we find that the shared, peak-period costs should be recovered on a flat, per port basis in both agreements. As explained above, this approach avoids the competitive disadvantages associated with use of a per MOU price imposed on all usage and it avoids the problems involved with estimating the minutes of use over which to spread an estimate of switching costs.

[1215] *Id.* at 5478.

[1216] *Id.* at 5479.

[1217] We recognize that the rates we establish in this arbitration proceeding reflect a different mix of port charges and usage charges than the rates contained in Verizon's agreements with other competitive LECs in Virginia. Because this would be true even if we allowed Verizon to recover the shared, peak period costs on a per MOU basis, we do not believe the existence of these other agreements is reason not to permit consistency between the two agreements at issue here.

CERTIFICATE OF SERVICE

ACC Docket No. T-00000A-00-0194

I hereby certify that the original and 13 copies of the ***Exceptions to Phase II and Phase II-A (Supplemental) Opinion and Order Regarding Transport and Analog Port Rate Issues*** in ACC Docket No. T-00000A-00-0194 were sent for filing on this 24th day of September, 2003 via Federal Express overnight to:

Arizona Corporation Commission
Docket Control – Utilities Division
1200 West Washington Street
Phoenix, AZ 85007

and a copy of the foregoing was sent via U.S. Mail, postage prepaid, on this 24th day of September, 2003, to the following:

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Dated this 24th day of September, 2003.

Signed by Melissa K. Geraghty
Melissa K. Geraghty