

**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**IN THE MATTER OF THE CONTINUED** )  
COSTING AND PRICING OF UNBUNDLED ) DOCKET NO. UT- 003013  
NETWORK ELEMENTS, TRANSPORT, ) PHASE A  
TERMINATION, AND RESALE )

**PHASE A REBUTTAL TESTIMONY OF**

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**DIRECTOR-NETWORK PLANNING**

**ON BEHALF OF**

**VERIZON NORTHWEST INC.**

**Formerly Known as GTE Northwest Incorporated**

**SUBJECT: LINE SHARING TECHNICAL ISSUES**

**AUGUST 4, 2000**

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**I. INTRODUCTION**

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Russell A. Bykerk. My business address is 545 East John Carpenter Freeway, Irving, Texas 75062.

**Q. HAVE YOU FILED PHASE A DIRECT AND RESPONSIVE DIRECT TESTIMONIES IN THIS CASE?**

A. Yes. On July 21, 2000, I adopted Stephen Schroeder's phase A direct testimony. I also filed phase A responsive direct testimony on the same day.

**ON WHOSE BEHALF ARE YOU PRESENTING TESTIMONY IN THIS PROCEEDING?**

I am presenting testimony on behalf of Verizon Northwest Inc., which was formerly known as GTE Northwest Incorporated. The company recently changed its name after the closure of the merger between its parent company, GTE Corporation, and Bell Atlantic Corporation. The merged company name is Verizon Communications.

**IN YOUR TESTIMONY HOW DO YOU USE THE TERMS "VERIZON NW" AND "GTE"?**

My fellow witnesses and I use "Verizon NW" to refer to Verizon Northwest Inc., the company that is a party to this proceeding and on whose behalf we are testifying. I use "GTE" to refer to the former GTE companies, which are now part of the Verizon Communications companies along with the former Bell Atlantic companies. This will make clear that we are talking about cost studies and inputs that have been developed by and for the GTE telephone operating companies and about those companies' operations, practices and procedures.

1 Q. **WHAT IS THE PURPOSE OF YOUR PHASE A REBUTTAL TESTIMONY?**

2 A. The purpose of my phase A rebuttal testimony is to respond to several technical  
3 issues related to line sharing. First, I will respond to the statement made by Mr.  
4 Michael Zulevic, on behalf of Covad and Rhythms Links, that cageless collocation  
5 should easily permit the ILEC to get CLEC DSL equipment within 25 feet of the  
6 distribution frame. Second, I will comment on Mr. Zulevic’s explanation on how he  
7 would design a forward-looking Central Office (“CO”).

8

9

**CABLE RUN FROM THE SPLITTER TO THE MDF**

10

11 **PLEASE EXPLAIN HOW FLOOR SPACE SHOULD BE ALLOCATED TO VARIOUS PIECES OF**  
12 **EQUIPMENT LOCATED IN A CENTRAL OFFICE.**

13 A. Mr. Zulevic’s past experience working in a Qwest central office should reveal to him  
14 that in a typical full service central office, floor space is allocated and assigned to  
15 various equipment types and support apparatus based on an overall utilization plan  
16 for that central office in its initial design stage. Ongoing adherence to that overall  
17 plan of utilization and active management of that space is necessary to ensure its  
18 efficient utilization for all the various equipment types typically deployed within it.  
19 The ILEC cannot arbitrarily be expected to deviate from that space utilization plan  
20 and jeopardize its ability to efficiently use that scarce and costly space resource for  
21 the convenience of its competitors.

22

23 Q. **MR. ZULEVIC CLAIMS THAT CAGELESS COLLOCATION SHOULD EASILY PERMIT**

1           **THE ILEC TO GET CLEC DSL EQUIPMENT WITHIN 25 FEET OF THE MDF. COULD**  
2           **YOU RESPOND TO THIS STATEMENT?**

3    A.    Yes. Mr. Zulevic confuses the virtual collocation arrangement with cageless  
4           collocation. In cageless collocation, as provisioned by Verizon NW, the CLEC  
5           equipment is not enclosed in a caged area, but it is still restricted to a specific  
6           location within the central office that is designated for collocation. Those designated  
7           areas may well be outside the 25 foot distance Mr. Zulevic proposes. In the virtual  
8           arrangement, CLEC equipment is mounted in available mounting space within ILEC  
9           equipment frames, which house like or similar equipment. There is no requirement  
10          for the ILEC to mount CLEC equipment in ANY available mounting space within  
11          the central office without regard to the planned or designated use of the central office  
12          floor space. Surveys of the former GTE central offices have revealed that the average  
13          cable run for collocation purposes (either caged or cageless) is on average 202 feet.  
14          Consequently, it is unreasonable to expect that this distance can be shortened to 25  
15          feet as Mr. Zulevic recommends in his virtual collocation proposal. Every equipment  
16          component that requires MDF terminations cannot be mounted on floor space  
17          immediately adjacent to the MDF. There just isn't room.

18

19   **Q.    DO YOU HAVE ANY CONCERNS WITH MR. ZULEVIC'S EXHIBITS**  
20           **THAT DEPICT A BASIC CENTRAL OFFICE NETWORK**  
21           **ARCHITECTURE FOR LINE SHARING?**

22    A.    Yes. Mr. Zulevic' Exhibit MFZ-5 is applicable only in a virtual collocation

1 arrangement. The arrangement depicted would be inappropriate for an ILEC-owned  
2 splitter pooling arrangement. Pooling requires availability of all splitter capacity to  
3 all potential users for most efficient utilization of available splitters. Cabling of  
4 splitters directly to the CLECs' collocation space will require that they be dedicated  
5 to particular CLECs in a minimum of 24 splitter increments, compromising the  
6 ILEC's ability to efficiently assign available splitters to all users. Further, Exhibits  
7 MFZ-5 and MFZ-6 depict the use of two terminal blocks on the HMDF for  
8 termination of splitter leads – one block for the DSL loop leads, the other for the  
9 POTS return leads to the switch. Such a design is not required to facilitate cross  
10 connecting and is prone to craftsman error in establishing connections, since a  
11 complete splitter circuit termination is split between two locations on the MDF.

12

13 **Q. ARE THERE ANY OTHER REASONS WHY THE ILEC CAN NOT EASILY PLACE THE**  
14 **CLEC SPLITTER WITHIN 25 FEET OF THE MDF?**

15 **A.** Yes. Many types of equipment terminate on the MDF and are cross connected to  
16 outside facilities or other equipment that is also terminated on the MDF. Whether  
17 or not the CLECs equipment can be placed within the 25 foot distance is dependent  
18 on the particular central office's space utilization plan and the availability of rack or  
19 floor space within the 25 foot distance. The simple fact is, there may not be available  
20 space within that distance. To avoid that eventuality and to achieve the most cost  
21 efficient arrangement, Mr. Zulevic would have one believe that all equipment that  
22 requires terminations on the MDF should be mounted ON the MDF. The fact is that

1 the MDF is not an equipment frame or equipment bay -- it is a cross connecting  
2 device. Its efficient utilization for that purpose would require that it not be cluttered  
3 with equipment or other apparatus that would impede the administration and  
4 performance of the cross connecting activity on a day to day basis. Splitter block  
5 assemblies are bulky and may restrict ready access to the interior of the frame when  
6 running jumpers for any purpose. Further, their rampant use will quickly exhaust  
7 available frame space due to their inefficient termination density, which is 1/3 the bay  
8 mounted termination density.

9

10 **Q. WHAT IS VERIZON NW'S PRACTICE REGARDING PLACING SPLITTER RELAY**  
11 **RACKS CLOSE TO THE MDF?**

12 **A.** Verizon NW will place the splitter relay rack as close to the MDF as is practical  
13 within the limits of the space utilization plan for the particular central. Therefore,  
14 under the Verizon NW-owned splitter arrangement (Configuration #3), no more  
15 stringent requirements are placed on the CLECs than the Company imposes on itself.  
16 The arrangements proposed for the Verizon NW-owned splitter are based on a  
17 pooling of splitters for all users, the incumbent included. In the virtual-like  
18 collocation alternative that Verizon NW has proposed (Configuration #1), the splitter  
19 shelves will be mounted in the equipment lineups that have been designated and  
20 assigned to splitter equipment and/or similar apparatus, further ensuring that no  
21 discriminatory treatment of CLEC splitters occurs.

22

1 Q. **WHY IS VERIZON NW RECOMMENDING THE USE OF THE BAY MOUNTED SPLITTER**  
2 **AS OPPOSED TO MOUNTING THE SPLITTER ON THE MDF?**

3 A. Verizon NW has determined that the use of the bay-mounted splitters for line sharing  
4 purposes:

5  
6 is the most efficient arrangement from an overall office space utilization perspective, not just within  
7 the context of line sharing splitter equipment,

8  
9 simplifies administration of the splitter terminations as all the splitter apparatus can be mounted  
10 contiguously in a designated rack, rather than be located in available spaces as they may occur  
11 on the MDF, and the termination density allows more opportunity to have volumes of splitter  
12 terminations available in contiguous space on the MDF.

13  
14 minimizes mis-wired splitter assignments, and

15  
16 minimizes impairments to day to day MDF cross connecting activity.

17  
18 maximizes utilization of the available equipment terminating capacity on the MDF due to the  
19 termination density of the bay mounted splitter.

20  
21 **DESIGNING A FORWARD-LOOKING CENTRAL OFFICE**

22  
23 Q. MR. ZULEVIC DESCRIBES IN PHASE A RESPONSIVE DIRECT TESTIMONY HOW HE  
24 WOULD DESIGN A FORWARD-LOOKING CENTRAL OFFICE. WOULD YOU LIKE TO  
25 COMMENT ON HIS DESCRIPTION?



1 A. Yes. Central offices are rarely created as new installations today. The exceptions are  
2 those central offices destroyed by flood, fire, or some equivalent disaster that forces  
3 complete abandonment of the previous wire center, and very rarely, the construction  
4 of new central office for growth.

5 Most central offices are the product of years of growth and technology evolution. The changes driven  
6 by these factors are addressed in the face of the ILEC obligation to maintain uninterrupted service on  
7 the existing platform while building, testing, and enabling the replacement platform. The end result  
8 of this work is most often a building structure that reflects multiple additions and modifications to  
9 meet the changing needs, and a floor plan that reflects an achievable, workable solution to the last set  
10 of challenges.

11  
12 Only 20 years ago it would not have been possible to predict the demands on the central office  
13 resources as we know them today, yet most central offices predate 1980. There is no conceivable way  
14 the challenges of today could have been accurately predicted. And if they could have been, it would  
15 have been irresponsible for the ILEC to build, equip, and condition all of the floor space, power and  
16 HVAC required to meet the needs of today and unnecessarily pay for those resources for the last 20  
17 years. Yet, the forward looking central office design proposed by Mr. Zulevic assumes exactly that.  
18 The concept implies and requires that the ILEC should have anticipated the technologies available 20  
19 years hence, as well as the technical limitations of those yet to be realized technologies, and should  
20 have built a central office that fully and completely accommodates those today, without any additional  
21 cost yesterday, today or tomorrow. The forward-looking central office proposed by Mr. Zulevic has  
22 little, if any, practical value and should be disregarded.

23

1 **Q. DOES THIS CONCLUDE YOUR PHASE A REBUTTAL TESTIMONY?**

2 A. Yes.