

Date 6/22/00

Addendum Number 3

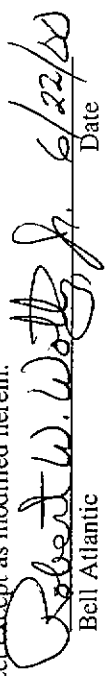
From: Robert W. Woltz, Jr., Acting President and CEO  
Bell Atlantic-Virginia, Inc.  
1310 N. Courthouse Rd, 8th Floor  
Arlington, Virginia 22201

To: Judy L. Lilly, Assistant Vice President  
Communications Network Services, 0506  
Virginia Tech  
Blacksburg, Virginia 24061

A proposal to amend contract number CC-0696-Bell-Atl is requested. Attached are service descriptions and pricing information for the following line item(s).

<u>Type of Change</u>	<u>Service Requested</u>	<u>Purpose of Change</u>
Modify and Add	Extend access to additional Ordering Parties, Carrier Access to Next Generation Internet Prototype, Reduce Term Liability	

Bell Atlantic is pleased to submit this proposal to amend the contract referenced above at the price and terms indicated in the attached document. Should the University wish to accept this proposal, please have your duly authorized representative sign in the space provided below and return this copy to the Bell Atlantic Representative at the address listed above. All other terms and conditions of the contract shall remain in full force in effect, except as modified herein.

  
Robert W. Woltz, Jr. 6/22/00  
Bell Atlantic Date

To: Minnis E. Ridenour, Executive Vice President  
Office of the Executive Vice President  
Virginia Tech  
Blacksburg, Virginia 24061

From: Judy Lilly, Director  
Communications Network Services  
Virginia Tech  
Blacksburg, VA 24061

Attached are documents to amend the contract referenced above. This request has been reviewed and approved by the Office of the General Counsel. Please sign and return to me at the address above.

  
Minnis E. Ridenour 6/21/00  
Office of the Executive Vice-President Date

  
Judy Lilly 6/21/00  
Virginia Tech Communications Network Services Date

cc: Purchasing

## **BROADBAND NETWORK SERVICES AGREEMENT ADDENDUM**

**THIS ADDENDUM** No. 3 ("Addendum") modifies the Broadband Network Services Agreement ("Agreement") dated June 12, 1996 by and between Virginia Polytechnic Institute and State University ("Virginia Tech") and Bell Atlantic - Virginia, Inc. ("Contractor").

**WHEREAS**, this Addendum is being entered into pursuant to section 5.14 of the Agreement. The Services contained in this Addendum are in addition to and support the existing Services contained in the Agreement. This Addendum will be held by Virginia Tech; and

**WHEREAS**, Virginia Tech, Bell Atlantic, and any of Bell Atlantic's subcontractors who agree to participate under the terms and conditions of this Addendum agree to provide the broadband network services to additional Ordering Parties.

**NOW, THEREFORE**, in consideration of the premises, mutual promises and covenants contained therein, the parties hereto agree as follows:

### **1 Modify Section 5.15**

#### **Services for Commercial Businesses**

The terms and conditions which shall apply to purchases of Broadband Network Services from Contractor ("the Services") by an authorized commercial business (hereafter referred to as "Ordering Party") pursuant to this Addendum shall be those agreed to under separate written agreement between Contractor and the Ordering Party in accordance with applicable laws and regulations; and Contractor and Virginia Tech will each undertake all reasonable efforts to help ensure that all Ordering Parties' participation is permissible under such law and regulation.

The terms and conditions for purchases of Services from Contractor pursuant to the Agreement shall continue to apply to the original Ordering Parties defined in section 5.15 of the Agreement.

#### **Orders from Commercial Businesses**

Any and all commercial businesses licensed to do business in the Commonwealth of Virginia shall be considered an authorized Ordering Party and shall be eligible to order services under this Addendum. Contractor (itself and/or through its subcontractors) shall provide the Services described in this Addendum (including any incidental software Contractor deems it necessary to provide in connection therewith) ("Services") to any Ordering Party which is a commercial business. Ordering Parties may order services through Virginia Tech so long as the purchase order requests services covered by this Addendum.

#### **Termination Liability**

Termination liability for Ordering Parties with existing service under the Agreement shall remain as set forth in the Agreement. New Orders placed by any Ordering Party for Services provided by a Bell Atlantic subcontractor pursuant to this Addendum shall be subject to either the termination liability set forth in the Agreement or to a twelve (12) month minimum term, as specified in writing by each such subcontractor. If an Ordering Party terminates the services, in whole or in part, within twelve (12) months from the date the Services are installed by a subcontractor who has agreed to the twelve (12) month minimum term, the Ordering Party shall be obligated to pay Contractor early termination charges equal to the sum of the applicable monthly rate per circuit multiplied by the number of circuits disconnected times the number of months remaining in the unexpired portion of the twelve (12) month term.

## **2 Add Section 8.7: Entire Agreement and Incorporation of Tariffs**

The terms and conditions that shall apply in connection with these Services or Services provided to any Ordering Party, and the rights and liabilities of the parties, shall be as set forth herein, in the Agreement, and in all applicable tariffs now or hereafter filed with the applicable state regulatory commission and/or the Federal Communications Commission. This Addendum (including the Exhibit attached hereto) and all applicable tariffs or guides constitute the entire agreement between the parties and shall supersede all prior oral or written quotations, communications, understandings or agreements on the subject matter hereof. This Addendum may not be modified or rescinded except by a writing signed by authorized representatives of each party.

## **3 Modify Appendix A: Carrier Access**

In addition to the Access Carrier Extensions described in the "Carrier Access" section of Appendix A of the Agreement, Contractor will provide connections from Vision Alliance switch facilities to an interLATA backbone network designated by Virginia Tech. The meet point for these connections will be the points of presence where Vision Alliance switch facilities are located including, at a minimum, the following locations:

Arlington	1025 N. Irving Street, Arlington, VA
Richmond	703 East Grace Street, Richmond, VA
Charlottesville	417 West Main Street, Charlottesville, VA
Norfolk	120 West Bute Street, Norfolk, VA
Roanoke	225 Franklin Road, S.W., Roanoke, VA
Johnson City, TN	3417 North Roan Street, Johnson City, TN
Harrisonburg	105 Newman Ave. Harrisonburg, VA

Meet point locations shall be subject to change and additional locations may be connected as mutually agreeable to Contractor and Virginia Tech. At each meet point, Contractor shall provide an ATM OC3c, ATM OC12c, or other interface as mutually agreeable to Contractor and Virginia Tech on Contractor's switch facilities, intra-office cabling, and other facilities within the POP required to establish the connection.

Contractor shall have the option of scaling these connections according to the scaling methodology described in this Addendum or according to other terms acceptable to Virginia Tech. Contractor will cooperate with Virginia Tech and the interLATA carrier to be designated by Virginia Tech to ensure effective management and best possible performance for these facilities and a four-hour mean time to repair objective for components provided by Contractor.

### **3.1 Scaling Methodology**

Effective upon execution of this Addendum, scaling for all "Carrier Access" facilities will be modified as described herein.

#### **3.1.1 Definitions**

A link shall be defined as the aggregate of physical connections between a pair of nodes. This may be a single physical link, but, as in the case of certain Access Carrier Extension (ACE) connections, may be multiple physical links. Whenever the distinction is not obvious, the terms physical link and aggregate link will distinguish, and the term "link" shall generally imply "aggregate link."

There are two classes of service for traffic: guaranteed and best effort. The guaranteed class of service includes both Constant Bit Rate (CBR) and Variable Bit Rate (VBR); best effort includes Unspecified Bit Rate (UBR). The proposed scaling methodology uses bounds on both the reserved bandwidth of guaranteed Virtual Circuits (VCs) and total link utilization

A link is considered saturated when its total traffic is at a rate in excess of 70% of its nominal capacity or when the total guaranteed reservation for VCs assigned to it is in excess of 50% of this capacity. The guaranteed reservation will be the sum of the guaranteed reservation for all Permanent Virtual Circuits (PVCs) and Switched Virtual Circuits (SVCs). In order to evaluate link utilization, traffic counters will be gathered at five-minute intervals. Any missing data from these counters will be assumed to indicate a state of saturation. The five-minute samples of these traffic counters will be summarized on a daily basis, with the proportion of samples indicating saturation noted. A day will be defined as between 12:00AM and 11:59PM for a particular calendar day. Because pertinent results will be based on the proportion of these samples indicating saturation, any effect of Daylight Savings Time will be ignored.

### **3.1.2 Scaling Up**

A link will be considered out of conformance on a particular day if more than one-third (33%) of the five-minute traffic samples indicate a state of saturation. If more than ten (10) such days of any thirty (30) day period exists, the link shall be deemed insufficient for the traffic requirements and must have its capacity increased. This capacity increase shall be completed within sixty (60) calendar days .

### **3.1.3 Scaling Down**

As well as providing a methodology for increasing network capacity, a methodology for reducing network capacity is proposed. If a period of ninety (90) days has no more than twenty (20) days wherein one-twentieth (5%) of the five minute samples indicate saturation, the provider may choose to reduce link capacity, provided such reduction would not make the link insufficient based on the previous methodology.

### **3.1.4 Data Collection**

The data required for this methodology are the periodic link utilization and reservations from the relevant backbone and local exchange switches along with corresponding time-stamps for each of the five-minute samples. The format and collection methodology for these data shall conform to Virginia Tech specifications. In particular, the data may be gathered by the carrier and sent daily via electronic mail as tab-delimited text or gathered by Virginia Tech directly via Simple Network Management Protocol (SNMP).

### **3.1.5 Periodic Evaluation**

This methodology will be evaluated every ninety (90) days by Virginia Tech to ensure that it is effectively addressing network resource requirements. The fundamental premise of network scaling remains that applications must work; this methodology is an attempt to quantify a necessary condition for scaling.

## **4 Modify Appendix B: Prices for Services**

### **Prices for Commercial Businesses**

The prices for the Services as set forth in Exhibit A of this Addendum, hereby incorporated by reference, shall be applicable to each Ordering Party which is a commercial business; provided that any Ordering Party may be required to pay additional construction charges in connection with such Services. The prices set forth in Exhibit A do not apply to the original Ordering Parties defined in section 5.15 of the Agreement. Virginia Tech shall not be held liable for payment for services received by the Ordering Parties.

All other terms and conditions of the Agreement shall remain unchanged and in full force.

This Addendum No. 3 shall become effective upon execution by both parties.

## Exhibit A

### Service Descriptions and Pricing for Commercial Businesses

#### 1. Services and Incorporation of Tariffs

Contractor (itself or its subcontractors) shall provide the intrastate, intraLATA Services specified below at the rates and quantities set forth herein. The Services shall be provided to the authorized Ordering Parties defined in this Addendum under separate written agreement and in accordance with Contractor's applicable regulatory commission tariffs (the "Tariffs"), which are incorporated by reference.

#### 2. Description of Services and Rates

Ordering Parties who are commercial businesses, other than private educational sites and other sites described in Section 5.15 of the Agreement, shall pay the rates and charges set forth below for the Services. These rates are based on a minimum aggregate of three hundred fifty (350) ATM circuits of which fifty (50) DS-3 or OC3c shall be maintained by Contractor at all times under the Agreement. Bell Atlantic will conduct a review of all circuits in service on an annual basis. Should the number of maintained circuits fall below the required minimum, Contractor reserves the right to increase the rates charged commercial businesses by up to 10%. However, Ordering Parties as defined in section 5.15 of the Agreement including any and all institutions of higher education, public and private schools, private educational sites, agencies, and localities of the Commonwealth of Virginia, up to and including those political subdivisions as recognized in the Code of Virginia, Section 8.01-385(3)iii will not be subject to any such rate increase unless agreed to in writing by Virginia Tech. Installation charges for the Services shall be those contained in the Agreement. Any other work, services or facilities required will be provided subject to prevailing tariff rates and charges, or if no tariff is applicable, at Contractor's then-current retail rates. These rates do not include Special Construction charges which may be required on a case-by-case basis.

<u>ATM Service</u>	<u>Monthly Rate Per Circuit</u>
T-1	\$ 430.00
DS-3	\$ 3,468.00
OC-3	\$ 7,344.00