

ATM - Amendment

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
THE BELL ATLANTIC TELEPHONE)
COMPANIES)
)
Offer of Comparably Efficient)
Interconnection to Providers of)
Protocol Conversion Services)

MINOR AMENDMENT

The Bell Atlantic telephone companies¹ hereby amend their comparably efficient interconnection ("CEI") plan for protocol conversion services² to add a new underlying basic service, Asynchronous Transfer Mode ("ATM") Cell Relay Service.

ATM Cell Relay Service was not being offered either at the time the original protocol conversion CEI plan was filed nor at the time of the March 1995 amendment to that

¹ The Bell Atlantic telephone companies are Bell Atlantic-Delaware, Inc.; Bell Atlantic-Maryland, Inc.; Bell Atlantic-New Jersey, Inc.; Bell Atlantic-Pennsylvania, Inc.; Bell Atlantic-Virginia, Inc.; Bell Atlantic-Washington, D.C., Inc.; and Bell Atlantic-West Virginia, Inc.

² This plan was filed on December 21, 1988 and approved on March 31, 1989. *See Memorandum Opinion and Order*, 4 FCC Rcd 2744 (1989) ("Approval Order"). Bell Atlantic also filed an earlier amendment on March 13, 1995, to include several additional basic services.

plan. Demand for this service is just now developing, prompting the current tariffing activities.³ Previously, Bell Atlantic met the limited demand for ATM-based services through individual case basis or similar limited offerings in various state jurisdictions, without providing protocol conversions.

ATM Cell Relay Service is a telecommunications transport and switching service that provides for high speed connectivity among widely distributed locations. It is a fast packet, cell-based technology which can support user applications requiring high bandwidth, high-performance, and mixed media transport and switching. The service is provided over dedicated high-speed facilities and switches and can transport video, voice, and data traffic over the same network. ATM Cell Relay Service will allow customers who have requirements for high speed, inter-premises connectivity to interconnect their multiple locations via a subscriber User Network Interface from the customer's premises to a Bell Atlantic hub or serving wire center.

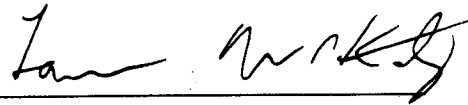
³ The service has been tariffed in Pennsylvania. *See* Tariff Pa P.U.C. - No. 1, Section 20H (filed Sept. 18, 1996, eff. Nov. 17, 1996), a copy of which is attached. Similar tariffs will be filed in other Bell Atlantic intrastate jurisdictions shortly. At present, Bell Atlantic has no interstate demand for ATM service.

Bell Atlantic will comply with all applicable CEI conditions, as specified in the Approval Order, in providing protocol conversions in connection with the additional basic service.

Respectfully submitted,

The Bell Atlantic Telephone
Companies

By Their Attorney



Lawrence W. Katz

1320 North Court House Road
Eighth Floor
Arlington, Virginia 22201
(703) 974-4862

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ATM CELL RELAY SERVICE

A. GENERAL

ATM Cell Relay Service is a telecommunications transport and switching service that provides for high speed connectivity between/among widely distributed locations within a LATA. It is a fast packet, cell-based technology which can support user applications requiring high bandwidth, high-performance transport and switching. This connectivity is provided via Permanent Virtual Circuits (PVC) which are implemented over access facilities and switches that are dedicated to high speed telecommunications services.

ATM Cell Relay Service will allow customers who have requirements for high speed, inter-premises connectivity to interconnect their multiple locations, within a LATA, via a subscriber User Network Interface (UNI) from the customer's premises to a Telephone Company hub or serving wire center.

B. REGULATIONS

1. Definition of Terms

User Network Interface (UNI)

User Network Interface (UNI) is a dedicated digital line that provides a connection from the customer's premises to the Telephone Company hub or serving wire center. The effective maximum data rate for these digital lines is either DS-3 (45 Megabits per second) or OC3c (155 Megabits per second).

Each UNI requires at least one Permanent Virtual Circuit (PVC). A customer may elect to subscribe to multiple PVCs. This feature is established over the UNI via address mapping which enables the customer to have virtual connections to various locations.

Permanent Virtual Connection (PVC)

The PVC is a Cell Relay Service virtual connection between two customer locations. The path is set up by the Telephone Company based on information contained on a service order rather than by dial up signaling. In this tariff, the PVC defines a path across the UNI between the customer premises and the Telephone Company's ATM switch. Each UNI requires the purchase of at least one PVC. In order to complete a connection from one customer premises to another, two UNIs and at least two PVCs are required.

Virtual Channel Connection (VCC)

A Virtual Channel Connection is a type of PVC with independent identity and defined service parameters that is provisioned via service order, and cannot be altered by the customer without additional Service Order activity.

ATM CELL RELAY SERVICE

B. REGULATIONS (Cont'd)

1. Definition of Terms (Cont'd)

Permanent Virtual Connection (Cont')

Virtual Path Connection (VPC)

A Virtual Path Connection is a type of PVC with defined service parameters that is provisioned via a service order. The customer may provision their own virtual connections within the VPC provided that the sum of the service parameters of all of the virtual channels do not exceed the aggregate service parameters of VPC.

Constant Bit Rate (CBR)

A Constant Bit Rate is a steady flow of user information required to support applications where variable delays in transmission would negatively impact the information content. Examples of applications requiring CBR are voice, and some types of video.

Variable Bit Rate (VBR)

A Variable Bit Rate is a flow of information that is bursty, and does not flow at a constant rate. An example of an application using VBR is Local Area Network (LAN) traffic.

Sustained Cell Rate (SCR)

Sustained Cell Rate is the maximum rate at which VBR cells may be constantly transmitted with a high assurance that no cells will be lost. Cells transmitted within the SCR have the highest priority of the VBR traffic, and will not be tagged as eligible for discard.

Peak Cell Rate (PCR)

Peak Cell Rate is the highest available rate of information transfer on a Variable Bit Rate connection, and the continuous cell rate allowed for Constant Bit Rate. Cells exceeding the sustained cell rate and below the peak cell rate will be limited to a maximum burst size.

Maximum Burst Size (MBS)

Maximum Burst Size is the maximum number of cells that can be passed to the service provider's network in a single burst at a rate that exceeds the SCR, but does not exceed the PCR assigned to the VBR connection. Cells exceeding the MBS will be declared as non conformant and will be discarded.

Cell Delay Variation Tolerance (CDVT)

Cell Delay Variation Tolerance is the amount of variation permitted for early arrival of clusters of cells at the source UNI. Cells exceeding the Tolerance will be declared non conformant and will be discarded.

ATM CELL RELAY SERVICE

B. REGULATIONS (Cont'd)

2. Maintenance Window

To meet our customers' requirements, we must occasionally perform network upgrades. These network upgrades are needed to provide improved performance and new features. Generally these upgrades will be performed between the hours of 11 p.m. and 8 a.m. Network upgrades will be planned to provide customers reasonable and timely notification and to minimize customer service impacts.

3. Provision of Service

a. ATM Cell Relay Service will consist of:

- (1) One UNI from the customer's premises to the central office based cell relay switch with maximum capacity for either DS-3 (45 Mbps) or OC3c (155 Mbps). The OC3c (155 Mbps) UNI is available provisioned over SONET facilities which provides a survivable service that automatically switches to an alternate (not diverse) path in the event of a failure on the primary path, or provisioned over a direct fiber with no alternative route.
- (2) An initial quantity of variable bit rate bandwidth for use by the customer within the UNI. The initial quantity of bandwidth will be 10 Mbps for a DS-3 UNI or 25 Mbps for a OC3c UNI.
- (3) Unlimited usage within the LATA.
- (4) At least one PVC is required to be purchased per UNI. The PVC can be either a VCC or a VPC.
- (5) Permanent Virtual Connections (one or more of any of the following)
 - a. Constant Bit Rate Virtual Channel Connection
 - b. Variable Bit Rate Virtual Channel Connection
 - c. Constant Bit Rate Virtual Path Connection
 - d. Variable Bit Rate Virtual Path Connection

ATM CELL RELAY SERVICE

B. REGULATIONS (Cont'd)

4. Service Functionality

The basic service functionality consists of transporting, within a LATA, ATM Cells of information from one UNI to any other UNI. Each Cell Relay Cell is delivered unchanged from the source to the destination(s).

5. Optional Features

- a. Additional variable bit rate bandwidth on the UNI above the initial quantity in increments of 5 Mbps on DS-3 or 10 Mbps on OC3c.
- b. Upgrade of initial 10 Mbps of VBR Bandwidth to any combination of CBR and VBR bandwidth.
- c. Upgrade of initial 25 Mbps of VBR Bandwidth to any combination of CBR and VBR bandwidth.
- d. Upgrade of additional VBR Bandwidth over and above the initial Bandwidth to any combination of VBR and CBR Bandwidth.

6. Service Parameters

a. Class A - CBR

Peak/Sustained Cell Rate	Customer selected in increments of 64 Kilobits per second up to the maximum speed of the UNI.
Non-conforming cells	Discarded
Cell Delay Variation Tolerance(CDVT)	DS-3 = 150 microseconds OC3c = 50 microseconds

b. Class C - VBR

Sustained Cell Rate(SCR)	Customer specified in increments of 64 kilobits per second up to the maximum available capacity of the line
Peak Cell Rate(PCR)	200% of Sustained Rate up to the maximum capacity of the line
Cell Delay Variation Tolerance(CDVT)	DS-3 = 150 microseconds OC3c = 50 microseconds
Maximum Burst Size(MBS)	100 Cells

ATM CELL RELAY SERVICE

B. REGULATIONS (Cont'd)

6. Service Parameters (Cont'd)

b. Class C (Cont'd)

Non Conforming Cells

Exceeding Peak Rate	Discarded
Exceeding Sustained Cell Rate plus MBS	Tagged and or Discarded

7. Availability of Service

ATM Cell Relay service is limited to LATAs where facilities are available.

8. Minimum Service Period

a. Per Month Basis

Each UNI provided on a per month basis is subject to a minimum service period of six months. If service is disconnected prior to the expiration of the minimum service period, termination liability charges are applicable to the remaining portion of the minimum period, whether the service is used or not. The termination liability will be reduced by 1/6 for each month of the service period.

b. Term Basis

Each UNI provided under contract basis, is subject to a minimum service period. For the 3 year term, the customer is liable for 100 percent of the monthly charges offset by 1/36 for each month of service. For the 5 year term, the customer is liable for 100 percent of the monthly charges offset by 1/60 for each month of service, or as an alternative, the total number of months of service times the difference between the three year and five year rates. For example, if 48 months had elapsed from the time the service was in effect, and the five year plan had initially been selected, the alternative termination liability would be calculated using the following formula:

Termination Liability =(three year rate-five year rate)X 48 months

Customers may at any time request to move from an existing term to a new term of equal or greater length without conversion charges. If less than 12 months of the existing term plan period has expired, customers may add UNIs to an existing term plan without initiating a new term plan. Once the term plan has expired, prevailing rates will apply. If rates increase during the term, the customer may discontinue service without liability.

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B. REGULATIONS (Cont'd)

9. Connections

Customer Premises equipment provided by the customer must meet the following interface requirements:

- a. The customer shall provide compatible equipment (e.g., routers, access concentrators, ATM switches, etc.) in accordance with interface specifications defined in the ATM Forum UNI 3.0 or 3.1 specifications for Permanent Virtual Connections.
- b. The Telephone Company's responsibility will be limited to the furnishing of communications facilities and switches suitable for the digital User Network Interface.
- c. The Telephone Company is not responsible for the installation, operation, or maintenance of any equipment provided by the customer.
- d. Customer provided equipment must be capable of receiving clock and recovering clock from the network.

10. Administrative Charge

An administrative charge will be applied whenever a customer initiated change is made to the parameters of a Virtual Channel or Virtual Path Connection regarding speed or other service parameters that do not involve remapping of the Connection. Such changes are defined as those requiring no changes in physical facilities, and able to be implemented from the Telephone Company Network Control Center without dispatch of a technician to the customer location. The charge will be applied on a per Virtual Connection basis.

11. Moves

When a customer requests a move or relocation of the UNI, the move or relocation will be treated as a termination of the existing service and the establishment of a new service for the application of all charges.

12. Prepayment Option

Customers subscribing to a term pricing contract plan have the option of prepaying the total outstanding recurring charges. If the customer decides to disconnect service before the end of the contractual period, no termination liability will apply, but the prepaid amount will not be refunded.

ATM CELL RELAY SERVICE

(C)

C. RATES AND CHARGES

	<u>Product/ Service Charge</u>	<u>Monthly Rate</u>
1. User Network Interface		
a. Month to Month		
DS-3 User Network Interface with 10 Mbps of Class C Variable Bit Rate Bandwidth	\$1500.00	\$3700.00
OC3c Sonet based User Network Interface with 25 Mbps of Class C Variable Bit Rate Bandwidth 2500.00	7250.00	
OC3c Direct Fiber User Network Interface with 25 Mbps of Class C Variable Bit Rate Bandwidth	2000.00	4550.00
b. Three Year Term		
DS-3 User Network Interface with 10 Mbps of Class C Variable Bit Rate Bandwidth	1500.00	3100.00
OC3c Sonet based User Network Interface with 25 Mbps of Class C Variable Bit Rate Bandwidth 2500.00	6000.00	
OC3c Direct Fiber User Network Interface with 25 Mbps of Class C Variable Bit Rate Bandwidth	2000.00	3800.00
c. Five Year Term		
DS-3 User Network Interface with 10 Mbps of Class C Variable Bit Rate Bandwidth	1500.00	2800.00
OC3c Sonet based User Network Interface with 25 Mbps of Class C Variable Bit Rate Bandwidth	2500.00	5500.00
OC3c Direct Fiber User Network Interface with 25 Mbps of Class C Variable Bit Rate Bandwidth	2000.00	3450.00

ATM CELL RELAY SERVICE

(C)

C. RATES AND CHARGES (Cont'd)

	<u>Product/ Service Charge</u>	<u>Monthly Rate</u>
2. Permanent Virtual Connections (At Least One required per UNI)		
Constant Bit Rate Virtual Channel Connection	\$50.00	\$ 2.00
Variable Bit Rate Virtual Channel Connection	50.00	2.00
Constant Bit Rate Virtual Path Connection	50.00	4.00
Variable Bit Rate Virtual Path Connection	50.00	4.00
3. Optional Features		
a. DS-3 User Network Interface		
Five Mbps of Class C Variable Bit Rate Sustained Cell Rate Bandwidth above the initial ten Mbps	50.00	100.00
Upgrade of initial ten Mbps Variable Bit Rate Bandwidth to any combination of Constant Bit Rate or Variable Bit Rate Bandwidth	50.00	50.00
Upgrade of five Mbps Variable Bit Rate Bandwidth over the initial ten Mbps to any combination of Constant Bit Rate or Variable Bit Rate Bandwidth	50.00	25.00
b. OC3c User Network Interface		
Ten Mbps of Class C Variable Bit Rate Sustained Cell Rate Bandwidth above the initial 25 Mbps	50.00	150.00
Upgrade of initial 25 Mbps Variable Bit Rate Bandwidth to any combination of Constant Bit Rate or Variable Bit Rate Bandwidth	50.00	125.00
Upgrade of 10 Mbps Variable Bit Rate Bandwidth above the initial 25 Mbps to any combination of Constant Bit Rate or Variable Bit Rate Bandwidth	50.00	50.00

ATM CELL RELAY SERVICE

C. RATES AND CHARGES (Cont'd)

	<u>Product/ Service Charge</u>	<u>Monthly Rate</u>
4. Administrative Charge		
One or more changes made to each VCC or VPC on a single Service Order	\$75.00	-