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## B7. DIGITAL NETWORK SERVICE

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**B7. DIGITAL NETWORK SERVICE**

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## B7. DIGITAL NETWORK SERVICE

### B7.1 MegaLink Service

#### B7.1.1 General

- A. MegaLink service is furnished for Private Line IntraLATA Communications by the Company.
- B. MegaLink service is a service for the transmission of digital signals only and uses only digital transmission facilities.
- C. MegaLink service provides for the simultaneous two-way transmission of isochronous digital signals at DS1 speeds of 1.544 mbps, where facilities are available.
- D. To ensure satisfactory operation, the terminal equipment provided by the customer must be compatible with the DS1/1.544 Mbps channel facility provided by the Company. The technical specifications and standard network interfaces for MegaLink service are contained in BellSouth Services Technical Reference Publication 73525. This publication is available from BellSouth Services Documentation Operations, North W5A1, 3535 Colonnade Parkway, Birmingham, Alabama 35243.
- E. Unless specified following, the terms and conditions for MegaLink service specified herein apply in addition to the terms and conditions set forth in Section B2.
- F. The rates specified for MegaLink service in B7.1.3 following, contemplate the provision of a digital quality facility over existing interoffice carrier equipment and/or exchange cable facilities compatible with this service. If such equipment, new facilities or changes to existing facilities are required for the provision of this service, a special construction charge based on the cost incurred to make the changes will apply in addition to the rates for MegaLink service.

#### B7.1.2 Terms and Conditions

- A. Description of Service
  - 1. MegaLink service is furnished for the simultaneous two-way transmission of serial, Bipolar, Return-to-Zero (BPRZ) isochronous digital signals, except where intentional bipolar violations are introduced by Bipolar with 8 Zero Substitution (B8ZS) format, at a speed of DS1/1.544 Mbps between two-points located within a LATA.
  - 2. Multipoint service is not available.
  - 3. MegaLink service is available on a month-to-month basis or under variable rate periods, with rates based on lengths of **12 months**, **24-48 months<sup>1,2</sup>**, **49-72 months<sup>1</sup>**, or **73-96 months<sup>1</sup>** under conditions specified in B2.4. If the customer does not select a new contract option or does not request discontinuance of service, service will be continued under the terms specified in B2.4. (C)
  - 4. Connection of DS1/1.544 Mbps communications systems provided by others may be made on a permissive basis as provided for in Section B2., the Company does not represent its MegaLink service as adapted for such connections, and shall not be responsible for the through transmission of signals, or the quality of such transmission on such connections.
  - 5. A Channel Service Unit (CSU) or appropriate Termination Equipment (TE) provided by the customer is required at a customer's or authorized user's premises to perform such functions as:
    - proper termination of the service
    - amplification
    - signal shaping
    - remote loop-back

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers. (N)

**Note 2:** As of April 5, 2021, the 24-36 Month Contract Term is no longer available for new or renewing subscribers. (N)

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## B7. DIGITAL NETWORK SERVICE

### B7.1 MegaLink Service (Cont'd)

#### B7.1.2 Terms and Conditions (Cont'd)

(T)

##### A. Description of Service (Cont'd)

6. The design, maintenance and operation of MegaLink service contemplates communications originating and terminating as (1) a customer premises to customer premises channel via the Company's Serving Wire Center, (SWC) - and/or through remote SWCs; (2) a customer premises to the Serving Wire Center - and/or to remote SWCs - partial channel (link); or (3) a central office to central office (interoffice) partial channel (link).
7. MegaLink service may also be furnished on a link (partial channel) basis when connected to Centrex Type Services<sup>1</sup>, FlexServ service, MegaLink channel service, another MegaLink service, MegaLink Plus service, and/or LightGate service.
8. All appropriate rates specified in other *guidebook* sections are in addition to the monthly rate per package or single channel for MegaLink service specified in this *Guidebook*.

(T)

##### B. Definitions

###### CHANNEL SERVICE UNIT

The term "Channel Service Unit" (CSU) denotes equipment provided by the Customer to terminate a digital facility on the customer's or user's premises.

**Note 1:** Connection from MegaLink service and/or LightGate service to Centrex Type Services may not be available from all serving wire centers.

## B7. DIGITAL NETWORK SERVICE

### B7.1 MegaLink Service (Cont'd)

#### B7.1.2 Terms and Conditions (Cont'd)

##### B. Definitions (Cont'd)

###### DS1

This denotes a channel service expressed in terms of its digitally encoded data bit rate in accordance with the North American hierarchy of digital signal levels. It has a 1.544 Mbps transmission data rate, and provides for the two-way simultaneous transmission of isochronous timed, Bipolar Return-to-Zero (BPRZ) bit stream format except where intentional bipolar violations are introduced by Bipolar with 8 Zero Substitution (B8ZS) format. Unframed signal formats are not permitted or compatible with Company equipment. The required format and interface specifications are contained in BellSouth Services Technical Reference Publication 73525.

###### DIGITAL LOCAL CHANNEL

The term "Digital Local Channel" denotes a path for MegaLink service furnished from the demarcation point on a customer's premises to their Serving Wire Center.

###### INTEROFFICE CHANNEL

The term "Interoffice channel" denotes a path (or paths) for digital transmission between Company Serving Wire Centers within a LATA. An interoffice channel may be furnished in such manner as the Company may elect.

##### C. Application of Rates

1. Digital Local Channels furnished between a Serving Wire Center and the customer's premises will be charged at rates based on the first 1/2 mile and each additional 1/2 mile for the airline distance measured between the customer's premises and their Serving Wire Center.
2. Interoffice Channels furnished between Central Offices will be charged at rates based on airline distance between the Central Offices.
3. MegaLink service is available on a month-to-month basis or under variable rate periods, with rates based on lengths of 36 months, 60 months, or 84 months under conditions specified in the Channel Services Payment Plan in B2.4 except as modified following. Contract rate increases are subject to the stipulations of 4. following.
4. MegaLink service rates under contract will not be increased by Company initiative until the contract period expires. Rates in effect at the time the service is installed and/or as of the service order application date will be applicable until the contract expires. At the expiration date of the customer's payment period option, the customer may select a new payment period option at current rates or revert to current rates on a month-to-month basis.
5. A Termination Liability Charge is applicable at the date of termination. The applicable charge is dependent on the contract period subscribed to and will be equal to fifty percent (50%) of the following: the number of months remaining in the contract times the monthly rate provided under the contract. However, Termination Liability charges will not apply for customer requests for moves of service under CSPP subject to the provisions set forth in B2.4.9.B.11. preceding, or for customer requested changes of service under CSPP to Fast Packet Transport Services under the Fast Packet Transport Services Payment Plan, *or to AT&T Ethernet Services under the Ethernet Payment Plan*, subject to the provisions set forth in B2.4.9.B.4.b.
6. Airline distance between Company central offices shall be developed using the methodology, found in B3.3.3. Fractional mileage shall be rounded up to the next full mile.

(C)

##### D. Connections

1. Customer-Provided Terminal Equipment, Customer-Provided Derivation Equipment and Customer-Provided Communications Systems may be connected to MegaLink service when such connection is made in accordance with the provision specified in 2., 3., and 4. following.

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## B7. DIGITAL NETWORK SERVICE

### B7.1 MegaLink Service (Cont'd)

#### B7.1.2 Terms and Conditions (Cont'd)

(T)

##### D. Connections (Cont'd)

##### 2. Responsibility of the Company

- a. The responsibility of the Company shall be limited to the furnishing and maintenance of MegaLink service to a network interface on the customer's premises where provision is made for the connection of local service.
- b. The Company shall not be responsible for installation, operation, or maintenance of any terminal equipment or communications systems provided by a customer. MegaLink service is not represented as adapted for the use of such equipment or system. Where such equipment or system is connected to Company facilities the responsibility of the Company shall be limited to the furnishing of facilities suitable for MegaLink service and to the maintenance and operation in a manner proper for such digital service. The Company shall not be responsible for:
  - the through transmission of signals generated by such equipment or system, or for the quality of, or defects in, such transmission or
  - the reception of signals by such equipment or systems, or
  - damage to terminal equipment or communications systems provided by a customer or authorized user due to testing.
- c. The Company shall not be responsible to the customer if changes in any of the facilities, operations or procedures of the Company utilized in the provision of MegaLink service render any facilities or equipment provided by a customer obsolete, or require modification or alteration of such equipment or system or otherwise affects its use or performance.
- d. The Company undertakes to maintain and repair the facilities which it furnishes. The customer may not rearrange, disconnect, remove or attempt to repair any equipment installed by the Company without prior written consent of the Company.

##### 3. Responsibilities of the Customer

- a. The customer is responsible for installing and testing his premises equipment or facilities to insure that when they are connected to MegaLink service such equipment or facilities are operating properly.
- b. The operating characteristics of the customer premises equipment or facilities shall be such as to not interfere with any of the services offered by the Company. Such use is subject to the further provisions that the equipment provided by a customer does not: endanger the safety of Company employees or the public; damage, require change in or alteration of the equipment or other facilities of the Company; interfere with the proper functioning of such equipment or facilities; impair the operation of the Company's facilities or otherwise injure the public in its use of the Company's services. Upon notice that the equipment provided by a customer is causing or is likely to cause such hazard or interference, the customer shall take such steps as shall be necessary to remove or prevent such hazard or interference.
- c. The customer's responsibility shall include cooperative testing with the Company as may be necessary. Where regeneration and/or equalization adjustments or changes may be required to compensate for rearrangements and/or changes in outside plant facilities, the customer will be responsible for all expenses incurred in changes to his premises equipment.

## B7. DIGITAL NETWORK SERVICE

### B7.1 MegaLink Service (Cont'd)

#### B7.1.2 Terms and Conditions (Cont'd)

##### D. Connections (Cont'd)

4. Connection of Customer-Provided Terminal Equipment, Customer-Provided Derivation Equipment and Customer-Provided Communications Systems.

a. The following provisions will apply:

- (1) Customer-Provided Terminal Equipment and/or Customer-Provided Communications Systems may be connected at the premises of the customer to MegaLink service.
- (2) The customer, by use of its own derivation equipment, may create digital bit streams from a MegaLink service and such equipment may be connected for transmission of such bit streams when connected thru a customer-provided CSU/TE.
- (3) The undertaking of the Company is to furnish MegaLink service as ordered and specified by the customer as specified in d. following.

b. Connections to Other Services Furnished by the Company to the Same Customer

MegaLink service furnished by the Company may be connected by the customer to another service or to other services furnished by the Company as specified in D.2 preceding. Connected services are subject to all *terms and conditions* governing the provisioning of those services.

c. Connections to other services furnished by the Company to different customers

The customer may connect at the premises of the customer, another MegaLink service or other services furnished by the Company to different customers as specified in D.2. preceding. Connected services are subject to all *terms and conditions* governing provisioning of those services.

d. Connection of Channel Service Units

A Channel Service Unit (CSU) or appropriate Termination Equipment (TE) must be provided by the customer to connect a Company-provided digital facility. In accordance with Part 68 of the FCC's Rules and Regulations, new grandfathered CSU/TEs may be connected, moved, and reconnected until June 30, 1987. After this date only registered and previously connected grandfathered CSU/TEs may be connected to Company-provided digital facilities.

Grandfathered CSU/TE equipment must comply with the requirements outlined in BellSouth Services Technical Reference 73525. This publication is now available from BellSouth Services Documentation Operations, North W5A1, 3535 Colonnade Parkway, Birmingham, AL 35243. Registered technical requirements for CSU/TEs are outlined in Part 68 of the FCC's Rules and Regulations. A copy may be obtained from the Federal Communications Commission, Room BB300, Washington, D. C. 20054.

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## B7. DIGITAL NETWORK SERVICE

### B7.1 MegaLink Service (Cont'd)

#### B7.1.2 Terms and Conditions (Cont'd)

(T)

##### E. Features

###### 1. Clear Channel Capability

- a. Clear Channel Capability (CCC) is an arrangement that alters a DS1/1.544 Mbps signal with unconstrained information bits, to meet pulse density requirements outlined in Technical Reference 73525. This will allow a customer to transport an all zero octet over a MegaLink service channel providing an available combined maximum 1.536 Mbps data rate. This arrangement requires the customer signal at the channel interface to conform to Bipolar with 8 Zero Substitution (B8ZS) line code as described in Technical Reference 73525.
- b. CCC is provided on MegaLink service channels between two customer designated premises, from a customer premises to their Serving Wire Center or Node Central Office and/or to a remote Serving Wire Center or Node Central Office, and from a Central Office to a Central Office, and is subject to the availability of facilities. This optional feature may be ordered at the same time the MegaLink service channel is ordered, or it may be ordered as an additional feature of an existing MegaLink service channel.
- c. When providing CCC via a DS3/44.736 Mbps High Capacity channel, that DS3 channel must be designated, in Company records, as having Clear Channel Capability prior to the provisioning of a DS1/1.544 Mbps High Capacity channel with CCC. Customers must agree to out-of-service periods required to add this feature to an existing MegaLink service channel to be optioned for B8ZS.

##### F. Payment Arrangements and Credit Allowance

1. The minimum period for which MegaLink service is furnished and for which charges are applicable is one month.
2. Suspension of service is not allowed.
3. When MegaLink service is interrupted due to causes other than negligence of the customer, or to the failure of facilities or equipment furnished by the customer, a credit allowance will be made upon request for the portion of service affected. For the purpose of determining the amount of allowance, every month is considered to have 30 days. All credit allowances shall begin from the time of notice by the customer to the Company, and will end when the service is operative. No credit is allowed for interruption to service of less than 30 minutes. Interruptions of 30 minutes or more are credited to the customer at the proportionate monthly rate in half-hour multiples for each half-hour, or major fraction thereof, of interruption. A customer must report the outage in order to receive service outage credit. The total credit received in any month shall not exceed the monthly rate for the service.



**B7. DIGITAL NETWORK SERVICE**

**B7.1 MegaLink Service (Cont'd)**

**B7.1.3 Rates and Charges**

A. A Digital Local Channel is furnished between a Serving Wire Center and the customer's premises. Rates are based on the airline distance between the Serving Wire Center and the customer's premises.

1. Digital Local Channel, each<sup>1</sup>

	Nonrecurring Charge	Month to Month	12 Months	24-48 <sup>4,5</sup> Months	49-72 <sup>4</sup> Months	73-96 <sup>4</sup> Months	USOC
(a) (Obsoleted, See Section B107)							
(b) First 1/2 mile	\$300.00	\$4,996.00(I)	\$153.00(I)	\$85.00	\$85.00	\$85.00	1LDPZ
(c) Each additional 1/2 mile, or fraction thereof	-	1,908.00(I)	60.00(I)	34.00	32.00	30.00	1LDPA

B. Interoffice Channels are furnished between Central Offices. Rates are based on the airline distance between Central Offices.<sup>1,2</sup>

1. Interoffice Channel, each channel 0-8 miles

(a) Fixed monthly rate <sup>3</sup>	100.00	4,463.00(I)	153.00(I)	85.00	85.00	85.00	1LNO1
(b) Each airline mile, or fraction thereof <sup>3</sup>	-	1,158.00(I)	33.00(I)	19.00	17.00	16.00	1LNOA

2. Interoffice Channel, each channel 9-25 miles

(a) Fixed monthly rate <sup>3</sup>	100.00	4,463.00(I)	153.00(I)	85.00	85.00	85.00	1LNO2
(b) Each airline mile, or fraction thereof <sup>3</sup>	-	1,158.00(I)	32.00(I)	18.00	16.00	15.00	1LNOB

3. Interoffice Channel, each channel over 25 miles

(a) Fixed monthly rate <sup>3</sup>	100.00	4,463.00(I)	153.00(I)	85.00	85.00	85.00	1LNO3
(b) Each airline mile, or fraction thereof <sup>3</sup>	-	1,158.00(I)	29.00(I)	17.00	15.00	13.00	1LNOC

C. Clear Channel Capability is furnished on a per MegaLink service channel basis.

	Monthly Rate	Nonrecurring Charge Initial	Nonrecurring Charge Subsequent	USOC
1. Per MegaLink service channel optioned as:				
(a) Superframe Format (SF)	\$-	\$-	\$600.00	CCOSF
(b) Extended Superframe Format (ESF)	-	-	600.00	CCOEF

D. Move Charge

A move charge, per MegaLink service channel, applies for each Digital Local Channel moved to a new location in the same building. This move charge is equal to the sum of the Digital Local Channel Nonrecurring Charge, Service Change Charge - Inside Moves, and Premises Visit Charge.

A move charge, per MegaLink service channel under CSPP, applies for each MegaLink service moved to a new location in Company territory within the same state. This move charge is equal to the sum of all nonrecurring charges applicable to a new MegaLink service channel installation at the new location.

**Note 1:** Contract lengths are flexible to allow customer choice of payment period per B2.4.9.

**Note 2:** Refer to B3.3.3 for mileage measurement methodology.

**Note 3:** MegaLink Plus service, specified in B7.9, references rates and charges for this rate element.

**Note 4:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 5:** As of April 5, 2021, the 24-36 Month Contract Term is no longer available for new or renewing subscribers.

## B7. DIGITAL NETWORK SERVICE

### B7.1 MegaLink Service (Cont'd)

#### B7.1.3 Rates and Charges (Cont'd)

**E. Service Connection Charges**

1. Service Establishment Charges are applicable, for each MegaLink service channel ordered, for receiving and recording information and/or taking action in connection with a customer's request, and processing the necessary data. These charges include engineering design, common centralized testing and coordination.
2. Service Change Charges are applicable for receiving and recording information and/or taking action in connection with a customer's Inside Move or transfer of service responsibility request, for processing the necessary data on an existing MegaLink service channel. A Service Change Charge is applicable for each MegaLink service channel associated with the customer request (in lieu of a Service Establishment Charge).
3. Premises Visit Charges are applicable, per Digital Local Channel, for the termination of a channel at a customer's premises or for inside moves. Only one Premises Visit Charge applies when more than one channel service of the same type is terminated or moved at the same premises at the same time.
4. Connection charges are applicable for the connection and testing of Digital Local Channels and/or Interoffice Channels. The charges are those nonrecurring charges contained in A. and B. preceding.
5. Charges for MegaLink Service

a. Service Establishment Charge

- (1) Per MegaLink Service Channel<sup>1</sup>

- (a) Each

**Nonrecurring Charge**  
**\$575.00**

**USOC**  
**MGLSE**

b. Service Change Charge

- (1) Per MegaLink Service Channel<sup>1</sup>

- (a) For Inside Moves, each

**350.00**

**MGL1M**

- (b) Per Transfers of Responsibility, each

**50.00**

**MGLTR**

c. Premises Visit Charge

- (1) Per Digital Local Channel or for an Inside Move<sup>2</sup>

- (a) Per Visit

**37.00**

**MGLPV**

**Note 1:** Refer to B7.1.2.A.7. for description of MegaLink service channels.

**Note 2:** This charge is applicable to additional stations subsequently installed in a building.

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## **B7. DIGITAL NETWORK SERVICE**

### **B7.2 SynchroNet Service (*Obsoleted, see Section B107*)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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**B7. DIGITAL NETWORK SERVICE**

**B7.2 SynchroNet Service (*Obsoleted, see Section B107*) (Cont'd)**

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## B7. DIGITAL NETWORK SERVICE

### B7.3 MegaLink Channel Service

#### B7.3.1 General

- A. MegaLink channel service is an intraLATA digital service which provides channelization capability for the customer in the Company's central office. MegaLink channel service is provided in packages based on multiple voice grade channel equivalents (DS0) where 24 voice grade channels are equal to a DS1. This service provides local channels and/or interoffice channels for network exchange access, Foreign Exchange Service, Centrex Type Services station lines, off-premises stations, tie lines, WATS lines, analog data channels, Broadband Exchange Lines, and digital data services (at 2.4 Kbps, 4.8 Kbps, 9.6 Kbps, 19.2 Kbps, 56 Kbps, 64 Kbps and MegaLink service data rates).
- B. Channelization is provided by D type channel banks which are offered in various basic system capacities and feature activation types. Individual channel services are made available by selecting the specific feature activation equipment desired in a basic system. The customer may channelize all or part of a MegaLink channel service package to activate voice and data facilities for interconnection with the exchange network, voice grade and data facilities for private line channels, as well as other MegaLink channel services. The customer may also choose not to channelize all or part of a MegaLink channel service package allowing direct connection to other DS1 services as provided in this *Guidebook* or the General *Exchange Guidebook*. (T)
- C. This service is available within a LATA where appropriate digital facilities are available as determined by the Company. Service inquiries will be necessary to determine availability. Special Construction charges for MegaLink service will apply as specified in B7.1 preceding.
- D. Individual channels within a MegaLink channel service package may be connected with service offered in other sections of this *Guidebook* and General *Exchange Guidebook* as appropriate. The *terms, conditions*, rates and charges in this *Guidebook* are applicable for the MegaLink channel service component of the customer's end-to-end service. Single channel service components (non-MegaLink channel service links) are subject to the *terms, conditions*, rates and charges in their respective *guidebook* sections. (T)
- E. The customer may activate any number or combination of channels within a MegaLink channel service package within the limitations set forth in B7.3.1.G following. Channels may be activated coincident with initial service or at any time subsequent to basic system installation. Once activated, a channel is subject to a minimum service period in accordance with the contract terms. Features (channels) activated under month-to-month rates will have a minimum service period of one month.

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## B7. DIGITAL NETWORK SERVICE

### B7.3 MegaLink Channel Service (Cont'd)

#### B7.3.1 General (Cont'd)

- F. The total number of voice grade equivalent channels activated by the customer may not exceed the capacity of the basic system. Additionally, there are some necessary restrictions in total system capacities where certain types of channel services are channelized. For example, some channelizing equipment for SynchroNet service may require two voice grade equivalent channels per channel provided by the Company. This would reduce a system's stated capacity substantially. The Company will notify the customer when a system's capacity is affected. (T)
- G. Central Office channelization generally provides analog to digital conversion to permit individual exchange services and private line channel services to be transported over digital high capacity facilities. In addition, this equipment permits connection to required testing facilities at designated hub or node locations for some digital offerings, such as SynchroNet service. This channelization is also intended for use at Company locations where different high capacity digital network links terminate in the same central office and must be converted to individual analog or digital channels before individual service links can be cross-connected. System capacities below are provided in groups of 24 voice grade equivalent channels, and are subject to the limits as set forth in B7.3.1.G. preceding.
- H. Channelization on a customer's premises is provided by the customer. Customer premises channelization equipment, and any other associated network termination equipment, is available through various vendors, including Company, on a detariffed basis. Joint provisioning of channelized services introduces joint responsibilities between the customer and the Company.
1. Responsibilities of the Company:
    - a. The Company will endeavor to activate its portion of joint service in a timely manner on the negotiated date to support installation requirements.
    - b. The Company will provide the customer with information regarding the type and the manufacturer of Central Office (C.O.) channelization equipment to be used in each application.
    - c. The Company will limit its selection of central office equipment to avoid operational and administrative difficulties associated with a multi-vendor central office environment.
    - d. The Company reserves the right to change its equipment vendors should equipment availability, price or technological advantages make such a change attractive or necessary.
    - e. The Company will notify the customer, generally a minimum of six months in advance, of any need to change its central office equipment to allow the customer sufficient time to respond, make any necessary changes, and schedule cooperative testing for cutover if required.
    - f. Digital synchronization timing for MegaLink channel service will be provided by the Company.

## B7. DIGITAL NETWORK SERVICE

### B7.3 MegaLink Channel Service (Cont'd)

#### B7.3.1 General (Cont'd)

##### H. (Cont'd)

##### 2. Responsibilities of the Customer:

- a. The customer must be prepared to activate his portion of joint service in a timely manner on the negotiated date, providing testing equipment and personnel to support installation requirements, as may be necessary.
- b. The customer will be responsible for selecting his own equipment. Customer equipment must be compatible with the Company provided channelization at the central office.

##### 3. Trouble resolutions:

The Company will assist the customer in resolving any installation or day to day channel service problems. However, the Company does not assume responsibility for the compatibility or suitability of the customer's equipment. Dispatches to customer premises caused by customer equipment troubles will result in Trouble Determination Charges to the customer.

- I. The technical specifications and standard network interfaces for DS1 and associated channelized services are contained in BellSouth Technical Reference #73525. This publication is available from BellSouth Services, Documentation Operations, North W5A1, 3535 Colonnade Parkway, Birmingham, Alabama 35243. Channelized DS1 service is available only with D4 channel bank equipment or compatible, equivalent equipment.
- J. Emerging technology, such as low bit rate voice multiplexing techniques, may permit additional quantities of individual channels to be channelized on a single DS1 signal. Equipment providing this capability does not generally assure compatibility between different manufacturers. Some equipment may not be suitable for data transmission or tandem network line application. Rates, charges, and availability of this equipment will be negotiated with the customer on an individual case basis.

#### B7.3.2 Application of Rates

- A. Monthly rates as specified in B7.3.4 following apply for each MegaLink channel service according to the system capacity of voice grade equivalent channels in each package. These rates apply regardless of the number of voice grade circuit equivalents within each package that are actually activated by the customer at a point in time. In addition, rates and charges for associated MegaLink service in B7.1 are applicable.
- B. Exchange Network Access is provided for channels within each MegaLink channel service package at the rates and charges specified in B7.3.4 following and apply for each channel within a package that is activated for Exchange Network Access. In addition, all applicable *terms, conditions*, rates, and charges specified in Section A3. of the General Exchange Guidebook will apply. (T)
- C. Rates and charges specified in other *guidebook* sections for services such as Touch-Tone, Custom Calling Service, etc., are in addition to the monthly rate for MegaLink channel services. Also, the rates and charges for other services that may be interconnected or extended beyond the basic MegaLink channel service, such as off-premises stations, tie lines, private lines, etc., are in addition to the rates specified in this Guidebook for those portions of channel services necessary to provide end-to-end service. Rates and charges for single MegaLink service channels used to connect MegaLink channel services when used as part of the same communications system, will be as specified in B7.1 preceding. (T)
- D. All usual and applicable Service Connection Charges and Nonrecurring Charges as specified in other *guidebooks* apply to the activation, move or change of channel equivalents within MegaLink channel service packages as well as for installation of the basic system. Suspension of service is not permitted with MegaLink channel service. (T)
- E. MegaLink channel service systems and Feature Activations are available on a month-to-month basis or under variable rate periods, with rates based on lengths of 36 months, 60 months<sup>1</sup>, or 84 months<sup>1</sup> under conditions specified in B2.4 except as modified following. Contract rate increases are subject to the stipulations of F. following. All elements of a contract will expire at the same time (be coterminous).

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

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## B7. DIGITAL NETWORK SERVICE

### B7.3 MegaLink Channel Service (Cont'd)

#### B7.3.2 Application of Rates (Cont'd)

- E. (Cont'd)
1. Individual exchange network access and private line channel services that are connected to MegaLink channel service are not offered under MegaLink channel service master contract rate stability provisions. They are subject to their standard *guidebook* provisions as appropriate. (T)
- F. MegaLink channel service rates under contract will not be increased by Company initiative until the contract period expires. Those monthly rates for Basic System Capacity and Feature Activation in effect at the time the service is installed and/or as of the service order application date, will be applicable until the contract expires. At the expiration date of the customer's payment period option, the customer may select a new payment period option at current rates or revert to current rates on a month-to-month basis.
- G. A Termination Liability Charge is applicable at the date of termination. The applicable charge is dependent on the contract period subscribed to and will be equal to fifty percent (50%) of the following: the number of months remaining in the contract times the monthly rate for the Basic System Capacity and Feature Activation which are provided under contract. This is subject to the exemptions of 1. and 2. following.
1. No Termination Liability Charge will be applicable for the Basic System capacity when the customer renegotiates a new contract for the same equipment or larger system at the same location(s) for a period of time greater than the time remaining on the existing contract, subject to contract periods contained in E. preceding.
  2. The Termination Liability Charge basis for Feature Activation rates will be 50 percent of the total monthly rate for the activated features under contract, which are being disconnected. All features activated under contract are coterminous with the basic system with which they are associated. Any features subscribed to on a month-to-month basis have a minimum service period of one month and no associated termination charge liability.
  3. The Termination Liability charge for moves of MegaLink channel service under CSPP from one location to a different location in Company territory within the same state, with the exception of inside moves, will not apply. Instead, the provisions set forth in B2.4.9.B.12. will apply. (T)
- H. Transfer of service responsibility between customers is permitted subject to payment of a Transfer Charge as specified in B7.3.4.C.

#### B7.3.3 Digital Architecture and Definitions

- A. Digital Architecture
- MegaLink channel service differs in provisioning method and numbering format from single channel services. These services will be available from the Company on a link (partial channel) basis rather than as an end-to-end service. This architecture is intended to promote more efficient connectivity of analog and digital networks in the future.
- Both analog and digital channels are offered by the Company. Where traditional analog voice grade signals are provided to a customer at his premises, then comparable performance specifications to the Series 2100 (or 2000) Channel Services will be provided, as contained in the Private Line or General *Exchange Guidebooks*. (T)

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## B7. DIGITAL NETWORK SERVICE

### B7.3 MegaLink Channel Service (Cont'd)

#### B7.3.3 Digital Architecture and Definitions (Cont'd)

##### A. Digital Architecture (Cont'd)

Many MegaLink service channels will be available on a digital basis at the network interface on a customer's premises. Traditional analog services, like tie lines, off-premises stations, and PBX trunks can be provided on a digital basis to a customer's premises by the Company when a customer desires them encoded in a DS1 bit stream. Under those conditions, they will be provided as DS0 channels by the Company. Both the Company and the customer have joint responsibilities to ensure the proper transmission of the provided services. Normal analog channel network interface specifications will be superseded by the electrical specifications of the MegaLink service channel which is actually terminated. Each DS0 channel provided will have identity only as a "time slot" within a DS1 channel. Compatible Digital to analog conversion equipment must be provided by the customer to derive the desired analog services. Any Channel Service Units (CSUs) necessary for digital services are the responsibility of the customer.

##### B. Definitions

###### CHANNEL SERVICE UNIT (CSU)

The term CSU denotes network channel terminating equipment provided by the customer to terminate digital channel facilities on a customer's or user's premises.

###### DS0

The term DS0 denotes a channel service expressed in terms of its digitally encoded data bit rate in accordance with the North American hierarchy of digital signal levels. It is generally referred to as having a 64 Kbps transmission bit rate signal. The required format and interface specifications are contained in BellSouth Technical Reference #73525. (C)

###### DS1

The term DS1 denotes a channel service expressed in terms of its digitally encoded bit rate in accordance with the North American hierarchy of digital signal levels. It has a 1.544 Mbps transmission data rate, and provides for the two-way simultaneous transmission of isochronous timed, Bipolar Return-to-Zero (BPRZ) bit stream format, except where intentional bipolar violations are introduced by Bipolar with 8 Zero Substitution (B8ZS) format. Unframed signal formats are not permitted or compatible with Company equipment. The required format and interface specifications are contained in BellSouth Technical Reference #73525.

**B7. DIGITAL NETWORK SERVICE**

**B7.3 MegaLink Channel Service (Cont'd)**

**B7.3.4 Rates and Charges**

**A. Basic System Capacity**

The rates for a basic system without activated features for voice or data grade service are as follows:

1. Central Office

	Nonrecurring Charge	Month To Month	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC	(C)
(a) 24 Voice Equivalent Channels	\$220.00	\$230.00	\$189.00	\$171.00	\$154.00	VUM24	
(b) 48 Voice Equivalent Channels	265.00	400.00	300.00	290.00	280.00	VUM48	
(c) 96 Voice Equivalent Channels	350.00	725.00	550.00	530.00	510.00	VUM96	
(d) 144 Voice Equivalent Channels	435.00	1,025.00	790.00	770.00	740.00	VUM144	
(e) 192 Voice Equivalent Channels	525.00	1,266.00	1,010.00	970.00	924.00	VUM192	
(f) 240 Voice Equivalent Channels	610.00	1,525.00	1,210.00	1,170.00	1,078.00	VUM240	
(g) 288 Voice Equivalent Channels	695.00	1,860.00	1,522.00	1,370.00	1,233.00	VUM288	
(h) 384 Voice Equivalent Channels	865.00	2,265.00	1,855.00	1,670.00	1,503.00	VUM384	
(i) 480 Voice Equivalent Channels	1,040.00	2,650.00	2,171.00	1,954.00	1,759.00	VUM480	
(j) 576 Voice Equivalent Channels	1,210.00	3,025.00	2,477.00	2,230.00	2,007.00	VUM576	
(k) 672 Voice Equivalent Channels	1,380.00	3,365.00	2,754.00	2,479.00	2,232.00	VUM672	

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers. (N)



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**B7. DIGITAL NETWORK SERVICE**

**B7.3 MegaLink Channel Service (Cont'd)**

**B7.3.4 Rates and Charges (Cont'd)**

(T)

A. Basic System Capacity (Cont'd)

2. (DELETED)

(D)

**B7. DIGITAL NETWORK SERVICE**

**B7.3 MegaLink Channel Service (Cont'd)**

**B7.3.4 Rates and Charges (Cont'd)**

**B. Feature Activation**

1. Central Office

a. Analog Voice Service

- (1) For Exchange Line, Foreign Exchange, OPS,WATS Line, Trunk, Centrex Type Services Station Line, or Voice PL use

	Nonrecurring Charge		Month to Month	24 to 96 <sup>5</sup> Months Contract	USOC	(C)
	First	Each Additional				
(a) Per feature activated <sup>1,2,3</sup>	\$7.00	\$6.00	\$9.00 <sup>4</sup>	\$5.00	1PQW+	
(2) For Tie Line use						
(a) Per feature activated <sup>1,2,3</sup>	7.00	6.00	13.00 <sup>4</sup>	8.00	1PQW+	
b. Analog Data Service						
(1) For data transmission use						
(a) Per feature activated <sup>1,2,3</sup>	7.00	6.00	13.00 <sup>4</sup>	8.00	1PQW+	
c. Digital Data Service						
(1) For 2.4 Kbps, 4.8 Kbps, 9.6 Kbps, 19.2 Kbps, 56 Kbps and 64 Kbps data rates						
(a) Per feature activated <sup>1,2,3</sup>	7.00	6.00	13.00	11.00	1PQW+	
d. Broadband Exchange Line Service						
(1) For 56 Kbps and 64 Kbps data rates						
(a) Per feature activated <sup>1,2,3</sup>	10.00	7.50	13.00 <sup>4</sup>	8.00	1PQW+	

**Note 1:** The first nonrecurring charge is applicable to the first channel activated of a particular type. It is also applicable to a first channel of that type which is installed at a later time.

**Note 2:** Each additional nonrecurring charge is applicable to each additional channel activated of the same type, and at the same time.

**Note 3:** Represents 1 (one) voice equivalent channel per feature activated.

**Note 4:** Rates are effective on a billing period basis beginning February 1, 2001.

**Note 5:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers (N)

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**B7. DIGITAL NETWORK SERVICE**

(T)

**B7. DIGITAL NETWORK SERVICE**

**B7.3 MegaLink Channel Service (Cont'd)**

**B7.3.4 Rates and Charges (Cont'd)**

**C. Transfer Charges**

- 1. Transfer Between Customers

<b>Nonrecurring</b>	
<b>Charge</b>	<b>USOC</b>
<b>\$50.00</b>	<b>NA</b>

(a) Per transfer

**D. Mileage Charges**

Rates and charges for MegaLink service and MegaLink Plus service as contained in B7.1 and B7.9 are applicable. Generally, one 1.544 Mbps channel is required for each group of 24 voice equivalent channels provided.

**E. Automatic Protection Switching (APS)**

APS for a MegaLink service interface provides automatic DS1 channel switching to a backup DS1 channel upon primary facility failure. When provided via MegaLink service this feature requires purchase of an additional MegaLink service channel from B7.1 for each backup channel required. Rates, charges and availability of this equipment will be negotiated with the customer on an individual case basis. This feature may not be available with lines utilizing the Clear Channel Capability line code (B8ZS). (T)

**F. Switching Arrangements, multipoint/multistation Bridging and Data Conditioning rates.**

Rates and charges are those that would be applicable to single channel services.

**G. Signaling Arrangements**

Rates and charges for single channels, as contained in A13.1 of the General *Exchange Guidebook* and Section B3., are not applicable to local channel and interoffice link segments that are channelized under the MegaLink channel services offering. However, rates and charges for automatic ringdown (20 Hz) signalling, as contained in Section B3., are applicable when this is desired by the customer. (T)

**H. Network Access Service**

Rates and charges for Network Access lines are applicable as contained in Section A3. of the General *Exchange Guidebook* in addition to Feature Activation and other MegaLink channel service rates and charges contained in this section. (T)

## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service

#### B7.4.1 General

A. LightGate service is an intraLATA fiber optic based, digital service which provides channelization capability for the customer in packages based on systems consisting of DS1, DS3, STS-1, OC-3, OC-12, OC-48 and OC-192 channels. It will provide local channels and/or interoffice channels in the following system sizes:

- Asynchronous – LightGate 1
- Synchronous - STS-1, OC-3, OC-12, OC-48 and OC-192 LightGate service

Asynchronous systems are capable of transporting DS1 and DS3 channels. Synchronous systems are capable of transporting all channels. The capacity of each LightGate service System is shown in the following table:

<u>LightGate System</u>	<u>DS1</u>	<u>DS3</u>	<u>STS-1</u>	<u>OC-3</u>	<u>OC-12</u>	<u>OC-48</u>
LightGate 1	28	1				
LightGate STS-1	28		1			
LightGate OC-3	84	3	3	1		
LightGate OC-12	336	12	12	4	1	
LightGate OC-48	1344	48	48	16	4	1
LightGate OC-192	5376	192	192	64	16	4

B. Channelization is provided by LightGate service Systems which furnish fiber optic transport from the central office to a customer's premises. Channel interfaces are offered to provide individual DS1, Flex DS1, DS3, DS3 (Asymmetrical with DS1/Flex DS1), STS-1, OC-3, OC-12, OC-48, 10 Mbps, 100 Mbps, Fractional 1000 Mbps and 1000 Mbps channels. The customer may channelize all or part of a LightGate service package to activate data facilities for interconnection with the exchange network, voice grade and data facilities for private line channels, as well as other LightGate services. The customer may also choose not to channelize all or part of a LightGate service package allowing direct connection to other LightGate services, DS3 or DS1 services as provided in this *Guidebook* or the General *Exchange Guidebook*. (OC-12, OC-48 and OC-192 LightGate service local channel systems and OC-192 interoffice channel systems are only available as channelized.) (T)

**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.1 General (Cont'd)**

- C. Channel interface availability varies with system size, transport architecture (asynchronous vs. synchronous) and the capability of Company provided equipment. The following table lists the channel interfaces that are generally available with each LightGate service System.

Local Channel Systems:

	Asynchronous		Synchronous			
	LG1	STS-1	OC-3	OC-12	OC-48	OC-192
Customer Channel Interfaces						
DS1	Yes	Yes	Yes	No	Yes <sup>1</sup>	Yes <sup>1</sup>
Flex DS1	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>
DS3	Yes	No	Yes	Yes	Yes	Yes <sup>1</sup>
DS3 Asymmetrical with DS1	No	No	Yes	No	No	No
DS3 Asymmetrical with Flex DS1	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>
STS-1	No	Yes	Yes	Yes	Yes	Yes <sup>1</sup>
OC-3	No	No	Yes	Yes	Yes	Yes
OC-12	No	No	No	No	Yes	Yes
OC-48	No	No	No	No	No	Yes
10 Mbps	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>
100 Mbps	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>
Fractional 1000 Mbps at 1000 Mbps	No	No	No	No	Yes <sup>4</sup>	Yes <sup>4</sup>
Fractional 1000 Mbps at 50 Mbps, 150 Mbps, 300 Mbps or 450 Mbps	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>
Fractional 1000 Mbps at 600 Mbps	No	No	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>
100 Mbps BellSouth Metro Ethernet Backbone	No	No	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes <sup>5</sup>
1000 Mbps BellSouth Metro Ethernet Backbone	No	No	No	No	Yes <sup>5</sup>	Yes <sup>5</sup>

**Note 1:** Available only for systems installed on or after December 2, 2003. The maximum number of DS1 Circuits available in a system is 108.

**Note 2:** Available only for systems installed on or after April 13, 2005. The maximum number of Flex DS1 circuits available in a system is 108.

**Note 3:** Available only for OC-12, OC-48 or OC-192 systems installed on or after January 7, 2005 that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer. 10 Mbps, 100 Mbps and Fractional 1000 Mbps at 50 Mbps interfaces are available for OC-3 systems only that were installed on or after April 27, 2006. 100 Mbps interface service components are further defined regarding the number of STS-1s used to provision the interface.

**Note 4:** Available only for systems installed on or after December 2, 2003 that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 5:** 100 Mbps and 1000 Mbps BellSouth Metro Ethernet Backbone interfaces are for use when LightGate service is utilized for transport of a customer’s BellSouth Metro Ethernet service<sup>6</sup>. 100 Mbps are further defined regarding the number of STS-1, utilized in conjunction with the interface. The 100 Mbps (3 STS-1) BellSouth Metro Ethernet Backbone interface is not available for OC-3 nodes. (C)

**Note 6:** Effective June 30, 2021, BellSouth Metro Ethernet Service is no longer available to new or renewing subscribers. (N)



## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.1 General (Cont'd)

- C. Channel interface availability varies with system size, transport architecture (asynchronous vs. synchronous) and the capability of Company provided equipment. The following table lists the channel interfaces that are generally available with each LightGate service System. (Cont'd)

Local Channel Systems: (Cont'd)

Customer Channel Interfaces (Cont'd)	Asynchronous	Synchronous				
	LG1	STS-1	OC-3	OC-12	OC-48	OC-192
Fractional 1000 Mbps at 150 Mbps, 300 Mbps or 450 Mbps BellSouth Metro Ethernet Backbone	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>
Fractional 1000 Mbps at 600 Mbps BellSouth Metro Ethernet Backbone	No	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>
Fibre Connection (FICON™)	No	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>
Fibre Connection (FICON™) Express	No	No	No	No	No	Yes <sup>2</sup>
Fibre Channel 100	No	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>
Fibre Channel 200	No	No	No	No	No	Yes <sup>2</sup>

- Note 1:** Fractional 1000 Mbps BellSouth Metro Ethernet Backbone interfaces are for use when LightGate service is utilized for transport of a customer's BellSouth Metro Ethernet service<sup>3</sup>. Interface availability is based on equipment capability. (C)
- Note 2:** Available only for systems that do not contain a Optical Customer Termination or a Optical Serving Wire Center Termination. The interface is further defined regarding the number of STS-1s used to provision the interface. Interface availability is based on equipment capability.
- Note 3:** Effective June 30, 2021, BellSouth Metro Ethernet Service is no longer available to new or renewing subscribers. (N)





**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.1 General (Cont'd)**

- C. Channel interface availability varies with system size, transport architecture (asynchronous vs. synchronous) and *the capability of Company provided equipment*. The following table lists the channel interfaces *that are generally* available with each LightGate service System. (Cont'd) (C)

Local Channel Systems: (Cont'd)

All optical LightGate service Central Office Channel Interfaces are provisioned utilizing 1310 nm Single-mode fiber interfaces. (N)

	Asynchronous		Synchronous			
	LG1	STS-1	OC-3	OC-12	OC-48	OC-192
Central Office Channel Interfaces						
DS1	Yes	Yes	Yes	No	Yes <sup>1</sup>	Yes <sup>1</sup>
Flex DS1	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>
DS3	Yes	No	Yes	Yes	Yes	Yes <sup>1</sup>
DS3 Asymmetrical with DS1	No	No	Yes	No	No	No
DS3 Asymmetrical with Flex DS1	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>
STS-1	No	Yes	Yes	Yes	Yes	Yes <sup>1</sup>
OC-3	No	No	Yes	Yes	Yes	Yes
OC-12	No	No	No	No	Yes	Yes
OC-48	No	No	No	No	No	Yes
28 DS1 Channel System	No	No	No	Yes	Yes	Yes <sup>1</sup>
STS-1 Channel System	No	No	No	Yes	Yes	Yes <sup>1</sup>
OC-3 Channel System	No	No	No	Yes	Yes	Yes
OC-12 Channel System	No	No	No	No	No	Yes
OC-48 Channel System	No	No	No	No	No	Yes
10 Mbps	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>
100 Mbps	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>
<i>Fractional 1000 Mbps at 1000 Mbps</i>	No	No	No	No	Yes <sup>4</sup>	Yes <sup>4</sup>
Fractional 1000 Mbps at 50 Mbps, 150 Mbps, 300 Mbps or 450 Mbps	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>
Fractional 1000 Mbps at 600 Mbps	No	No	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>

**Note 1:** Available only for systems installed on or after December 2, 2003. The maximum number of DS1 Circuits available in a system is 108.

**Note 2:** Available only for systems installed on or after April 13, 2005. The maximum number of Flex DS1 circuits available in a system is 108.

**Note 3:** Available only for OC-12, OC-48 or OC-192 systems installed on or after January 7, 2005, that do not contain a Optical Customer Termination or a Optical Serving Wire Center Termination. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer. 10 Mbps, 100 Mbps and Fractional 1000 Mbps at 50 Mbps interfaces are available for OC-3 systems only that were installed on or after April 27, 2006. 100 Mbps interface service components are further defined regarding the number of STS-1s used to provision the interface.

**Note 4:** Available only for systems installed on or after December 2, 2003 that do not contain a Optical Customer Termination or a Optical Serving Wire Center Termination. 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.1 General (Cont'd)

- C. Channel interface availability varies with system size, transport architecture (asynchronous vs. synchronous) and the capability of Company provided equipment. The following table lists the channel interfaces that are generally available with each LightGate service System. (Cont'd)

Local Channel Systems: (Cont'd)

	Asynchronous		Synchronous			
	LG1	STS-1	OC-3	OC-12	OC-48	OC-192
Central Office Channel Interfaces (Cont'd)						
100 Mbps BellSouth Metro Ethernet Backbone	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>
1000 Mbps BellSouth Metro Ethernet Backbone	No	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>
Fractional 1000 Mbps at 150 Mbps, 300 Mbps or 450 Mbps BellSouth Metro Ethernet Backbone	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>
Fractional 1000 Mbps at 600 Mbps BellSouth Metro Ethernet Backbone	No	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>
Fibre Connection (FICON <sup>M</sup> )	No	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>
Fibre Connection (FICON <sup>TM</sup> ) Express	No	No	No	No	No	Yes <sup>2</sup>
Fibre Channel 100	No	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>
Fibre Channel 200	No	No	No	No	No	Yes <sup>2</sup>

**Note 1:** Fractional 1000 Mbps BellSouth Metro Ethernet Backbone, 100 Mbps BellSouth Metro Ethernet Backbone and 1000 Mbps BellSouth Metro Ethernet Backbone interfaces are for use when LightGate service is utilized for transport of a customer's BellSouth Metro Ethernet service<sup>3</sup>. 100 Mbps BellSouth Metro Ethernet Backbone interfaces are further defined regarding the number of STS-1, utilized in conjunction with the interface. The 100 Mbps (3-STS-1) BellSouth Metro Ethernet Backbone interface is not available for OC-3 nodes. Interface availability is based on equipment capability. (C)

**Note 2:** Available only for systems that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. The interface is further defined regarding the number of STS-1s used to provision the interface. Interface availability is based on equipment capability.

**Note 3:** Effective June 30, 2021, BellSouth Metro Ethernet Service is no longer available to new or renewing subscribers. (N)



**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.1 General (Cont'd)**

C. *Channel interface availability varies with system size, transport architecture (asynchronous vs. synchronous) and the capability of Company provided equipment. The following table lists the channel interfaces that are generally available with each LightGate service System. (Cont'd)* (C)

Local Channel Systems: (Cont'd)

Interoffice Channel Systems:

	Asynchronous		Synchronous			
	LG1	STS-1	OC-3	OC-12	OC-48	OC-192
Central Office Channel Interfaces						
DS1	No	No	No	No	No	No
DS3	Yes	No	Yes	Yes	Yes	Yes <sup>1</sup>
STS-1	No	Yes	Yes	Yes	Yes	Yes <sup>1</sup>
OC-3	No	No	Yes	Yes	Yes	Yes
OC-12	No	No	No	Yes	Yes	Yes
OC-48	No	No	No	No	Yes	Yes
28 DS1 Channel System	Yes	No	Yes	Yes	Yes	Yes <sup>1</sup>
STS-1 Channel System	No	Yes	Yes	Yes	Yes	Yes <sup>1</sup>
OC-3 Channel System	No	No	Yes	Yes	Yes	Yes
OC-12 Channel System	No	No	No	No	No	Yes
OC-48 Channel System	No	No	No	No	No	Yes
10 Mbps	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>
100 Mbps	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>
<b>Fractional 1000 Mbps at 1000 Mbps</b>	No	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>
Fractional 1000 Mbps at 50 Mbps, 150 Mbps, 300 Mbps or 450 Mbps	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>
Fractional 1000 Mbps at 600 Mbps	No	No	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>
Fibre Connection (FICON™)	No	No	No	No	Yes <sup>4</sup>	Yes <sup>4</sup>
Fibre Connection (FICON™) Express	No	No	No	No	No	Yes <sup>4</sup>
Fibre Channel 100	No	No	No	No	Yes <sup>4</sup>	Yes <sup>4</sup>
Fibre Channel 200	No	No	No	No	No	Yes <sup>4</sup>

**Note 1:** Available only for systems installed on or after October 30, 2003. The maximum number of DS1 circuits available in a system is 108.

**Note 2:** Available only for systems installed on or after December 20, 2004 that do not contain a Optical Customer Termination or a Optical Serving Wire Center Termination. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 3:** Available only for systems installed on or after October 30, 2003 that do not contain a Optical Customer Termination or a Optical Serving Wire Center Termination. 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 4:** The interface is further defined regarding the number of STS-1s used to provision the interface.

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## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.1 General (Cont'd)

- D. OC-3, OC-12 and OC-48 LightGate service local channel systems may have an optical physical interface at either the serving wire center or the customer termination location. Where a customer elects to order a LightGate service local channel system with optical termination at the customer's location, the customer's termination equipment must be compatible with Company equipment in the serving wire center. Customers are also required to utilize compatible channel interface combinations to function with Company provided central office channel interfaces. The Company reserves the right to determine the equipment it employs for service.
- E. This service is available within a LATA where appropriate digital facilities can be made available as determined by the Company. Service inquiries will be necessary to determine availability interval.
- F. All LightGate services in a customer's package must be channelized in a single equipment location on a customer's premises, i.e., a package cannot be split between premises, or multiple locations within a premises. Standard network interfaces will be provided by the Company for digital services consistent with existing practices for single channel services.
- G. Individual channels within a LightGate service package may be connected with service offered in other sections of this *Guidebook* and the General *Exchange Guidebook* as appropriate. The *terms, conditions*, rates and charges in this *Guidebook* are applicable for the LightGate service component of the customer's end-to-end service. Single channel service components (non-LightGate service links) are subject to the *terms, conditions*, rates and charges in their respective *guidebook* sections. (T)
- H. The customer may activate any number or combination of channels within a LightGate service package within the capacity limits of the Basic System. Channels may be activated coincident with installation or at any time subsequent to basic system installation. Once activated, a channel is subject to a minimum service period in accordance with the contract period. Features (channels) activated under month-to-month rates will have a minimum service period of one month.
- I. (DELETED)
- J. (DELETED)
- K. (DELETED)
- L. Two additional levels of reliability are offered as options of basic LightGate service. These service levels provide guaranteed Separate Alternate Facilities Transport (SAFT Levels I & II) for improved protection of local channel systems extended from the first outside plant service access point outside the Company's serving wire center to the last outside plant service access point prior to entering a customer's premises.

SAFT Level I – Service protection facilities will be guaranteed to be provided in a separate sheath, i.e., cable, from the primary facilities.

SAFT Level II – Service protection facilities will be guaranteed to be provided in a separate sheath, i.e., cable, separate supporting structure and route from the primary facilities. Intermediate equipment, if required, will be configured to prevent a single service interruption point. If existing facilities are not available, special construction charges may apply.
- M. LightGate service interoffice channel systems are intended to extend LightGate service local channels to other central offices. In addition these channels, may be provided on a stand-alone basis when used in a "link" arrangement with other services in this *Guidebook* and the General *Exchange Guidebook*. (T)
- N. The level of automatic protection switching capability varies for LightGate service asynchronous and synchronous channels. For asynchronous channels, automatic protection switching capability is a standard service feature that automatically switches customer service to protection facilities upon primary facility failure. Card protection (1+n) is provided for DS1, DS3 and STS-1 channel interfaces as a standard feature. For synchronous channels, automatic protection switching capability is provided via the synchronous customer or central office channel 4-fiber interfaces. These 4-fiber interfaces provide 1+1 optical card protection of the interface. The specifications for these interfaces are contained in BellSouth Telecommunications, Inc. Technical Reference #73501.

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## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.1 General (Cont'd)

- O. The termination of channelization equipment will be in a single equipment location on a customer's premises. The customer must provide suitable floor space, controlled environment, and a source of non-switched 120 volt, 60 Hz AC power to support this service.
- P. Channelization of DS3 (electrical) data rates on a customer's premises may also be provided by the customer. Joint provisioning of channelized services introduces joint responsibilities between the customer and the Company.
  - 1. Responsibilities of the Company:
    - a. The Company will endeavor to activate its portion of joint service in a timely manner on the negotiated date to support installation requirements.
    - b. The Company will provide the customer with information regarding the type and the manufacturer of central office (C.O.) channelization equipment to be used in each application.
    - c. The Company will limit its selection of central office equipment to avoid operational and administrative difficulties associated with a multi-vendor central office environment.
    - d. The Company reserves the right to change its equipment vendors should equipment availability, price or technological advantages make such a change attractive or necessary.
    - e. The Company will notify the customer, generally a minimum of six months in advance, of any need to change its central office equipment to allow the customer sufficient time to respond, make any necessary changes, and schedule cooperative testing for cutover if required.
    - f. Digital synchronization timing for LightGate services will be provided by the Company.
  - 2. Responsibilities of the Customer:
    - a. The customer must be prepared to activate his portion of joint service in a timely manner on the negotiated date, providing testing equipment and personnel to support installation requirements, as may be necessary.
    - b. The customer will be responsible for selecting his own equipment. Customer equipment must be compatible with the Company provided channelization at the central office.
    - c. The customer must provide suitable power for his own equipment. Simplex powering will not be provided by the Company for a customer's channel service units due to the serving arrangements associated with fiber optic facilities.
  - 3. Trouble resolutions:

The Company will assist the customer in resolving any installation or day to day channel service problems. However, the Company does not assume responsibility for the compatibility or suitability of the customer's equipment. Dispatches to customer premises caused by customer equipment troubles will result in Trouble Location Charges to the customer.

#### Q. Credit Allowance

When LightGate service is interrupted due to causes other than negligence of the customer, or to the failure of facilities or equipment furnished by the customer, a credit allowance will be made upon request for the portion of service affected. Where service interruptions of one minute or more per occasion occur, the credit applied shall be at the rate of 1440/1440 of the monthly charges for the LightGate service. All credit allowances shall begin from the time of notice by the customer to the Company, and will end when the service is operative. A customer must report the outage in order to receive service outage credit. The total credit received in any month shall not exceed the monthly rate for the service. Outage credits for DS1 channel interfaces and subtending DS1 services are as set forth in the *guidebook* sections governing those services.

(T)

## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.1 General (Cont'd)

- R. The technical specifications and standard network interfaces for LightGate service, are contained in BellSouth Technical Reference #73501. This publication is available from BellSouth Telecommunications, Inc., Documentation Operations, North W5A1, 3535 Colonnade Parkway, Birmingham, Alabama 35243.
- S. 100 Mbps and 1000 Mbps BellSouth Metro Ethernet Backbone interfaces are for use when LightGate service is utilized for transport of a customer's BellSouth Metro Ethernet service<sup>1</sup>. 100 Mbps BellSouth Metro Ethernet Backbone interfaces are further defined regarding the number of STS-1s, utilized in conjunction with the interface. (C)

#### B7.4.2 Application of Rates

- A. Monthly rates and charges as specified in B7.4.5 following apply for each LightGate service. These rates apply regardless of the number of circuit equivalents within each package that are actually activated by the customer at a point in time.
  - 1. Local channel systems furnished between a Serving Wire Center and the customer's premises are distance sensitive. Local channel systems include the transport common equipment, and first half air-mile of local channel facilities at rates specified in B7.4.5.A. following. Rates for additional lengths of local channel facilities are as specified in B7.4.5.B. following.
  - 2. Separate Alternate Facility Transport (SAFT) options for LightGate service local channels are offered at the rates specified in B7.4.5.C. following. These rates are in addition to local channel system rates.
  - 3. Interoffice channel system mileage rates and charges are as specified in B7.4.5.D. following.
- B. All usual and applicable Service Connection Charges and Nonrecurring Charges as specified in other guidebooks apply to the activation, move or change of channel equivalents within LightGate service packages as well as for installation of the basic system. Suspension of service is not permitted with LightGate service.
- C. Channel interfaces are required for LightGate service based upon the following guidelines:
  - 1. Channel interfaces are required at both the customer's location and the serving wire center for LightGate service local channel systems and at both termination points of a LightGate service interoffice channel, except as specified in 2. following.
  - 2. A LightGate service central office channel interface is not required for a synchronous LightGate service local channel system with optical termination in the serving wire center. A LightGate service local channel system with optical termination in the serving wire center may connect in one of the following ways:
    - to another LightGate service local channel or interoffice channel at the compatible optical level,
    - to a SMARTRing service channel interface (CI) at the compatible optical level, or
    - to a compatible optical level channel interface from a higher level LightGate service local channel or interoffice channel.
  - 3. LightGate service channel interfaces are only offered in conjunction with a LightGate service System.
  - 4. Company provided DS1 customer channel interfaces are offered with LightGate 1, LightGate STS-1 and LightGate OC-3 Basic Systems. Also, a maximum of 96 DS1 customer channel interfaces are available on LightGate OC-48 and LightGate OC-192 Basic Systems installed on or after October 30, 2003 .
  - 5. OC-12 and OC-48 LightGate service local channel systems require a 28 DS1, STS-1, or OC-3 channel system in addition to DS1 channel interfaces in the central office to derive DS1 channels in the serving wire center. OC-192 LightGate service local channel systems require an OC-3 channel system in addition to DS1 channel interfaces to terminate DS1 channels in the serving wire center.
  - 6. OC-192 LightGate service local channel systems, installed prior to October 30, 2003, require an OC-3, OC-12 or OC-48 channel system in addition to DS3 or STS-1 channel interfaces to terminate DS3 or STS-1 channels in the serving wire center.
  - 7. OC-3 LightGate service local channel systems which require a DS3 termination at one location and DS1 terminations at the other, have two options available:
    - A DS3 channel interface at the customer location and a 28 DS1 channel system in addition to DS1 channel interfaces at the serving wire center, or
    - A DS3 (asymmetrical with DS1) interface at one termination point and DS1 channel interfaces at the other termination point.

**Note 1:** Effective June 30, 2021, BellSouth Metro Ethernet Service is no longer available to new or renewing subscribers. (N)





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## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.2 Application of Rates (Cont'd)

##### E. (Cont'd)

8. For LightGate service Interoffice Channel Systems the following is applicable: (N)
  - A 28 DS1 channel system in addition to DS1 channel interfaces provide DS1 channel termination capability with LightGate 1 service. (N)
  - An STS-1 channel system in addition to DS1 channel interfaces provide DS1 channel termination capability with STS-1 LightGate service. (N)
  - An OC-3 channel system in addition to DS1 channel interfaces provide DS1 channel termination capability with OC-3, OC-12, OC-48 and OC-192 LightGate service. OC-3, OC-12 or OC-48 channel systems in addition to DS3 or STS-1 channel interfaces provide DS3 or STS-1 channel termination capability with LightGate OC-192 Interoffice Channel Systems. (N)
9. A channel system in addition to the lower level interfaces replaces the requirement for the higher level interface. For example, an OC-3 central office interface would be replaced with an OC-3 channel system and DS1 central office interfaces. (N)
- F. LightGate service local channel mileage and Separate Alternate Facilities Transport mileage rates are distance sensitive. They are measured per half airline mile or fraction thereof from the customer's designated premises to the Serving Wire Center. Mileage is computed by using methodology and Vertical (V) and Horizontal (H) coordinates contained in the NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. No. 4. Fractional mileage shall be rounded up to the next half mile. (N)
- G. Interoffice Channels furnished between Central Offices will be charged at rates based on airline distance between the Central Offices. Mileage is shown in B7.4.5.D following in terms of mileage bands. To determine the rate to be billed, first compute the mileage using methodology and Vertical (V) and Horizontal (H) coordinates contained in the NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. No. 4. Next find the band into which the computed mileage falls and apply the rates shown for that band. Fractional mileage shall be rounded up to the next full mile. (N)
- H. LightGate service OC-3, OC-12 or OC-48 channel interfaces are associated with optical circuits within a LightGate service System. These optical circuits may be provisioned as concatenated. When an optical circuit is provisioned as concatenated, the multiple STS-1s within the optical circuit are provided as a single entity with a single overhead channel. When an optical circuit is provisioned as concatenated at the time the circuit is installed, there is no additional charge for provisioning it as concatenated. When an existing non-concatenated optical circuit is requested to be reconfigured as concatenated, a concatenation rearrangement charge shall apply. This rearrangement charge shall also apply when a request is made to convert an existing concatenated circuit to non-concatenated. This rearrangement charge is specified in B7.4.5.E following and is applied on a per circuit basis. (N)
- I. Customers may request a C-Bit Parity framing format for a DS3 level circuit. If the request is made at the time the circuit is installed, there is no additional charge. When a request for C-Bit Parity framing format is made for an existing circuit, a nonrecurring charge will be applicable for rearranging the framing format on the circuit. This charge will also be applicable if a customer requests that the C-Bit Parity framing format be removed from a circuit. This charge is specified in B7.4.5.F. following and is applied on a per circuit basis. (N)

## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.2 Application of Rates (Cont'd)

- J.** LightGate service Systems are available under contract only for variable rate periods with rates based on lengths of **12 months**, 24 to 48 months<sup>1,2</sup>, 49 to 72 months<sup>1</sup>, or 73 to 96 months<sup>1</sup> under conditions specified in B2.4 except as modified following. Contract rate increases are subject to the stipulations of K. following. All elements of a contract will expire at the same time (be coterminous). (C)
1. LightGate service Systems are available only under contract as specified preceding. Month to month rates are only available at the end of a contract rate period. Central office and customer channel interfaces are available on a month to month basis or under contract.
  2. All rate elements associated with a LightGate service local channel or interoffice channel must be provided under the same payment plan; provided however, that channel interfaces may be activated on month-to-month rates or a shorter payment period if desired.
  3. Channelized DS1/1.544 Mbps channels and Sub-DS1 Feature Activations are available under terms contained in the MegaLink channel service offering.
- K.** LightGate service rates under contract will not be increased by Company initiative until the contract period expires. Those monthly rates for LightGate service in effect at the time the service is installed and/or as of the service order application date, will be applicable until the contract expires. At the expiration date of the customer's payment period option, the customer may select a new payment period option at current contract rates or revert to current rates on a month-to-month basis. If the customer does not select a new payment period or does not request discontinuance of service, service will be continued under the terms specified in B2.4.
- L.** A Termination Liability Charge is applicable at the date of termination. The applicable charge is dependent on the contract period subscribed to and will be equal to the number of months remaining in the contract times fifty percent (50%) of the monthly rates for the LightGate service rates which are provided under contract, and are subject to the exemptions of 1. and 2. following.
1. No Termination Liability Charge will be applicable for the LightGate service System when the customer renegotiates a new contract for the same system at the same location(s) for a period of time greater than the time remaining on the existing contract.
  2. Termination Liability charges do not apply to LightGate service channel interfaces under the Channel Services Payment Plan.
- M.** Transfer of service responsibility between customers is permitted subject to payment of a Transfer Charge as determined on an individual case basis.

#### B7.4.3 Digital Architecture and Definitions

##### A. Digital Architecture

1. LightGate services differ in provisioning method and numbering format from single channel services. These services will be available from the Company on a link (partial channel) basis rather than as an end-to-end service. This architecture is intended to promote more efficient connectivity of analog and digital networks in the future.

Many LightGate service channels will be available on a digital basis at the network interface on a customer's premises. Traditional analog services, like tie lines, off-premises stations, and PBX trunks can be provided on a digital basis to a premises by the Company when a customer desires them encoded in a DS1 bit stream. Under those conditions, they will be provided as DS0 channels by the Company. Both the Company and the customer have joint responsibilities to ensure the proper transmission of the provided services. Normal analog channel network interface specifications will be superseded by the electrical specifications of the 1.544 Mbps (DS1) channel which is actually terminated. Each DS0 channel provided will have identity only as a "time slot" within a DS1 channel. Compatible digital to analog conversion equipment must be provided by the customer to derive the desired analog services. Any Channel Service Units (CSUs) necessary for digital services are the responsibility of the customer.

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 2:** As of April 5, 2021, the 24-36 Month Contract Term for LightGate DS1 and DS3 channel interface options are no longer available for new or renewing subscribers. (N)

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## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.3 Digital Architecture and Definitions (Cont'd)

A. Digital Architecture (Cont'd)

2. (DELETED)

(D)

B. Definitions

CHANNEL SERVICE UNIT (CSU)

This denotes network channel terminating equipment provided by the customer to terminate digital channel facilities on a customer's or user's premises.

DS0

This denotes a channel service expressed in terms of its digitally encoded data bit rate in accordance with the North American hierarchy of digital signal levels. It is generally referred to as having a 64 kbps transmission data rate signal. The required format and interface specifications are referenced in BellSouth Technical Reference #73501.

DS1

This denotes a channel service expressed in terms of its digitally encoded data bit rate in accordance with the North American hierarchy of digital signal levels. It has a 1.544 Mbps transmission data rate, and provides for the two-way simultaneous transmission of isochronous timed, Bipolar Return-to-Zero (BPRZ) bit stream format, except where intentional bipolar violations are introduced by Bipolar with 8 Zero Substitution (B8ZS) format. Unframed signal formats are not permitted or compatible with Company equipment. The required format and interface specifications are contained in BellSouth Technical Reference #73501.

DS3

This denotes a channel service expressed in terms of its digitally encoded data bit rate in accordance with the North American hierarchy of digital signal levels. It has a 44.736 Mbps transmission data rate, and provides for two-way simultaneous transmission of randomized Non-Return-to-Zero (NRZ) signals with a B3ZS format. The required format and interface specifications are contained in BellSouth Technical Reference #73501.

LIGHTGATE 1

This service provides extended service capability of DS3 data rates to the customer, or multiplexed DS1 and DS0 channels based upon configurations desired. Appropriate electrical signals will be provided in accordance with the specifications of BellSouth Technical Reference #73501. The total capacity to be provided is a single 44.736 Mbps transmission rate. This offering is intended to be a flexible, link connectable transport service for large customers with the capability of connecting with individual exchange and private line services, MegaLink channel service, *SMARTRing service*, and/or other LightGate services.

(C)

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## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.3 Digital Architecture and Definitions (Cont'd)

##### B. Definitions (Cont'd)

(Obsoleted. See Section B107.)

(O)

##### SYNCHRONOUS LIGHTGATE SERVICES

(N)

LightGate service is available in the following synchronous systems: STS-1, OC-3, OC-12, OC-48 and OC-192. These offerings are intended to be a very flexible, link connectable transport service for the very large customer. They have the capability of connecting with individual exchange and private line services, MegaLink channel service, SMARTRing service and/or other LightGate services. Appropriate electrical and optical signals will be provided in accordance with the specifications of BellSouth Technical Reference #73501.

(N)

##### SYNCHRONOUS OPTICAL NETWORK (SONET)

(N)

SONET defines a progressive hierarchy of optical signal and line rates. The basic building block is the STS-1 (Synchronous Transport Signal at level 1), operating at 51.840 Mbps. All higher rate signals (STS-N) are multiples of the basic STS-1 signal rate. The optical counterpart of a STS-N is the OC-N, operating at the same rate as the corresponding STS-N. The required format and interface specifications are contained in BellSouth Technical Reference #73501.

(N)

#### B7.4.4 Rates and Charges (Obsoleted. See Section B107.)

(O)

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**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.4 Rates and Charges (Obsoleted. See Section B107.) (Cont'd)**

(O)

## **B7. DIGITAL NETWORK SERVICE**

### **B7.4 LightGate Service (Cont'd)**

**B7.4.4 Rates and Charges (Obsoleted. See Section B107.) (Cont'd)**

(O)

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**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.4 Rates and Charges (Obsoleted. See Section B107.) (Cont'd)**

(O)



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**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.4 Rates and Charges (Obsoleted. See Section B107.) (Cont'd)**

(0)

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**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.4 Rates and Charges (Obsoleted. See Section B107.) (Cont'd)**

(0)

**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.4 Rates and Charges (Obsoleted. See Section B107.) (Cont'd)**

(O)

## **B7. DIGITAL NETWORK SERVICE**

### **B7.4 LightGate Service (Cont'd)**

**B7.4.4 Rates and Charges (Obsoleted. See Section B107.) (Cont'd)**

(O)

**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.5 Rates and Charges**

**A. LightGate service Local Channel Systems**

The Basic System includes photonic common equipment and first one-half air mile of local channel fiber optic facilities.

	<b>Nonrecurring Charge</b>	<b>Month to Month</b>	<b>12 Months</b>	<b>24 to 48<sup>2,3</sup> Months</b>	<b>49 to 72<sup>2</sup> Months</b>	<b>73 to 96<sup>2</sup> Months</b>	<b>USOC</b>
1. LightGate 1 Basic System <sup>1</sup>							
(a) Per System	<b>\$300.00</b>	<b>\$76,797.00(I)</b>	<b>\$2,897.00(I)</b>	<b>\$1,590.00</b>	<b>\$1,440.00</b>	<b>\$1,290.00</b>	<b>HFSC7</b>
2. LightGate STS-1 Basic System <sup>1</sup>							
(a) Per System	<b>700.00</b>	<b>2,794.00</b>	<b>2,146.00</b>	<b>1,590.00</b>	<b>1,440.00</b>	<b>1,290.00</b>	<b>HFST1</b>
3. LightGate OC-3 Basic System <sup>1</sup>							
(a) Per System	<b>700.00</b>	<b>4,995.00</b>	<b>NA</b>	<b>3,100.00</b>	<b>2,800.00</b>	<b>2,500.00</b>	<b>HFSO3</b>
(b) Per System with Optical Customer Termination	<b>700.00</b>	<b>3,283.00</b>	<b>NA</b>	<b>1,968.00</b>	<b>1,776.00</b>	<b>1,584.00</b>	<b>HFSOC</b>
(c) Per System with Optical Serving Wire Center Termination	<b>700.00</b>	<b>3,283.00</b>	<b>NA</b>	<b>1,968.00</b>	<b>1,776.00</b>	<b>1,584.00</b>	<b>HFSOW</b>
4. LightGate OC-12 Basic System <sup>1</sup>							
(a) Per System	<b>700.00</b>	<b>7,425.00</b>	<b>NA</b>	<b>5,100.00</b>	<b>4,600.00</b>	<b>4,150.00</b>	<b>HFS12</b>
(b) Per System with Optical Customer Termination	<b>700.00</b>	<b>5,184.00</b>	<b>NA</b>	<b>3,504.00</b>	<b>3,200.00</b>	<b>2,880.00</b>	<b>HFS1C</b>
(c) Per System with Optical Serving Wire Center Termination	<b>700.00</b>	<b>5,184.00</b>	<b>NA</b>	<b>3,504.00</b>	<b>3,200.00</b>	<b>2,880.00</b>	<b>HFS1W</b>
5. LightGate OC-48 Basic System <sup>1</sup>							
(a) Per System	<b>700.00</b>	<b>17,550.00</b>	<b>NA</b>	<b>11,000.00</b>	<b>10,000.00</b>	<b>9,000.00</b>	<b>HFS48</b>
(b) Per System with Optical Customer Termination	<b>700.00</b>	<b>10,800.00</b>	<b>NA</b>	<b>7,040.00</b>	<b>6,400.00</b>	<b>5,760.00</b>	<b>HFS4C</b>
(c) Per System with Optical Serving Wire Center Termination	<b>700.00</b>	<b>10,800.00</b>	<b>NA</b>	<b>7,040.00</b>	<b>6,400.00</b>	<b>5,760.00</b>	<b>HFS4W</b>
6. LightGate OC-192 Basic System <sup>1</sup>							
(a) Per System	<b>700.00</b>	<b>35,100.00</b>	<b>NA</b>	<b>20,000.00</b>	<b>18,000.00</b>	<b>16,000.00</b>	<b>HFST2</b>

**Note 1:** Month to month rates are only available at the end of a contract rate period.

**Note 2:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 3:** As of April 5, 2021, the 24-36 Month Contract Term for LightGate DS1 and DS3 channel interface options are no longer available for new or renewing subscribers.

**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.5 Rates and Charges (Cont'd)**

**A. LightGate service Local Channel Systems (Cont'd)**

The Basic System includes photonic common equipment and first one-half air mile of local channel fiber optic facilities.

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>3,4</sup> Months	49 to 72 <sup>3</sup> Months	73 to 96 <sup>3</sup> Months	USOC
7. Central Office Channel Interfaces							
(a) Per DS1	\$125.00	\$32.00	\$27.00	\$20.00	\$17.00	\$16.00	1PQE8
(b) Per DS3	125.00	3,838.00(I)	172.00(I)	95.00	90.00	85.00	1PQE3
(c) Per DS3 (Asymmetrical with DS1/Flex DS1)	290.00	675.00	NA	390.00	365.00	350.00	1PQEG
(d) Per STS-1	125.00	236.00	NA	140.00	130.00	120.00	1PQE4
(e) Per OC-3 (2 Fiber)	200.00	324.00	NA	190.00	175.00	160.00	1PQE5
(f) Per OC-3 (4 Fiber)	200.00	573.00	NA	330.00	300.00	270.00	1PQE6
(g) Per OC-12 (2 Fiber)	360.00	864.00	NA	495.00	450.00	405.00	1PQEE
(h) Per OC-12 (4 Fiber)	400.00	1,728.00	NA	990.00	900.00	810.00	1PQED
(i) Per OC-48 (2 Fiber)	500.00	2,160.00	NA	1,325.00	1,215.00	1,050.00	1PQEO
(j) Per OC-48 (4 Fiber)	500.00	4,320.00	NA	2,650.00	2,430.00	2,100.00	1PQEF
(k) Per 28 DS1 Channel System	125.00	810.00	NA	490.00	465.00	450.00	MQ3CO
(l) Per DS1 on 28 DS1 Channel System	125.00	20.00	10.00	8.00	7.00	6.00	1PQEA
(m) Per STS-1 Channel System	125.00	810.00	NA	490.00	465.00	450.00	1PQE7
(n) Per OC-3 Channel System	125.00	1,788.00	NA	1,100.00	1,000.00	900.00	1PQE9
(o) Per OC-12 Channel System	125.00	3,577.00	NA	2,200.00	2,000.00	1,800.00	1PQ12
(p) Per OC-48 Channel System	125.00	7,411.00	NA	4,410.00	4,050.00	3,510.00	1PQ48
(q) Per 1000 Mbps (21 STS-1) <sup>1</sup>	400.00	999.00	NA	520.00	475.00	425.00	1PQEK
(r) Per 1000 Mbps (24 STS-1) <sup>1</sup>	400.00	999.00	NA	520.00	475.00	425.00	1PQEW
(s) Per 10 Mbps <sup>2</sup>	450.00	675.00	NA	175.00	155.00	140.00	1PQEH
(t) Per 100 Mbps (3 STS-1) <sup>2</sup>	450.00	729.00	NA	210.00	190.00	170.00	1PQEJ
(u) Per Fractional 1000 Mbps <sup>2</sup>							
- 50 Mbps	450.00	702.00	NA	190.00	170.00	150.00	1PQEM
- 150 Mbps	450.00	756.00	NA	230.00	210.00	190.00	1PQEN
- 300 Mbps	450.00	810.00	NA	300.00	280.00	260.00	1PQER
- 450 Mbps	450.00	864.00	NA	340.00	310.00	290.00	1PQES
- 600 Mbps	450.00	945.00	NA	380.00	340.00	320.00	1PQET
(v) Per Flex DS1	130.00	32.00	NA	20.00	17.00	16.00	1PQEQ

**Note 1:** Available only for systems installed on or after October 30, 2003 that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 2:** Available only for systems installed on or after December 20, 2004 that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 3:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 4:** As of April 5, 2021, the 24-36 Month Contract Term for LightGate DS1 and DS3 channel interface options are no longer available for new or renewing subscribers.

## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.5 Rates and Charges (Cont'd)

##### A. LightGate service Local Channel Systems (Cont'd)

The Basic System includes photonic common equipment and first one-half air mile of local channel fiber optic facilities.  
(Cont'd)

		Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
7.	Central Office Channel Interfaces (Cont'd)							
(v)	Per 100 Mbps (1 STS-1) Metro Ethernet Backbone	\$800.00	\$675.00(I)	NA	\$175.00	\$155.00	\$140.00	1PQEU
(w)	Per 100 Mbps (3 STS-1) Metro Ethernet Backbone	800.00	729.00(I)	NA	210.00	190.00	170.00	1PQEY
(x)	Per 1000 Mbps Metro Ethernet Backbone	850.00	999.00(I)	NA	520.00	475.00	425.00	1PQEZ
(y)	Per Fractional 1000 Mbps Metro Ethernet Backbone							
	- 150 Mbps (3 STS-1)	850.00	756.00(I)	NA	230.00	210.00	190.00	1PQD5
	- 300 Mbps (6 STS-1)	850.00	810.00(I)	NA	300.00	280.00	260.00	1PQD6
	- 450 Mbps (9 STS-1)	850.00	864.00(I)	NA	340.00	310.00	290.00	1PQD7
	- 600 Mbps (12 STS-1)	850.00	945.00(I)	NA	380.00	340.00	320.00	1PQD8
(z)	Per Fibre Connection (FICON™) (21 STS-1)	500.00	1,093.00(I)	NA	570.00	520.00	470.00	1PQGA
(aa)	Per Fibre Connection (FICON™) (24c STS-1)	500.00	1,093.00(I)	NA	570.00	520.00	470.00	1PQGB
(ab)	Per Fibre Connection (FICON™) Express (48 STS-1)	520.00	1,728.00(I)	NA	1,060.00	970.00	840.00	1PQGC
(ac)	Per Fibre Connection (FICON™) Express (48c STS-1)	520.00	1,728.00(I)	NA	1,060.00	970.00	840.00	1PQGD
(ad)	Per Fibre Channel 100 (21 STS-1)	500.00	1,120.00(I)	NA	580.00	530.00	480.00	1PQGE
(ae)	Per Fibre Channel 100 (24c STS-1)	500.00	1,120.00(I)	NA	580.00	530.00	480.00	1PQGF
(af)	Per Fibre Channel 200 (48 STS-1)	520.00	1,836.00(I)	NA	1,130.00	1,030.00	890.00	1PQGG
(ag)	Per Fibre Channel 200 (48c STS-1)	520.00	1,836.00(I)	NA	1,130.00	1,030.00	890.00	1PQGH

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.5 Rates and Charges (Cont'd)

##### A. LightGate service Local Channel Systems (Cont'd)

The Basic System includes photonic common equipment and first one-half air mile of local channel fiber optic facilities.

(Cont'd)	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>2,3</sup> Months	49 to 72 <sup>2</sup> Months	73 to 96 <sup>2</sup> Months	USOC
8. Customer Channel Interfaces							
(a) Per DS1	\$170.00	\$32.00	\$27.00	\$20.00	\$17.00	\$16.00	1PQF1
(b) Per DS3	125.00	3,838.00(I)	172.00(I)	95.00	90.00	85.00	1PQF3
(c) Per DS3 (Asymmetrical with DS1/Flex DS1)	280.00	675.00	NA	390.00	365.00	350.00	1PQFG
(d) Per STS-1	125.00	324.00	NA	195.00	185.00	175.00	1PQF4
(e) Per OC-3 (2 Fiber)	125.00	324.00	NA	190.00	175.00	160.00	1PQF5
(f) Per OC-3 (4 Fiber)	125.00	641.00	NA	380.00	350.00	320.00	1PQF6
(g) Per OC-12 (2 Fiber)	275.00	965.00	NA	570.00	525.00	480.00	1PQF8
(h) Per OC-12 (4 Fiber)	275.00	1,930.00	NA	1,140.00	1,050.00	960.00	1PQF7
(i) Per OC-48 (2 Fiber)	300.00	2,160.00	NA	1,325.00	1,215.00	1,050.00	1PQF2
(j) Per OC-48 (4 Fiber)	300.00	4,320.00	NA	2,650.00	2,430.00	2,100.00	1PQFO
(k) Per 10 Mbps <sup>1</sup>	450.00	675.00	NA	175.00	155.00	140.00	1PQFH
(l) Per 100 Mbps (3 STS-1) – Electrical <sup>1</sup>	450.00	729.00	NA	210.00	190.00	170.00	1PQFJ
(m) Per 100 Mbps (3 STS-1) - 1310 nm Single-mode <sup>1</sup>	450.00	729.00	NA	210.00	190.00	170.00	1PQ3J
(n) Per Fractional 1000 Mbps <sup>1</sup>							
50 Mbps 850 nm Multi-mode – 1 STS-1	450.00	702.00	NA	190.00	170.00	150.00	1PQFM
50 Mbps 1310 nm Single-mode – 1 STS-1	450.00	702.00	NA	190.00	170.00	150.00	1PQ3M
150 Mbps 850 nm Multi-mode – 3c STS-1	450.00	756.00	NA	230.00	210.00	190.00	1PQFN
150 Mbps 1310 nm Single-mode – 3c STS-1	450.00	756.00	NA	230.00	210.00	190.00	1PQ3N
150 Mbps 850 nm Multi-mode – 3 STS-1	450.00	756.00	NA	230.00	210.00	190.00	1PQJN
150 Mbps 1310 nm Single-mode – 3 STS-1	450.00	756.00	NA	230.00	210.00	190.00	1PQKN
300 Mbps 850 nm Multi-mode – 6c STS-1	450.00	810.00	NA	300.00	280.00	260.00	1PQFR
300 Mbps 1310 nm Single-mode – 6c STS-1	450.00	810.00	NA	300.00	280.00	260.00	1PQ3R
300 Mbps 850 nm Multi-mode – 6 STS-1	450.00	810.00	NA	300.00	280.00	260.00	1PQJR
300 Mbps 1310 nm Single-mode – 6 STS-1	450.00	810.00	NA	300.00	280.00	260.00	1PQKR
450 Mbps 850 nm Multi-mode - 9c STS-1	450.00	864.00	NA	340.00	310.00	290.00	1PQFS
450 Mbps 1310 nm Single-mode - 9c STS-1	450.00	864.00	NA	340.00	310.00	290.00	1PQ3S
450 Mbps 850 nm Multi-mode – 9 STS-1	450.00	864.00	NA	340.00	310.00	290.00	1PQJS
450 Mbps 1310 nm Single-mode – 9 STS-1	450.00	864.00	NA	340.00	310.00	290.00	1PQKS

**Note 1:** Available only for systems installed on or after December 20, 2004, that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 2:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 3:** As of April 5, 2021, the 24-36 Month Contract Term for LightGate DS1 and DS3 channel interface options are no longer available for new or renewing subscribers.



**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.5 Rates and Charges (Cont'd)**

**A. LightGate service Local Channel Systems (Cont'd)**

The Basic System includes photonic common equipment and first one-half air mile of local channel fiber optic facilities.

(Cont'd)

	<b>Nonrecurring Charge</b>	<b>Month to Month</b>	<b>12 Months</b>	<b>24 to 48<sup>1,4</sup> Months</b>	<b>49 to 72<sup>1</sup> Months</b>	<b>73 to 96<sup>1</sup> Months</b>	<b>USOC</b>
8. Customer Channel Interfaces (Cont'd)							
(n) Per Fractional 1000 Mbps <sup>3</sup> (Cont'd)							
600 Mbps 850 nm Multi-mode - 12c STS-1	\$450.00	\$945.00(I)	NA	\$380.00	\$340.00	\$320.00	1PQFT
600 Mbps 1310 nm Single-mode - 12c STS-1	450.00	945.00(I)	NA	380.00	340.00	320.00	1PQ3T
600 Mbps 850 nm Multi-mode - 12 STS-1	450.00	945.00(I)	NA	380.00	340.00	320.00	1PQJT
600 Mbps 1310 nm Single-mode - 12 STS-1	450.00	945.00(I)	NA	380.00	340.00	320.00	1PQKT
1000 Mbps 850 nm Multi-mode - 21 STS-1 <sup>2</sup>	400.00	999.00(I)	NA	520.00	475.00	425.00	1PQFK
1000 Mbps 1310 nm Single-mode - 21 STS-1 <sup>2</sup>	400.00	999.00(I)	NA	520.00	475.00	425.00	1PQ3K
1000 Mbps 850 nm Multi-mode - 24c STS-1 <sup>2</sup>	400.00	999.00(I)	NA	520.00	475.00	425.00	1PQFP
1000 Mbps 1310 nm Single-mode - 24c STS-1 <sup>2</sup>	400.00	999.00(I)	NA	520.00	475.00	425.00	1PQ3P
(o) Per Flex DS1	260.00	32.00(I)	NA	20.00	17.00	16.00	1PQFQ
(p) Per 100 Mbps (1 STS-1) Metro Ethernet Backbone	800.00	675.00(I)	NA	175.00	155.00	140.00	1PQFU
(q) Per 100 Mbps (3 STS-1) Metro Ethernet Backbone	800.00	729.00(I)	NA	210.00	190.00	170.00	1PQFY
(r) Per 1000 Mbps Metro Ethernet Backbone	850.00	999.00(I)	NA	520.00	475.00	425.00	1PQFZ
(s) Per Fractional 1000 Mbps Metro Ethernet Backbone							
- 150 Mbps (3 STS-1)	850.00	756.00(I)	NA	230.00	210.00	190.00	1PQ35
- 300 Mbps (6 STS-1)	850.00	810.00(I)	NA	300.00	280.00	260.00	1PQ36
- 450 Mbps (9 STS-1)	850.00	864.00(I)	NA	340.00	310.00	290.00	1PQ37
- 600 Mbps (12 STS-1)	850.00	945.00(I)	NA	380.00	340.00	320.00	1PQ38
(t) Per Fibre Connection (FICON™) (21 STS-1)	500.00	1,093.00(I)	NA	570.00	520.00	470.00	1PQFA
(u) Per Fibre Connection (FICON™) (24c STS-1)	500.00	1,093.00(I)	NA	570.00	520.00	470.00	1PQFC
(v) Per Fibre Connection (FICON™) Express (48 STS-1)	520.00	1,728.00(I)	NA	1,060.00	970.00	840.00	1PQFD
(w) Per Fibre Connection (FICON™) Express (48c STS-1)	520.00	1,728.00(I)	NA	1,060.00	970.00	840.00	1PQFE
(x) Per Fibre Channel 100 (21 STS-1)	500.00	1,120.00(I)	NA	580.00	530.00	480.00	1PQFF
(y) Per Fibre Channel 100 (24c STS-1)	500.00	1,120.00(I)	NA	580.00	530.00	480.00	1PQFW
(z) Per Fibre Channel 200 (48 STS-1)	520.00	1,836.00(I)	NA	1,130.00	1,030.00	890.00	1PQ3A
(aa) Per Fibre Channel 200 (48c STS-1)	520.00	1,836.00(I)	NA	1,130.00	1,030.00	890.00	1PQ3B

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 2:** Available only for systems installed on or after October 30, 2003 that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 3:** Available only for systems installed on or after December 20, 2004, that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

Material appearing on this page previously appeared on page(s) 37.0.1 of this section.

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**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.5 Rates and Charges (Cont'd)**

**B.** LightGate service Local Channel Mileage<sup>1</sup>

The Basic System includes photonic common equipment and first one-half air mile of local channel fiber optic facilities.

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>2,3</sup> Months	49 to 72 <sup>2</sup> Months	73 to 96 <sup>2</sup> Months	USOC
1. Mileage for all LightGate service Local Channel Systems							
(a) First one-half mile (included in system charge)							NA
(b) Each additional one-half mile	NA	\$8,313.00(I)	\$345.00(I)	\$190.00	\$170.00	\$150.00	1LPEA
<b>C.</b> Separate Alternate Facility Transport (SAFT) <sup>1</sup>							
1. SAFT Level I							
(a) Per System	\$770.00						1L8EA
(b) Per one-half air mile		236.00	NA	115.00	95.00	90.00	1L8SA
2. SAFT Level II							
(a) Per System	770.00						1L8EP
(b) Per one-half air mile		2,700.00	NA	800.00	640.00	520.00	1L8SP
<b>D.</b> Interoffice Channels (These channels are furnished between central offices. Rates are based upon airline distance between central offices.)							
1. LightGate 1 service <sup>1</sup>							
(a) Per DS3							
(1) 0-8 miles							
(a) Fixed	190.00	52,953.00(I)	1,776.00(I)	975.00	775.00	625.00	1LPS8
(b) Per Mile		4,766.00(I)	126.00(I)	70.00	60.00	50.00	1LPE8
(2) 9-25 miles							
(a) Fixed	190.00	59,255.00(I)	2,049.00(I)	1,125.00	925.00	775.00	1LPS9
(b) Per Mile		4,766.00(I)	126.00(I)	70.00	60.00	50.00	1LPE9
(3) Over 25 miles							
(a) Fixed	190.00	69,288.00(I)	2,413.00(I)	1,325.00	1,125.00	925.00	1LPS6
(b) Per Mile		4,766.00(I)	126.00(I)	70.00	60.00	50.00	1LPE6
2. LightGate STS-1 service <sup>1</sup>							
(a) Per STS-1							
(1) 0-8 miles							
(a) Fixed	190.00	1,930.00	1,316.00	975.00	775.00	625.00	1LPS8
(b) Per Mile		175.00	94.00	70.00	60.00	50.00	1LPE8
(2) 9-25 miles							
(a) Fixed	190.00	2,160.00	1,518.00	1,125.00	925.00	775.00	1LPS9
(b) Per Mile		175.00	94.00	70.00	60.00	50.00	1LPE9
(3) Over 25 miles							
(a) Fixed	190.00	2,524.00	1,788.00	1,325.00	1,125.00	925.00	1LPS6
(b) Per Mile		175.00	94.00	70.00	60.00	50.00	1LPE6

**Note 1:** Month to month rates are only available at the end of a contract rate period.

**Note 2:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 3:** As of April 5, 2021, the 24-36 Month Contract Term for LightGate DS1 and DS3 channel interface options are no longer available for new or renewing subscribers.

**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.5 Rates and Charges (Cont'd)**

D. Interoffice Channels (Cont'd) (These channels are furnished between central offices. Rates are based upon airline distance between central offices.)

- 3. LightGate OC-3 service<sup>1</sup>
  - a. Per OC-3

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>2</sup> Months	49 to 72 <sup>2</sup> Months	73 to 96 <sup>2</sup> Months	USOC
(1) 0-8 miles							
(a) Fixed	\$190.00	\$2,835.00(I)	NA	\$1,475.00	\$1,225.00	\$1,025.00	1LPS8
(b) Per Mile		303.00(I)	NA	155.00	140.00	125.00	1LPE8
(2) 9-25 miles							
(a) Fixed	190.00	3,510.00(I)	NA	2,150.00	2,000.00	1,900.00	1LPS9
(b) Per Mile		303.00(I)	NA	155.00	140.00	125.00	1LPE9
(3) Over 25 miles							
(a) Fixed	190.00	4,860.00(I)	NA	3,150.00	2,900.00	2,700.00	1LPS6
(b) Per Mile		303.00(I)	NA	155.00	140.00	125.00	1LPE6
4. LightGate OC-12 service <sup>1</sup>							
(a) Per OC-12							
(1) 0-8 miles							
(a) Fixed	190.00	5,400.00(I)	NA	3,300.00	3,000.00	2,700.00	1LPS8
(b) Per Mile		540.00(I)	NA	320.00	290.00	260.00	1LPE8
(2) 9-25 miles							
(a) Fixed	190.00	7,425.00(I)	NA	4,800.00	4,500.00	4,200.00	1LPS9
(b) Per Mile		540.00(I)	NA	320.00	290.00	260.00	1LPE9
(3) Over 25 miles							
(a) Fixed	190.00	9,720.00(I)	NA	6,500.00	6,200.00	5,900.00	1LPS6
(b) Per Mile		540.00(I)	NA	320.00	290.00	260.00	1LPE6
5. LightGate OC-48 service <sup>1</sup>							
(a) Per OC-48							
(1) 0-8 miles							
(a) Fixed	190.00	10,530.00(I)	NA	6,500.00	5,800.00	5,200.00	1LPS8
(b) Per Mile		810.00(I)	NA	500.00	450.00	400.00	1LPE8
(2) 9-25 miles							
(a) Fixed	190.00	11,745.00(I)	NA	7,300.00	6,700.00	6,100.00	1LPS9
(b) Per Mile		810.00(I)	NA	500.00	450.00	400.00	1LPE9
(3) Over 25 miles							
(a) Fixed	190.00	13,500.00(I)	NA	8,600.00	7,900.00	7,100.00	1LPS6
(b) Per Mile		810.00(I)	NA	500.00	450.00	400.00	1LPE6

**Note 1:** Month to month rates are only available at the end of a contract rate period.

**Note 2:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.5 Rates and Charges (Cont'd)**

**D.** Interoffice Channels (Cont'd) (These channels are furnished between central offices. Rates are based upon airline distance between central offices.)

	<b>Nonrecurring Charge</b>	<b>Month to Month</b>	<b>12 Months</b>	<b>24 to 48<sup>2,3</sup> Months</b>	<b>49 to 72<sup>2</sup> Months</b>	<b>73 to 96<sup>2</sup> Months</b>	<b>USOC</b>
6. LightGate OC-192 service <sup>1</sup>							
(a) Per OC-192							
(1) 0-8 miles							
(a) Fixed	\$190.00	\$25,650.00	NA	\$15,500.00	\$13,800.00	\$12,500.00	1LPS8
(b) Per Mile		810.00	NA	500.00	450.00	400.00	1LPE8
(2) 9-25 miles							
(a) Fixed	190.00	26,865.00	NA	15,900.00	14,200.00	12,700.00	1LPS9
(b) Per Mile		810.00	NA	500.00	450.00	400.00	1LPE9
(3) Over 25 miles							
(a) Fixed	190.00	29,700.00	NA	17,700.00	15,800.00	14,100.00	1LPS6
(b) Per Mile		810.00	NA	500.00	450.00	400.00	1LPE6
7. Central Office Channel Interfaces							
(a) Per DS1	125.00	32.00	\$27.00	20.00	17.00	16.00	1PQE8
(b) Per DS3	125.00	3,838.00(I)	172.00(I)	95.00	90.00	85.00	1PQE3
(c) Per STS-1	125.00	236.00	NA	140.00	130.00	120.00	1PQE4
(d) Per OC-3 (2 Fiber)	200.00	324.00	NA	190.00	175.00	160.00	1PQE5
(e) Per OC-3 (4 Fiber)	200.00	573.00	NA	330.00	300.00	270.00	1PQE6
(f) Per OC-12 (2 Fiber)	360.00	864.00	NA	495.00	450.00	405.00	1PQEE
(g) Per OC-12 (4 Fiber)	400.00	1,728.00	NA	990.00	900.00	810.00	1PQED
(h) Per OC-48 (2 Fiber)	500.00	2,160.00	NA	1,325.00	1,215.00	1,050.00	1PQEO
(i) Per OC-48 (4 Fiber)	500.00	4,320.00	NA	2,650.00	2,430.00	2,100.00	1PQEF
(j) Per 28 DS1 Channel System	125.00	810.00	NA	490.00	465.00	450.00	MQ3CO
(k) Per DS1 on 28 DS1 Channel System	125.00	20.00	10.00	8.00	7.00	6.00	1PQEA
(l) Per STS-1 Channel System	125.00	810.00	NA	490.00	465.00	450.00	1PQE7
(m) Per OC-3 Channel System	125.00	1,788.00	NA	1,100.00	1,000.00	900.00	1PQE9
(n) Per OC-12 Channel System	125.00	3,577.00	NA	2,200.00	2,000.00	1,800.00	1PQ12
(o) Per OC-48 Channel System	125.00	7,411.00	NA	4,410.00	4,050.00	3,510.00	1PQ48

**Note 1:** Month to month rates are only available at the end of a contract rate period.

**Note 2:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**Note 3:** As of April 5, 2021, the 24-36 Month Contract Term for LightGate DS1 and DS3 channel interface options are no longer available for new or renewing subscribers.

## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.5 Rates and Charges (Cont'd)

- D.** Interoffice Channels (Cont'd) (These channels are furnished between central offices. Rates are based upon airline distance between central offices.)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>3</sup> Months	49 to 72 <sup>3</sup> Months	73 to 96 <sup>3</sup> Months	USOC
7. Central Office Channel Interfaces (Cont'd)							
(p) Per 1000 Mbps <sup>2</sup>	\$400.00	\$999.00(I)	NA	\$520.00	\$475.00	\$425.00	1PQEK
(q) Per 10 Mbps <sup>1</sup>	450.00	675.00(I)	NA	175.00	155.00	140.00	1PQEH
(r) Per 100 Mbps <sup>1</sup>	450.00	729.00(I)	NA	210.00	190.00	170.00	1PQEJ
(s) Per Fractional 1000 Mbps <sup>1</sup>							
- 50 Mbps	450.00	702.00(I)	NA	190.00	170.00	150.00	1PQEM
- 150 Mbps	450.00	756.00(I)	NA	230.00	210.00	190.00	1PQEN
- 300 Mbps	450.00	810.00(I)	NA	300.00	280.00	260.00	1PQER
- 450 Mbps	450.00	864.00(I)	NA	340.00	310.00	290.00	1PQES
- 600 Mbps	450.00	945.00(I)	NA	380.00	340.00	320.00	1PQET
(t) Per Fibre Connection (FICON <sup>TM</sup> ) (21 STS-1)	500.00	1,093.00(I)	NA	570.00	520.00	470.00	1PQGA
(u) Per Fibre Connection (FICON <sup>TM</sup> ) (24c STS-1)	500.00	1,093.00(I)	NA	570.00	520.00	470.00	1PQGB
(v) Per Fibre Connection (FICON <sup>TM</sup> ) Express (48 STS-1)	520.00	1,728.00(I)	NA	1,060.00	970.00	840.00	1PQGC
(w) Per Fibre Connection (FICON <sup>TM</sup> ) Express (48c STS-1)	520.00	1,728.00(I)	NA	1,060.00	970.00	840.00	1PQGD
(x) Per Fibre Channel 100 (21 STS-1)	500.00	1,120.00(I)	NA	580.00	530.00	480.00	1PQGE
(y) Per Fibre Channel 100 (24c STS-1)	500.00	1,120.00(I)	NA	580.00	530.00	480.00	1PQGF
(z) Per Fibre Channel 200 (48 STS-1)	520.00	1,836.00(I)	NA	1,130.00	1,030.00	890.00	1PQGG
(aa) Per Fibre Channel 200 (48c STS-1)	520.00	1,836.00(I)	NA	1,130.00	1,030.00	890.00	1PQGH

**Note 1:** Available only for systems installed on or after December 20, 2004, that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 2:** Available only for systems installed on or after October 30, 2003 that do not contain an Optical Customer Termination or an Optical Serving Wire Center Termination. 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 3:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

**B7. DIGITAL NETWORK SERVICE**

**B7.4 LightGate Service (Cont'd)**

**B7.4.5 Rates and Charges (Cont'd)**

<p><b>E.</b> Concatenation Rearrangement Charge (M)</p> <p>1. Per OC-3, OC-12 or OC-48 optical circuit rearranged as concatenated or non-concatenated subsequent to the initial installation of the circuit (M)</p>	<p><b>Nonrecurring Charge</b> (M)</p> <table border="0"> <tr> <td style="text-align: center;"><b>Initial</b></td> <td style="text-align: center;"><b>Subsequent</b></td> <td style="text-align: center;"><b>USOC</b></td> </tr> <tr> <td style="text-align: center;">\$-</td> <td style="text-align: center;">\$500.00</td> <td style="text-align: center;">NRCCN</td> </tr> </table>	<b>Initial</b>	<b>Subsequent</b>	<b>USOC</b>	\$-	\$500.00	NRCCN
<b>Initial</b>	<b>Subsequent</b>	<b>USOC</b>					
\$-	\$500.00	NRCCN					
<p>(a) Per circuit (M)</p> <p><b>F.</b> C-Bit Parity (M)</p> <p>1. Per DS3 circuit rearranged to have C-Bit Parity added or removed subsequent to the initial installation of the circuit. (M)</p> <p>(a) Per circuit (M)</p>	<table border="0"> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;">500.00</td> <td style="text-align: center;">NRCCB</td> </tr> </table>	-	500.00	NRCCB			
-	500.00	NRCCB					

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## B7. DIGITAL NETWORK SERVICE

### B7.4 LightGate Service (Cont'd)

#### B7.4.5 Rates and Charges (Cont'd)

##### G. Moves

1. A move involves a change in the physical location of one of the following:
  - a. the point of interface at the customer premises, or
  - b. the customer's premises
2. When the move is to a new location in Company territory within the same state, the charge for the move is equal to the sum of all nonrecurring charges applicable to a new LightGate service arrangement at the new location.

When the move is to a new location in Company territory in a different state, the move will be treated as a discontinuance and start of service. The customer will be responsible for satisfying all outstanding minimum period charges for the discontinued service. All applicable nonrecurring charges at the new location will apply.

### B7.5 MegaLink ISDN Service (Obsoleted. See Section B107.)

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**B7. DIGITAL NETWORK SERVICE**

**B7.5 MegaLink ISDN Service (Obsoleted. See Section B107.)(Cont'd)**

(O) (T)



## B7. DIGITAL NETWORK SERVICE

### B7.5 MegaLink ISDN Service (Obsoleted. See Section B107.) (Cont'd)

### B7.6 Reserved for Future Use

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service

#### *Service Availability*

Effective December 1, 2021, neither new nor existing customers will be permitted to purchase new SMARTRing Service ("Service"). In addition, (A) Service Payment Plans greater than 12-months in length will no longer be available; and (B) requests to move, add, change, upgrade, or downgrade existing Service arrangements will not be accepted, with the following exceptions: (1) existing customers will be permitted to modify their existing Service and will be able to add new circuits to their existing Service, but will not be permitted to add new nodes in any locations; (2) any such new circuits will be subject to the customer's existing term payment plan or term agreement for the Service to which they are added. Following the expiration of a customer's existing term agreement, Service will be provided on a month-to-month basis at the applicable Month-to-Month rates until the service is discontinued.

(N)

(N)

Effective November 30, 2023, unless specified to the contrary in their existing Service agreements, existing customers may not renew Payment Plans or term agreements for Service. In addition, no move, add, or change orders of any type will be accepted.

(N)

#### **B7.7.1 General**

- A. SMARTRing service is a dedicated, high capacity, network designed to provide increased reliability and functionality via a self-healing ring topology between multiple customer designated locations and Company Central Offices where facilities can be made available as determined by the Company. This network consists of fiber routed through local, alternate central office, internodal and/or interoffice channel facilities that transmit DS1, DS3, STS-1, OC-3, OC-12, OC-48, OC-192 and/or 1000 Mbps channel services simultaneously over primary and alternate paths between customer designated locations and Company Central Offices. This ring topology will continually monitor DS1, DS3, STS-1, OC-3, OC-12, OC-48, OC-192 and/or 1000 Mbps service quality, detect any failure within the system, and automatically self-heal itself around a point of failure to ensure the flow of DS1, DS3, STS-1, OC-3, OC-12, OC-48, OC-192 and/or 1000 Mbps Services between locations within the self-healing network. SMARTRing service further provides an adjunct optional feature and function capability for the establishment of a virtual packet ring which may be utilized for the transport of Basic Shared Ethernet LAN traffic on a best effort basis. For locations where a customer requests SMARTRing service and facilities are not available, construction charges will apply as set forth in Section B5. preceding for cases involving extraordinary cost.

Customers may purchase SMARTRing asymmetrical<sup>1</sup> optical interfaces up to the full ring capacity at a customer node or central office node, as shown in the Channel Interface chart following. For example, an OC-12 SMARTRing may have an OC-12 asymmetrical optical interface and an OC-48 SMARTRing may have an OC-48 asymmetrical optical interface. The interface capacity cannot exceed the node capacity of the host SMARTRing.

**Note 1:** An asymmetrical arrangement allows a customer to input a lower level interface at one node and aggregate onto a higher level optical interface at another Customer Node. For example, the customer had a four node OC-48 SMARTRing with DS3 interfaces at Nodes A, B, and C. The customer wants to aggregate multiple DS3s to Node location D, which can be an OC-48 optical interface. The customer can aggregate up to 48 DS3 interfaces to the OC-48 optical interface at Node D via Connecting Facility Assignments (CFA) in the ordering process.

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## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service

#### B7.7.1 General

- B.** SMARTRing service is available at OC-3, OC-3+, OC-12, OC-48, OC-48+, OC-192 and OC-192+ capacities.

OC-3 SMARTRing service is available as an individual service or in an Overlay Ring Arrangement riding the customer's host OC-12, OC-48, OC-48+, OC-192 or OC-192+ SMARTRing service. OC-3 SMARTRing service provides an equivalent capacity of 3 DS3s, or any combination thereof not to exceed an OC-3 capacity.

Channel Interface Capacity Reallocation allows the customer to reallocate channel interfaces on a node subsequent to the initial installation of the channel interfaces.

Effective December 20, 2004, OC-3+ SMARTRing service is not available for new individual service installations. Existing OC-3+ SMARTRing service installed as an individual service, or in combination with OC-12 SMARTRing service, as of December 20, 2004, may continue in place. OC-3+ SMARTRing service Overlay Ring Arrangements riding the customer's host OC-48, OC-48+, OC-192 or OC-192+ SMARTRing service are available for host rings installed prior to December 20, 2004. OC-3+ SMARTRing service provides an equivalent OC-3 capacity, not to exceed 3 DS3s at each node, with a maximum ring capacity of 12 DS3s, not to exceed an OC-12 ring capacity.

Effective May 30, 2015, (i) term plans for OC-3+ SMARTRing Service (including OC-3+ Overlay Ring Arrangements) may not be extended or renewed, (ii) OC-3+ Overlay Ring Arrangements may no longer be established on customers' host OC-12, OC-48, OC-48+, OC-192 or OC-192+ SMARTRing Service, and (iii) move, addition or change orders for OC-3+ SMARTRing Service (including OC-3+ Overlay Ring Arrangements) will no longer be accepted. No later than November 30, 2015, or upon expiration of customers' existing term plans, whichever is later, OC-3+ SMARTRing Service (including OC-3+ Overlay Ring Arrangements) must be disconnected. (N)

When a customer orders OC-3+ SMARTRing service in combination with OC-12 SMARTRing service, capacity and channel interface availability at each Customer Node and Central Office Node location is determined by the size node ordered by the customer.

OC-12 SMARTRing service is available as an individual service, or in combination with OC-3+ SMARTRing service, or in an Overlay Ring Arrangement riding the customer's host OC-48, OC-48+, OC-192 or OC-192+ SMARTRing service. OC-12 SMARTRing service provides an equivalent capacity of 12 DS3s.

OC-48 SMARTRing service is available as an individual service, or with overlaying rings in capacities of OC-3, OC-3+ and/or OC-12, or in an Overlay Ring Arrangement riding the customer's OC-192 or OC-192+ SMARTRing service. OC-48 SMARTRing service provides an equivalent capacity of 48 DS3s.

OC-48+ SMARTRing service is available as an individual bi-directional service, or with overlaying rings in capacities of OC-3, OC-3+ or OC-12, or in an Overlay Ring Arrangement riding the customer's OC-192+ SMARTRing service. It provides equivalent capacity of 24 DS3s between consecutive node locations on the ring. The maximum capacity of the OC-48+ SMARTRing service is determined by the number of Customer and Central Office nodes on the ring.

OC-192 SMARTRing service is available as an individual service, or with overlaying rings in capacities of OC-3, OC-3+, OC-12 and/or OC-48. OC-192 SMARTRing service provides an equivalent capacity of 192 DS3s.

OC-192+ SMARTRing service is available as an individual bi-directional service, or with overlaying rings in capacities of OC-3, OC-3+, OC-12, OC-48, and/or OC-48+. It provides equivalent capacity of 96 DS3s between consecutive node locations on the ring. The maximum capacity of the OC-192+ SMARTRing service is determined by the number of Customer and Central Office nodes on the ring.

## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.1 General (Cont'd)

**B.** (Cont'd)

All optical SMARTRing service Central Office Channel Interfaces are provisioned utilizing 1310 nm Single-mode fiber interfaces.

SMARTRing Service Channel Interfaces are available as follows:

<u>Channel Interfaces</u>	<u>NODES</u>						
	<u>OC-3</u>	<u>OC-3+</u>	<u>OC-12</u>	<u>OC-48</u>	<u>OC-48+</u>	<u>OC-192</u>	<u>OC-192+</u>
DS1	Yes	Yes	No <sup>1</sup>	Yes <sup>1</sup>	No <sup>1</sup>	Yes	No <sup>1</sup>
DS3	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>1</sup>
STS-1	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>1</sup>
OC-3	No	No	Yes	Yes	Yes	Yes	Yes
OC-12	No	No	No	Yes	Yes	Yes	Yes
OC-48	No	No	No	No	No	Yes	Yes
OC-3 (Asymmetrical Arrangement)	Yes	No	Yes	Yes	Yes	Yes	Yes
OC-12 (Asymmetrical Arrangement)	No	No	Yes	Yes	Yes	Yes	Yes
OC-48 (Asymmetrical Arrangement)	No	No	No	Yes	Yes	Yes	Yes
OC-192 (Asymmetrical Arrangement)	No	No	No	No	No	Yes	Yes
28 DS1 Channel System (DS3)	Yes	Yes	Yes	No	No	Yes	Yes <sup>2</sup>
28 DS1 Channel System (STS-1)	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>2</sup>
DS3 (Asymmetrical with DS1)	Yes	Yes	No	No	No	No	No
DS3 (Asymmetrical with Flex DS1)	No	No	Yes	Yes	Yes	Yes	Yes
DS1 Within an STS-1 Asymmetrical Arrangement	Yes	Yes	No	No	No	No	No
Fractional 1000 Mbps at 1000 Mbps	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes	Yes <sup>2</sup>
10 Mbps	Yes <sup>3</sup>	No	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
100 Mbps	No	No	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Fractional 1000 Mbps at 50 Mbps, 150 Mbps, 300 Mbps or 450 Mbps	Yes <sup>3</sup>	No	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Fractional 1000 Mbps at 600 Mbps	No	No	No	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
Flex DS1 <sup>5</sup>	No	No	Yes	Yes	Yes <sup>6</sup>	Yes	Yes <sup>6</sup>

**Note 1:** DS1 interfaces are available via OC-3, OC-3+ or 28 DS1 Channel System arrangements only for OC-12, OC-48+ and OC-192+ nodes and for OC-48, OC-48+ and OC-192+ SMARTRing service Nodes installed prior to October 30, 2003. For OC-48 and OC-192 nodes, installed on or after that date to December 20, 2004, DS1 interfaces are available with a maximum quantity per node of 108.

**Note 2:** DS3, STS-1, channel systems and 1000 Mbps interfaces are only available for nodes installed after October 30, 2003. 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer.

**Note 3:** 10 Mbps and Fractional 1000 Mbps at 50 Mbps interfaces only are available on OC-3 rings installed on or after April 27, 2006.

**Note 4:** Available on rings installed on or after December 20, 2004. 10 Mbps, 100 Mbps and Fractional 1000 Mbps transport channel interfaces do not contain any monitoring capability above the physical layer. 100 Mbps interface service components are further defined regarding the number of STS-1s used to provision the interface.

**Note 5:** Effective December 20, 2004, DS1 interfaces for OC-12, OC-48 or OC-192 rings installed on or after this date will be installed as a Flex DS1 interface. The maximum number of DS1 circuits available in a system is 108.

**Note 6:** Flex DS1 capabilities are as described previously in this Section for OC-48+ SMARTRing service and OC-192+ SMARTRing service. The maximum number of DS1 circuits available in a system is 108.

**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.1 General (Cont'd)**

**B.** (Cont'd)

SMARTRing service Channel Interfaces are available as follows: (Cont'd)

<u>Channel Interfaces</u>	<u>NODES</u>							
	<u>OC-3</u>	<u>OC-3+</u>	<u>OC-12</u>	<u>OC-48</u>	<u>OC-48+</u>	<u>OC-192</u>	<u>OC-192+</u>	
100 Mbps BellSouth Metro Ethernet Backbone	Yes <sup>1</sup>	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	
1000 Mbps BellSouth Metro Ethernet Backbone	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	
Fractional 1000 Mbps at 50 Mbps, 150 Mbps, 300 Mbps or 450 Mbps BellSouth Metro Ethernet Backbone	Yes <sup>1</sup>	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	
Fractional 1000 Mbps at 600 Mbps BellSouth Metro Ethernet Backbone	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	
Fibre Connection (FICON™)	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	
Fibre Connection (FICON™) Express	No	No	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	
Fibre Channel 100	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	
Fibre Channel 200	No	No	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	

**Note 1:** Fractional 1000 Mbps BellSouth Metro Ethernet Backbone, 100 Mbps BellSouth Metro Ethernet Backbone and 1000 Mbps BellSouth Metro Ethernet Backbone interfaces are for use when SMARTRing service is utilized for transport of a customer's BellSouth Metro Ethernet service<sup>3</sup>. 100 Mbps BellSouth Metro Ethernet Backbone interfaces are further defined regarding the number of STS-1s, utilized in conjunction with the interface. The 100 Mbps (3-STs-1) BellSouth Metro Ethernet Backbone interface is not available for OC-3 nodes. The 50 Mbps (1-STs-1) BellSouth Metro Ethernet Backbone interface is the only Fractional 1000 Mbps BellSouth Metro Ethernet Backbone interface that is available for OC-3 nodes. Interface availability is based on equipment capability. (C)

**Note 2:** The interface is further defined regarding the number of STS-1s used to provision the interface. Interface availability is based on equipment capability.

**Note 3:** Effective June 30, 2021, BellSouth Metro Ethernet Service is no longer available to new or renewing subscribers. (N)



## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.1 General (Cont'd)

**B.** (Cont'd)

SMARTRing service OC-3, OC-12, or OC-48 channel interfaces are associated with optical circuits within a SMARTRing service arrangement. These optical circuits may be provisioned as concatenated. When an optical circuit is provisioned as concatenated, the multiple STS-1s within the optical circuit are provided as a single entity with a single overhead channel.

SMARTRing service channel interfaces for OC-3, OC-12, OC-48, and OC-192<sup>1</sup> asymmetrical arrangements are associated with optical circuits within a SMARTRing Service arrangement. These optical circuit asymmetrical channel interfaces are non-concatenated and may not be provisioned as concatenated. (N)

SMARTRing service interfaces may be ordered as asymmetrical (i.e., a circuit enters one node at a lower level interface and exits at another node at a higher level interface). For example, a customer may have a service that connects to a ring via an OC-3 interface at a node. That service is then transported around the ring and connects via an OC-12 interface to another of the customer's services. The allowable asymmetrical interface arrangements for the various ring sizes are as shown in Technical Reference TR-73582.

The DS3 (Asymmetrical with DS1) interface allows a customer to aggregate DS1s originating from multiple nodes on a ring into a single DS3 interface at a designated node. A DS3 (Asymmetrical with DS1) interface has the capacity to aggregate 28 DS1s.

The DS1 within an STS-1 Asymmetrical Arrangement interface rate element applies in lieu of the STS-1 interface for the higher level termination of an asymmetrical arrangement when the lower level interface is a DS1.

SMARTRing service Overlay Ring Arrangements are available as follows:

<u>OVERLAYING SMARTRing Service</u>	<u>Host SMARTRing Service</u>				
	OC-12	OC-48	OC-48+	OC-192	OC-192+
OC-3	X	X	X	X	X
OC-3+		X	X	X	X
OC-12		X	X	X	X
OC-48				X	X
OC-48+					X

**Note 1:** OC-192 channel interfaces are available only in an asymmetrical arrangement (non-concatenated). (N)

## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.1 General (Cont'd)

- C. SMARTRing service is connectable at Company central offices to any compatible high capacity service as provided in Section B7. and to Broadband Exchange Line Service at compatible data rates (e.g., 1.586 Mbps) as provided in Section A40.5 of the General *Exchange Guidebook*. Rates and charges for such other services are as set forth in the applicable sections of this *Guidebook* for such other services. (T)
- D. The customer must provide suitable floor space, controlled environment, and source of non-switched suitable power to support this service.
- E. Where the customer provides two separate entrance facility cable routes for SMARTRing service, the primary and alternate facilities will be separate and will enter the customer node over such different routes. When the customer requests two separate routes at a Customer Node via two Local Channels and Company facilities do not exist for the second Local Channel, the Company may provide an equivalent second Local Channel via an existing alternate route. When facilities become available for the second Local Channel, the Company may rearrange the alternate route at any time. (T)
- F. The compatibility requirements, technical specifications, and generic requirements for SMARTRing service terminated at the customer's designated locations are referenced in Technical Reference ANSI T1.404-1989 and ANSI T1.403-1989.
- G. DS3 interface combinations and technical specifications are referenced in Bellcore TR-INS-000342.
- H. DS1 interface combinations and technical specifications are referenced in Bellcore TR-NPL-000054.
- I. SMARTRing service DS3 high capacity service channels have a performance objective of 99.5 percent error-free seconds over a continuous twenty-four hour period. Self-healing multi-nodal DS1 high capacity service channels have a performance objective of 99.95 percent error-free seconds over a continuous twenty-four hour period.
- J. SMARTRing service OC-3, OC-3+, OC-12, OC-48, OC-48+, OC-192 or OC-192+ capacity installed on or after June 3, 1994, is also available with FlexServ service Customer Network Management (CNM) under the rates, *terms and conditions* set forth following. FlexServ service CNM is available with two options: (1) Surveillance or (2) Reconfiguration. Customers wishing to incorporate either of these capabilities into their SMARTRing service should advise the Company at the time the initial service is requested. When the customer requests to add either FlexServ service option subsequent to the initial service installation, a SMARTRing service Rearrangement charge applies as set forth in 7.5.14 following. Customers who desire to only monitor their rings may order only Surveillance. However, customers who order Reconfiguration must already be subscribing to Surveillance or be ordering Surveillance coincident with Reconfiguration. Reconfiguration may not be ordered without Surveillance. (T)
- Reconfiguration is provided on a per STS-1 basis. Within each STS-1 group, all activated interfaces must be optioned the same (either all Surveillance only or all Surveillance and Reconfiguration). Customers who wish to utilize this service to reconfigure DS1 interfaces must purchase the FlexServ service Reconfiguration option for all DS1 interfaces associated with the STS-1 group with which the customer desires to have equipped with FlexServ service capability.
- When the customer orders Reconfiguration, the customer must order a sufficient quantity of SMARTRing service channel interfaces at every Customer Node and Central Office Node where reconfiguration capability is desired.
- Reconfiguration is not available with 100 Mbps and 1000 Mbps Metro Ethernet Backbone interfaces.
- K. SMARTRing service ordered and installed after April 27, 2006, is available with an optional feature and function capability in which a customer may utilize all or part of his SMARTRing service to establish an adjunct virtual packet ring. A virtual packet ring is separate and apart from the SONET capabilities associated with high capacity channel transport via DS1 through OC-48 interfaces. A virtual packet ring provides the capability for a customer to transport Ethernet LAN traffic utilizing Basic Shared Ethernet LAN Access Links that have best effort service capabilities in which the throughput associated with a virtual packet ring are controlled/affected by the customer's traffic and network configuration. Since this is a Best-Effort service, the Company does not guarantee any performance levels including packet loss, latency or jitter of the customer's network if the customer chooses to oversubscribe his network. (T)
- SMARTRing service Basic Shared Ethernet LAN Access Links are available based on equipment capability and a customer's requested service configuration. Upon a customer request for Basic Shared Ethernet LAN Access Links, equipment capability associated with the requested configuration shall be determined. Upon successful determination of the functionality of the customer's requested arrangement, the requested service shall be made available.
- Basic Shared Ethernet LAN Access Links are further defined per TR 73582. Basic Shared Ethernet LAN Access Links are available only at Customer Nodes.

**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.1 General (Cont'd)**

**K. (Cont'd)**

10 Mbps Basic Shared Ethernet LAN, 100 Mbps Basic Shared Ethernet LAN and/or Fractional 1000 Mbps Basic Shared Ethernet LAN Customer Channel Interfaces provide multipoint functionality, i.e., Ethernet frames are delivered to two or more locations on a customer's SMARTRing service on a best effort basis. This is a multipoint connection with a bandwidth defined by a Virtual Packet Ring. A Virtual Packet Ring Connection is the medium by which two or more locations exchange Ethernet frames. The bandwidth of the Virtual Packet Ring Connection is determined by the number of STS1's reserved for the Virtual Packet Ring Connection. In order for a customer to access the Virtual Packet Ring, SMARTRing service Customer Nodes must have a 10 Mbps Basic Shared Ethernet LAN, 100 Mbps Basic Shared Ethernet LAN and/or Fractional 1000 Mbps Basic Shared Ethernet LAN interface.

SMARTRing service Basic Shared Ethernet LAN Access Links are available as follows:

**CUSTOMER NODES**

<b><u>Basic Shared Ethernet LAN Access Links</u></b>	<b>OC-3</b>	<b>OC-3+</b>	<b>OC-12</b>	<b>OC-48</b>	<b>OC-48+</b>	<b>OC-192</b>	<b>OC-192+</b>	
10 Mbps - Electrical	Yes	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	(T)
100 Mbps - Electrical	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	(T)
100 Mbps - Optical	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	(T)
Fractional 1000 Mbps – Optical at 50 Mbps	Yes	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	(N)
Fractional 1000 Mbps – Optical at 150 Mbps, 300 Mbps or 450 Mbps	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	(T)
Fractional 1000 Mbps – Optical at 600 Mbps or 1000 Mbps	No	No	No	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	(T)

A connection to a Basic Shared Ethernet Access Link at a Central Office Node on a ring may be made utilizing a comparable Fractional 1000 Mbps Central Office Channel Interface.

The Virtual Packet Ring sizes available for the various SMARTRing service rings capacities and the Basic Shared Ethernet Access Links available on a Virtual Packet Ring are as follows:

**VIRTUAL PACKET RING SIZE (MBPS)**

<b><u>SMARTRing Service Ring Capacity</u></b>	<b><u>50</u></b>	<b><u>150</u></b>	<b><u>300</u></b>	<b><u>450</u></b>	<b><u>600</u></b>	<b><u>1000</u></b>
OC-3	Yes	No	No	No	No	No
OC-12	Yes	Yes	Yes	Yes	No	No
OC-48 or OC-48+	Yes	Yes	Yes	Yes	Yes	Yes
OC-192 or OC-192+	Yes	Yes	Yes	Yes	Yes	Yes

**VIRTUAL PACKET RING SIZE (MBPS)**

<b><u>Basic Shared Ethernet Channel Interfaces</u></b>	<b><u>50</u></b>	<b><u>150</u></b>	<b><u>300</u></b>	<b><u>450</u></b>	<b><u>600</u></b>	<b><u>1000</u></b>	
10 Mbps Basic Shared Ethernet LAN Access Link - Electrical	Yes	Yes	Yes	Yes	Yes	Yes	
100 Mbps Basic Shared Ethernet LAN Access Link - Electrical	No	Yes	Yes	Yes	Yes	Yes	(C)
100 Mbps Basic Shared Ethernet LAN Access Link - Optical	No	Yes	Yes	Yes	Yes	Yes	(C)
Fractional 1000 Mbps Basic Shared Ethernet LAN Access Link :							
– Optical at 50 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	
– Optical at 150 Mbps	No	Yes	Yes	Yes	Yes	Yes	(C)
– Optical at 300 Mbps	No	No	Yes	Yes	Yes	Yes	(C)
– Optical at 450 Mbps	No	No	No	Yes	Yes	Yes	(C)
– Optical at 600 Mbps	No	No	No	No	Yes	Yes	(C)
– Optical at 1000 Mbps	No	No	No	No	No	Yes	(C)

**Note 1:** Available for rings installed on or after April 27, 2006.



**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.1 General (Cont'd)**

- L. SMARTRing service ordered on or after June 15, 2009, will have an optional feature and function associated with Virtual Packet Rings (VPR). Customers will be able to transport BellSouth Metro Ethernet Service<sup>1</sup> (see *A140.13*) over SMARTRing Metro Ethernet Access Links. Connections between Metro Ethernet and SMARTRing are at SMARTRing central office nodes. The VPR will broadcast the Metro Ethernet to all Metro Ethernet Access Links associated with a specific VPR. Since this is a best effort service, the Company does not guarantee any performance levels including packet loss, latency or jitter of the customer’s network if the customer chooses to oversubscribe their network. Problems associated with throughput due to the best effort service capabilities of a Virtual Packet Ring do not constitute a service interruption for which a credit allowance would apply. (C)

Virtual Packet Ring will continue to function as a Best Effort service as described in K. proceeding.

The connection at the central office between Metro Ethernet and SMARTRing is Optical. The mixing of Access Link traffic and Metro Ethernet Access Link traffic on the same VPR is not supported. An out of service condition occurs when an existing Access Link is converted to a Metro Ethernet Access Link. Each node on the SMARTRing will connect to the metro Ethernet circuit via the Virtual Packet Ring and Metro Ethernet Access Links. Metro Ethernet Access Links will provide the equipment essential to Metro Ethernet reporting, statistics and customer network management.

Reconfiguration associated with Customer Network Management will not be allowed on Metro Ethernet Access Links.

SMARTRing service Basic Shared Ethernet LAN - Metro Ethernet Access Links are available as follows:

**NODES**

**Metro Ethernet Access Links –**

<b><u>Fractional 1000 Mbps at:</u></b>	<b><u>OC-3</u></b>	<b><u>OC-3+</u></b>	<b><u>OC-12</u></b>	<b><u>OC-48</u></b>	<b><u>OC-48+</u></b>	<b><u>OC-192</u></b>	<b><u>OC-192+</u></b>
150 Mbps	No	No	Yes	Yes	Yes	Yes	Yes
300 Mbps	No	No	Yes	Yes	Yes	Yes	Yes
450 Mbps	No	No	Yes	Yes	Yes	Yes	Yes
600 Mbps	No	No	No	Yes	Yes	Yes	Yes
1000 Mbps	No	No	No	Yes	Yes	Yes	Yes

**Note 1:** Effective June 30, 2021, BellSouth Metro Ethernet Service is no longer available to new or renewing subscribers. (N)



**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.1 General (Cont'd)**

- M. Shared Node Interconnection is available, based on equipment capability, whereby two SMARTRing service arrangements belonging to the same customer may share a node in a central office that is common to both rings. Shared Node Interconnection capability is available based on equipment capability. With Shared Node Interconnection, one of the rings (i.e., the larger capacity ring) is considered the Primary Ring and the other ring is considered the Secondary Ring. Primary Rings may be an OC-12, OC-48 or an OC-192 ring. A Secondary Ring is always a lower capacity ring than that of the Primary Ring. The various Shared Node Interconnection service arrangements that are available are as follows: (T)

<b>Shared Node Interconnection Primary Ring Capacity</b>	<b>Shared Node Interconnection Secondary Ring Capacity Available For Use With Primary Rings</b>			
	OC-3	OC-12	OC-48	OC-48+
OC-12	X			
OC-48	X	X		
OC-192	X	X	X	X

With Shared Node Interconnection, the Primary Ring shall have a Central Office Node and the Secondary Ring shall have a Shared Node Interconnection Central Office Node in the central office associated with the ring interconnection. For the Secondary Ring, a Shared Node Interconnection Central Office Node is considered toward meeting the three node minimum requirement for the Secondary Ring. This shared node will utilize capacity of the Primary Ring node, based on the size of the Secondary Ring, and will count toward the capacity the customer has available at the location. Should the customer require more capacity at a shared node central office location than is available on the Primary Ring node, then additional billable service components will be required.

Only one Shared Node Interconnection arrangement is available for an individual Central Office Node on a Primary Ring. Reconfiguration is not allowed at central office nodes that are configured for Shared Node *Interconnection*. (T)

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## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.2 Application of Rates

- A. Monthly rates and charges as specified in B7.7.4 following apply for each SMARTRing service. Customers must specify network capacity at the time of the initial order. In an Overlay Ring Arrangement where a customer's overlaying SMARTRing service rides the customer's host SMARTRing service, the overlay ring will share the transport of the host ring between common node locations. Rate categories at OC-3, OC-3+, OC-12, OC-48, OC-48+ and OC-192+ capacity levels include Customer Nodes, Central Office Nodes, Local Channels, Alternate Central Office Channels, Interoffice Channels and Internodal Channels. Channel Interfaces are required at each node on the network and must be associated with a SMARTRing service. An OC-3 Overlay Ring Arrangement requires an OC-3 Channel Interface at each node involved. An OC-3+ or OC-12 Overlay Ring Arrangement requires an OC-12 Channel Interface at each node involved. An OC-48/OC-48+ Overlay Ring arrangement requires an OC-48 Channel Interface at each node involved. In Overlay Ring Arrangements, the customer must order a Channel Interface for each entry to or exit from the host ring. In all other situations, the number of Channel Interfaces ordered will depend on whether the customer desires a working interface, or a working interface and a protection interface. The quantity of channel interfaces ordered may not exceed the capacity ordered. When a 28 DS1 Channel System is utilized to activate DS1 channels, the appropriate number of DS1 Channel Interfaces are required in lieu of an originating or terminating DS3 Channel Interface. SMARTRing service interfaces may be ordered as asymmetrical (i.e., a circuit enters one node at a lower level interface and exits at another node at a higher level interface).
- B. Nonrecurring charges for Local Channels, Alternate Central Office Channels, Interoffice Channels, Internodal Channels, Nodes and Channel Interfaces apply for each channel. When the customer requests two separate routes and the routing is provided as described in B7.7.1.E. preceding, charges apply for the Local Channels and any Interoffice Channels on the requested route. If the Company rearranges the alternate route, nonrecurring charges do not apply for the second Local Channel. Recurring charges for Local, Alternate Central Office, Interoffice and Internodal Channels apply for each quarter air mile increment of the channel. Fractions of a quarter mile will always round up to the next quarter air mile before determining the mileage and applying the rate. For channels which are less than one quarter mile, a minimum charge of one quarter mile applies.

When the customer requests a connection at a Customer Node via two Local Channels and Company facilities do not exist for the second Local Channel, the Company may provide an equivalent second Local Channel as an Alternate Central Office Channel via an existing alternate route. In such event, the customer will be billed Local Channel Mileage charges for such Alternate Central Office Channel, since the customer did not specifically request such option. When facilities become available for the second Local Channel, the Company may rearrange the alternate route at any time.

(N)

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## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd) (T)

#### B7.7.1 General (Cont'd)

- C. For Internodal Channels, charges apply as appropriate either for the same wire center area or contiguous serving wire center areas, as specified in B7.7.4.A.4. *Internodal Channel charges will not apply for SMARTRing nodes that are located in the same room or bay.* (C)
- D. Nonrecurring charges for Customer Nodes and Central Office Nodes apply per node. Recurring rates for Customer and Central Office Nodes also apply per node. The rates for Customer Channel Interfaces apply for each origination and termination of an activated interface at the Customer Node. Nonrecurring charges apply for each interface which originates or terminates at a Customer Node. The recurring rate applies on a per Customer Node basis for each origination and termination of an interface at a Customer Node. (N)
- E. SMARTRing service OC-3, OC-12, or OC-48 channel interfaces are associated with optical circuits within a SMARTRing service arrangement. These optical circuits may be provisioned as concatenated. When an optical circuit is provisioned as concatenated, the multiple STS-1s within the optical circuit are provided as a single entity with a single overhead channel. When an optical circuit is provisioned as concatenated at the time the circuit is installed, there is no additional charge for provisioning it as concatenated. When an existing non-concatenated optical circuit is requested to be reconfigured as concatenated, a concatenation rearrangement charge shall apply. This rearrangement charge shall also apply for existing concatenated circuits that are requested to be converted to non-concatenated. (T)
- F. SMARTRing service interfaces may be ordered as asymmetrical (i.e., a circuit enters one node at a lower level interface and exits at another node at a higher level interface). For example, a customer may have a service that connects to a ring via an OC-3 interface at a node. That service is then transported around the ring and connects via an OC-12 interface to another of the customer's services. The allowable asymmetrical interface arrangements for the various ring sizes are as shown in Technical Reference TR-73582. The interface rates for asymmetrical arrangements are the same as the rates for symmetrical arrangements except as follows: (T)
  - For lower level DS1 interfaces in an asymmetrical arrangement with an STS-1 interface, the DS1 within an STS-1 Asymmetrical Arrangement interface rate element applies in lieu of the STS-1 interface for the higher level termination. (T)
  - For lower level DS1 interfaces in an asymmetrical arrangement with a DS3 interface, the DS3 (Asymmetrical with DS1) interface rate element applies in lieu of the DS3 interface for the higher level termination of the asymmetrical arrangement (T)

## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.2 Application of Rates (Cont'd)

- G. In addition, customers with DS3 interfaces at the Customer Node electing to connect with DS1 services at a Central Office Node, must obtain a 28 DS1 Channel System, and the appropriate number of DS1 Channel Interfaces. The applicable rate elements for this arrangement are a DS3 Interface at the Customer Node and a 28 DS1 Channel System with DS1 Interfaces at the Central Office Node. The SMARTRing service 28 DS1 Channel System does not require a DS3 interface at the Central Office Node. A maximum of 28 DS1 Channel Interfaces can be activated for each 28 DS1 System utilized. Nonrecurring charges apply for each 28 DS1 Channel System. Nonrecurring charges also apply for each DS1 Channel Interface in a 28 DS1 Channel System. The recurring rate applies for each 28 DS1 Channel System and each DS1 Channel Interface in a 28 DS1 Channel System.
- H. In order to accommodate more flexible customer situations, SMARTRing service is available under several payment plans: **12 months**, 36 Month Term Payment Plan (24-48 months)<sup>1</sup>, 60 Month Term Payment Plan (49-72 months)<sup>1</sup>, or 84 Month Term Payment Plan (73-96 months)<sup>1</sup>. The 12, 36, 60, and 84 Month Term Payment Plans are provided under conditions specified in the Channel Services Payment Plan (CSPP), B2.4.9 preceding, except as modified following. For all payment plans, the following terms and conditions apply:
1. All rate elements, except Channel Interfaces for a given SMARTRing service, whether initially or subsequently ordered, must be provided under the same payment plan with the same service period and are coterminous upon disconnect of the SMARTRing service. Channel Interfaces may be ordered under payment plans equal to or less than the selected payment period for the given SMARTRing service.
  2. The **month-to-month** rates applicable **upon** payment plan **expiration** are subject to Company-initiated changes. (T)
  3. A termination liability charge will be applicable if services provided under a CSPP arrangement are disconnected prior to the end of the chosen service period. The applicable charge is equal to the number of months remaining in the rate stabilized service period times fifty percent (50%) of the monthly rates for SMARTRing service which include all Nodes, Local Channels, Alternate Central Office Channels, Internodal Channels and/or Interoffice Channels provided under the CSPP arrangement. For services under the month-to-month payment plan, a termination charge is equal to the number of months remaining in the twelve month minimum times the month-to-month rates in effect for SMARTRing service at the time of termination.  
Termination liability charges will not apply to any OC-3+ SMARTRing service disconnected on or after May 30, 2015.
  4. When a service period under an existing CSPP arrangement is completed and a customer elects to revert to a month-to-month payment option, no minimum period is applicable. If the customer does not select a new payment period or does not request discontinuance of service, service will be continued under the terms specified in B2.4.
  5. Additions of services or rate elements, for activating spare or unused capacities of a SMARTRing service under a CSPP arrangement, must be activated at the same rates and charges specified under the existing CSPP arrangement. Channel interfaces may be ordered as specified in 1. preceding.
  6. Additions of services or rate elements, i.e. new local channels, interoffice channels, etc., other than for activating spare or unused capacities, must be under a new CSPP arrangement at rates and charges as specified in 1. preceding. The new CSPP arrangement must be at least 24 months and must be coterminous with the CSPP arrangement for the existing SMARTRing service.

**Note 1:** All term plans for SMARTRing Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after February 1, 2019, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a Month-to-Month (MTM) basis at the applicable, then-current MTM rates. Notwithstanding anything to the contrary in the previous two sentences, this footnote does not apply to any term plans established after July 15, 2017.

Effective December 1, 2021, Payment Plans greater than 12 Months are no longer available for new or renewing subscribers. (N)

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**B7. DIGITAL NETWORK SERVICE****B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)****B7.7.2 Application of Rates (Cont'd)****H.** (Cont'd)

7. Termination liability charges will not apply to SMARTRing Service under the following circumstances, as long as the total number of nodes does not decrease for an existing customer: (T)
  - Disconnects of channel interfaces associated with SMARTRing Service
  - Disconnects, moves or rearrangements involving the removal of the following SMARTRing service rate elements to allow the placement of additional nodes and channels: Local Channel Mileage Rates, Interoffice Channel Mileage Rates, Customer Node and Central Office Node
8. Renewal Options are no longer available with OC-3+ SMARTRing Service (and OC-3+ Overlay Ring Arrangements), refer to B7.7.1.B for specific terms and conditions. (N)

**I.** SMARTRing service Local Channel, Alternate Central Office Channel and Internodal Channel rates are distance sensitive. They are measured per quarter airline mile or fraction thereof from the customer's designated premises to the Serving Wire Center, Alternate Central Office, or other Customer Nodes. V&H coordinates are derived for each customer location through the use of longitude and latitude measurements. Using the V&H coordinate method as set forth in the NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. No. 4, compute the mileage, convert to quarter miles, and multiply the appropriate per quarter mile rate by the distance involved. Any portion of a quarter mile will always round up to the next quarter mile before determining the mileage and applying the rate. For channels which are less than one quarter mile, a minimum charge of one quarter mile applies.

**J.** The SMARTRing service Interoffice Channel mileage is calculated per quarter airline mile between two directly connected central offices on the ring. Interoffice Channel mileage is computed by using the V&H coordinates method as set forth in the NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. No. 4. To determine the rate to be billed, multiply the appropriate per quarter mile rate by the distance involved. Fractions of a quarter mile always round up to the next quarter mile before determining the mileage and applying the rate. For channels which are less than one quarter mile, a minimum charge of one quarter mile applies.

**K.** A nonrecurring charge applies for SMARTRing service Surveillance, one for each Customer Node and each Central Office Node, per SMARTRing service rearranged. A nonrecurring charge applies for Reconfiguration, one per reconfiguration of each STS-1 group at each node where such reconfiguration capability is desired. These rate elements apply when the Customer adds FlexServ service to an existing SMARTRing service.

## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.2 Application of Rates (Cont'd)

- L. For SMARTRing service configured with a Virtual Packet Ring(s), an individual Virtual Packet Ring requires multiple (i.e., two or more) Basic Shared Ethernet LAN Access Links.
- M. A Virtual Packet Ring Rearrangement charge applies for the complete removal of a Virtual Packet Ring from a SMARTRing service. This charge does not apply to an increase or decrease in the size of a Virtual Packet Ring or to changes involving the addition or removal of individual nodes on the ring.
- N. For conversions of LightGate service to a higher capacity OC-12, OC-48, OC-48+, OC-192 or OC-192+ SMARTRing service and for conversions of SMARTRing service to a higher capacity SMARTRing service arrangement, customers will be allowed to defer the start of SMARTRing service ring level billing when the new service arrangement is provided under the Channel Services Payment Plan (CSPP), as described in B2.4.9, preceding. The period of deferred billing shall be based on the Company's estimation of the time required for conversion, up to a maximum of 60 days. This applies to orders for new service associated with conversions, as described above, or orders associated with a project for conversion that is pending completion, as of September 22, 2006. For orders associated with a project for conversion that is pending completion, the deferred start of ring level billing shall be accomplished via credits to the customer's bill. For upgrades, as described above, that are completed in less than 60 days, the deferred start of ring level billing shall be associated with the completion of the upgrade. Customer's SMARTRing service CSPP arrangements shall begin after the deferral period and continue to completion, as described in B2.4.9, preceding, for the customers selected CSPP commitment period.

Ring level billing is defined as billing for the following rate elements: Local Channel, Interoffice Channel, Internodal Channel Alternate Central Office Channel, Customer Node and Central Office Node. Billing for Customer Channel Interfaces and Central Office Channel Interfaces recurring will be effective upon activation of the interface and is not available for deferred billing.

In case of a service outage associated with SMARTRing service ring level rate elements that have deferred billing, as described above, for new service associated with conversions or service associated with a project for conversion that is pending completion, a service outage credit will not apply.

- O. For situations where a customer requests Local Channel and Interoffice Channel service components to a central office and alternate facilities are available that provide an equal or higher level of protection than the requested service arrangement, such alternate facilities may be utilized, with concurrence of the customer, and the rate application shall be that of the Local Channel and Interoffice Channel service components as requested by the customer.
- P. Shared Node Interconnection Central Office Node charges apply for each location on a Shared Node Interconnection Secondary Ring involved in a Shared Node Interconnection arrangement. SMARTRing service Local Channel, Interoffice Channel, etc., ring level service components apply to the Shared Node Interconnection Central Office Node in the same manner as associated with a Central Office Node.

The credit for service outages associated with Shared Node Interconnection Central Office Nodes shall be the same as is applicable to ring level nodes.

Should the customer require more capacity at a shared node central office location than is available on the Primary Ring node, then additional billable service components will be required.

#### B7.7.3 Architecture

##### A. SMARTRing Service

The SMARTRing service configuration utilizes a multi-nodal ring architecture which is specified jointly by the Company and the customer. The minimum configuration provides dedicated DS3 (44.736 Mbps) and/or DS1 digital services and must include at least three nodes. One node must be a Central Office Node in Company Central Office. The remaining two nodes may be either Central Office Nodes in a Company Central Offices or Customer Nodes at customer designated locations, or one of each. Additional nodes above the three node minimum may be any combination thereof. The maximum number of nodes will be determined based on equipment capability. The nodes are connected by SMARTRing service Local Channels, Alternate Central Office Channels, Interoffice Channels and Internodal Channels as applicable. SMARTRing service may be connected to other high capacity services only at Central Office Nodes.



## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.3 Architecture (Cont'd)

##### A. SMARTRing Service (Cont'd)

Applicable rate elements for this service are:

- Customer Nodes provide ring switching capabilities at customer designated locations other than Company Premises that are part of SMARTRing service. This rate element offers OC-3, OC-3+, OC-12, OC-48, OC-48+, OC-192 or OC-192+ network capacities. A summary of the channel interfaces available with each node are specified in B7.7.1 preceding. (T)
- Customer Channel Interface provides DS1, DS3, STS-1, OC-3, OC-12, OC-48, 10 Mbps, 100 Mbps, Fractional 1000 Mbps, and/or 1000 Mbps, connectivity that may take place at each Customer Node of SMARTRing service. The Customer Channel Interface rate element applies for every interface capacity that originates or terminates at a Customer Node.
- Central Office Node provides ring switching capabilities at Company Central Offices that are a part of SMARTRing service. This rate element offers OC-3, OC-3+, OC-12, OC-48, OC-48+, OC-192 or OC-192+ network capacities. A summary of the channel interfaces available with each node are specified in B7.7.1 preceding.
- Central Office Channel Interface provides DS1, DS3, STS-1, OC-3, OC-12, OC-48, 10 Mbps, 100 Mbps, Fractional 1000 Mbps and 1000 Mbps connectivity that may take place at each Central Office Node located on SMARTRing service. The Central Office Channel Interface rate element applies for every interface capacity that originates or terminates at a Central Office Node. Customers with DS3 or STS-1 interfaces at the Customer Node electing to connect with DS1 services at a Central Office Node must obtain a 28-DS1 Channel System. STS-1 interfaces may only connect to other compatible STS-1 services.
- Local Channel (at least one for each Customer Node which is directly connected to the serving wire center), provides for the communications path between a Customer Node and the serving wire center of the premises where located.
- Local Channel (at least one for each Customer Node which is directly connected to the serving wire center), provides for the communications path between a Customer Node and the serving wire center of the premises where located.
- Alternate Central Office Channel (at least one for each Customer Node which is directly connected to an Alternate Central Office), provides for the communications path, where requested, between a Customer Node and an Alternate Central Office.
- Interoffice Channel (one for each path between each two directly connected Company Central Offices), provides for the communications path between directly connected Company Central Offices located on a SMARTRing service.
- Internodal Channel (one for each path between two directly connected Customer Nodes), provides for the communications path, where requested, between two directly connected Customer Nodes located (a) in the same Serving Wire Center area or (b) in the same Office Park/Campus Environment or contiguous property, located in contiguous Serving Wire Center areas.
- Channel Interface Capacity Reallocation (one per node per occurrence), allows the customer to reallocate channel interfaces on a node subsequent to the initial installation of the channel interfaces. For example, a customer may initially allocate, activated or spare, eighty-four DS1s at each node on the ring and may subsequently request Channel Interface Capacity Reallocation to drop one DS3 and fifty-six DS1s at each node, or other combination of DS3s and/or DS1s equivalent to an OC-3 Network Capacity.
- SMARTRing service OC-3, OC-12, or OC-48 channel interfaces are associated with optical circuits within a SMARTRing service arrangement. These optical circuits may be provisioned as concatenated. When an optical circuit is provisioned as concatenated, the multiple STS-1s within the optical circuit are provided as a single entity with a single overhead channel.
- SMARTRing service interfaces may be ordered as asymmetrical (i.e., a circuit enters one node at a lower level interface and exits at another node at a higher level interface). For example, a customer may have a service that connects to a ring via an OC-3 interface at a node. That service is then transported around the ring and connects via an OC-12 interface to another of the customer's services. The allowable asymmetrical interface arrangements for the various ring sizes are as shown in Technical Reference TR-73582.

## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.3 Architecture (Cont'd)

##### A. SMARTRing Service (Cont'd)

- When the distance between nodes on a SMARTRing service is such that optical signal regeneration is required, then regeneration equipment will be provided at no additional charge to the customer to assure proper operation of the service. (T)  
***In some cases regeneration will be provided via SONET Add/Drop equipment called a Regeneration Node. A Regeneration Node does not contain the capability to add or drop services.*** Accordingly, FlexServ service Customer Network Management may not be ordered with a Regeneration Node, however, a customer may monitor a Regeneration Node via the FlexServ service Customer Network Management Surveillance option when a customer has established surveillance for a ring. Regeneration Node Surveillance is provided as a part of the charges associated with the customer's ring level FlexServ service Customer Network Management Surveillance. A Regeneration Node and Regeneration Node Surveillance, as applicable, will appear on a customer's records as a non-rated USOC, as follows:
 

Regeneration Node, all ring capacities, non-rated	<b>USOC</b>
Regeneration Node Surveillance, all ring capacities, non-rated	<b>SHNRD</b>
	<b>SHNRS</b>
- SMARTRing service Virtual Packet Rings may be established to work with either electrical or optical Basic Shared Ethernet LAN Access Links. A Virtual Packet Ring established associated with electrical access links will only work with electrical Basic Shared Ethernet LAN Access Links and a Virtual Packet Ring established associated with optical access links will only work with optical Basic Shared Ethernet LAN Access Links. Electrical and optical access links may not be mixed on the same Virtual Packet Ring.
- Individual Basic Shared Ethernet LAN Access Links associated with a VPR may be any size, as chosen by the customer. Based on a customer oversubscribing Access Links or a VPR, (i.e., placing an amount of traffic on an Access Link(s) or a VPR that is greater than the capacity of the Access Link(s) or VPR that is subscribed to by the customer), the performance levels including packet loss, latency or jitter of the customer's network may be affected. An individual SMARTRing service arrangement may have multiple Virtual Packet Rings, up to and including the capacity of the ring.

**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.3 Architecture (Cont'd)**

**A. SMARTRing Service (Cont'd)**

- Metro Ethernet Access Links must be Optical and must work with an optical VPR. Metro Ethernet Access Links are sized in a static configuration, meaning that they will not allow bursting up to the line speed. This is important when configuring Metro Ethernet, VPR and the Metro Ethernet Access Link. If the Metro Ethernet circuit supports bursting then each Metro Ethernet Access Link needs to be configured to match the maximum bandwidth allowed. The VPR will also need to be configured to match the burst capability.
- Metro Ethernet Access Link service uses the SMARTRing service as transport and broadcasts the Metro Ethernet to all Metro Ethernet Access Links associated with a specific VPR. Connection with the Metro Ethernet circuit at the SMARTRing central office node is limited to optical connections.
- Metro Ethernet and SMARTRing Metro Ethernet Access Links are limited to the following connections:

<u>Metro Ethernet Connection</u>	<u>SMARTRing Metro Ethernet Access Link Fractional 1000 Mbps at – Central Office</u>	<u>SMARTRing Metro Ethernet Access Link Fractional 1000 Mbps at – Customer Premises</u>
Basic 1000 Mbps	1000 Mbps	1000 Mbps
Premium 100 Mbps Optical (Fixed)	150 Mbps	150 Mbps
Premium 250 Mbps (Fixed)	300 Mbps	300 Mbps
Premium 500 Mbps (Fixed)	600 Mbps	600 Mbps
Premium 100, 250, 500 Mbps (Burst)	1000 Mbps	1000 Mbps
Premium 900 Mbps, 1000 Mbps	1000 Mbps	1000 Mbps
Virtual Ethernet Service 100 Mbps	150 Mbps	150 Mbps
Virtual Ethernet Service 200 Mbps	300 Mbps	300 Mbps
Virtual Ethernet Service 300 Mbps	300 Mbps	300 Mbps
Virtual Ethernet Service 450 Mbps	450 Mbps	450 Mbps
Virtual Ethernet Service 600 Mbps	600 Mbps	600 Mbps
Virtual Ethernet Service 750, 900, 1000 Mbps	1000 Mbps	1000 Mbps

- Customer requested upgrades of SMARTRing service will involve a service outage associated with Basic Shared Ethernet LAN Access Links, for which a credit for service outage shall not apply.
- Shared Node Interconnection (SNI) is available, based on equipment capability, whereby two SMARTRing service arrangements belonging to the same customer may share a node in a central office that is common to both rings.

(M)

**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.4 Rates and Charges**

**A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service)**

1. Local Channel Mileage Rates

(All Capacities)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
(a) Per Local Channel	\$500.00	\$-	\$-	\$-	\$-	\$-	1HVXX
(b) Per quarter air mile	-	141.00(I)	112.00(I)	\$83.00	\$73.00	\$68.00	1HVAX
2. Alternate Central Office Channel Mileage Rates (All capacities)							
(a) Alternate C.O. Channel, per channel	500.00	-	-	-	-	-	1HAXX
(b) Per quarter air mile	-	924.00(I)	378.00(I)	280.00	175.00	140.00	1HAAX
3. Interoffice Channel Mileage Rates							
(a) Fixed, OC-3 capacity	200.00	67.00(I)	48.00(I)	36.00	32.00	27.00	1HXFX
(b) Fixed, OC-12 capacity	200.00	195.00(I)	175.00(I)	130.00	115.00	105.00	1HXFX
(c) Per quarter air mile (OC-3 capacity)	-	74.00(I)	48.00(I)	36.00	30.00	23.00	1HXAX
(d) Per quarter air mile (OC-12 capacity)	-	74.00(I)	48.00(I)	36.00	30.00	23.00	1HXAX
(e) Fixed, OC-3+ capacity	200.00	195.00(I)	175.00(I)	130.00	115.00	105.00	1HXFX
(f) Fixed, OC-48 and OC-48+ capacity	200.00	459.00(I)	364.00(I)	270.00	260.00	250.00	1HXFX
(g) Fixed, OC-192 and OC-192+ capacity	200.00	1,039.00(I)	857.00(I)	635.00	610.00	590.00	1HXFX
(h) Per quarter air mile (OC-3+ capacity)	-	74.00(I)	48.00(I)	36.00	30.00	23.00	1HXAX
(i) Per quarter air mile (OC-48 and 48+ capacity)	-	74.00(I)	48.00(I)	36.00	30.00	23.00	1HXAX
(j) Per quarter air mile (OC-192 and OC192+ capacity)	-	74.00(I)	48.00(I)	36.00	30.00	23.00	1HXAX (N)

**Note 1:** All term plans for SMARTRing Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after February 1, 2019, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a Month-to-Month (MTM) basis at the applicable, then-current MTM rates. Notwithstanding anything to the contrary in the previous two sentences, this footnote does not apply to any term plans established after July 15, 2017.

Effective December 1, 2021, Payment Plans greater than 12 Months are no longer available for new or renewing subscribers.

## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.4 Rates and Charges (Cont'd)

##### A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
4. Internodal Channel Mileage Rates (All Capacities)							
(a) Per Internodal Channel, Same Wire Center area	\$500.00	-	-	-	-	-	1HNXX
(b) Per quarter air mile, Same Wire Center	-	\$2,423.00(I)	\$931.00(I)	\$690.00	\$415.00	\$345.00	1HNWX
(c) Per Internodal Channel, Same Office Park/Campus Environment in Contiguous Serving Wire Center areas	500.00	-	-	-	-	-	1HNZX
(d) Per quarter air mile, same Office Park/Campus Environment in contiguous Serving Wire Center areas	-	2,700.00(I)	1,053.00(I)	780.00	465.00	390.00	1HNCX
5. Customer Node (per Node)							
(a) OC-3 capacity	430.00	3,105.00(I)	1,336.00(I)	990.00	900.00	810.00	SHNC3
(b) OC-3+ capacity	430.00	3,645.00(I)	2,490.00(I)	1,845.00	1,575.00	1,350.00	SHNN5
(c) OC-12 capacity	460.00	4,846.00(I)	2,673.00(I)	1,980.00	1,800.00	1,575.00	SHNC1
(d) OC-48 capacity	460.00	7,047.00(I)	5,953.00(I)	4,410.00	4,050.00	3,510.00	SHNN8
(e) OC-48+ capacity	460.00	7,897.00(I)	5,953.00(I)	4,410.00	4,050.00	3,510.00	SHNN9
(f) OC-192 capacity	540.00	33,750.00(I)	12,656.00(I)	9,375.00	8,250.00	7,300.00	SHNN6
(g) OC-192+ capacity	540.00	33,750.00(I)	12,656.00(I)	9,375.00	8,250.00	7,300.00	SHNN2

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## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.4 Rates and Charges (Cont'd)

##### A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)

##### 6. Customer Channel Interface (per Node)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
(a) Per DS1	\$185.00	\$60.00(I)	\$45.00(I)	\$34.00	\$27.00	\$25.00	SHNBB
(b) Per DS3	145.00	229.00(I)	182.00(I)	135.00	130.00	125.00	SHNZT
(c) Per STS-1	190.00	297.00(I)	229.00(I)	170.00	150.00	140.00	SHN13
(d) Per OC-3, 2 fiber	190.00	344.00(I)	256.00(I)	190.00	170.00	160.00	SHN1D
(e) Per OC-3, 4 fiber	190.00	695.00(I)	513.00(I)	380.00	340.00	320.00	SHN15
(f) Per OC-12, 2 fiber	340.00	1,005.00(I)	695.00(I)	515.00	475.00	440.00	SHN1F
(g) Per OC-12, 4 fiber	340.00	2,011.00(I)	1,390.00(I)	1,030.00	950.00	880.00	SHN19
(h) Per OC-48, 2 fiber	420.00	2,160.00(I)	1,788.00(I)	1,325.00	1,215.00	1,050.00	SHN1A
(i) Per OC-48, 4 fiber	420.00	4,320.00(I)	3,577.00(I)	2,650.00	2,430.00	2,100.00	SHN1B
(j) Per OC-192, 2 fiber	1,600.00	10,125.00(I)	6,480.00(I)	4,800.00	3,300.00	2,850.00	SHNE1
(k) Per OC-192, 4 fiber	1,600.00	20,250.00(I)	12,960.00(I)	9,600.00	6,600.00	5,700.00	SHNE2
(l) Per DS1 within an STS-1 Asymmetrical Arrangement	330.00	33.00(I)	29.00(I)	22.00	20.00	18.00	SHNBS
(m) Per DS3 (Asymmetrical with DS1)	360.00	742.00(I)	607.00(I)	450.00	400.00	350.00	SHN1T
(n) Per 10 Mbps	450.00	675.00(I)	236.00(I)	175.00	155.00	140.00	SHN1M
(o) Per 100 Mbps (3 STS-1) – Electrical	450.00	729.00(I)	283.00(I)	210.00	190.00	170.00	SHN1N
(p) Per 100 Mbps (3 STS-1) – Optical 1310 nm Single-mode	450.00	729.00(I)	283.00(I)	210.00	190.00	170.00	SHN3N

**Note 1:** All term plans for SMARTRing Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after February 1, 2019, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a Month-to-Month (MTM) basis at the applicable, then-current MTM rates. Notwithstanding anything to the contrary in the previous two sentences, this footnote does not apply to any term plans established after July 15, 2017.

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## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.4 Rates and Charges (Cont'd)

##### A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)

##### 6. Customer Channel Interface (per Node) (Cont'd)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
(q) Per Fractional 1000 Mbps							
- 50 Mbps 850 nm Multi-mode – 1 STS-1	\$450.00	\$702.00(I)	\$256.00(I)	\$190.00	\$170.00	\$150.00	SHN10
- 50 Mbps 1310 nm Single-mode – 1 STS-1	450.00	702.00(I)	256.00(I)	190.00	170.00	150.00	SHN30
- 150 Mbps 850 nm Multi-mode – 3c STS-1	450.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHN1P
- 150 Mbps 1310 nm Single-mode – 3c STS-1	450.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHN3P
- 150 Mbps 850 nm Multi-mode – 3 STS-1	450.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHN3J
- 150 Mbps 1310 nm Single-mode – 3 STS-1	450.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHN3L
- 300 Mbps 850 nm Multi-mode – 6c STS-1	450.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHN1R
- 300 Mbps 1310 nm Single-mode – 6c STS-1	450.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHN3R
- 300 Mbps 850 nm Multi-mode – 6 STS-1	450.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHN3M
- 300 Mbps 1310 nm Single-mode – 6 STS-1	450.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHN3Q
- 450 Mbps 850 nm Multi-mode – 9c STS-1	450.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHN1U
- 450 Mbps 1310 nm Single-mode – 9c STS-1	450.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHN3U
- 450 Mbps 850 nm Multi-mode – 9 STS-1	450.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHN3T
- 450 Mbps 1310 nm Single-mode – 9 STS-1	450.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHN39
- 600 Mbps 850 nm Multi-mode – 12c STS-1	450.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHN1V
- 600 Mbps 1310 nm Single-mode – 12c STS-1	450.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHN3V
- 600 Mbps 850 nm Multi-mode – 12 STS-1	450.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHNBY
- 600 Mbps 1310 nm Single-mode – 12 STS-1	450.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHNBZ
- 1000 Mbps 850 nm Multi-mode – 21 STS-1	400.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHN1K
- 1000 Mbps 1310 nm Single-mode – 21 STS-1	400.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHN3K
- 1000 Mbps 850 nm Multi-mode – 24c STS-1	400.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHN3G
- 1000 Mbps 1310 nm Single-mode – 24c STS-1	400.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHN3H
(r) Per Flex DS1	360.00	60.00(I)	45.00(I)	34.00	27.00	25.00	SHN1Q
(s) Per 100 Mbps (1 STS-1) Metro Ethernet Backbone	800.00	675.00(I)	236.00(I)	175.00	155.00	140.00	SHN1J
(t) Per 100 Mbps (3 STS-1) Metro Ethernet Backbone	800.00	729.00(I)	283.00(I)	210.00	190.00	170.00	SHN33
(u) Per 1000 Mbps Metro Ethernet Backbone	850.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHN34
(v) Per Fractional 1000 Mbps Metro Ethernet Backbone							
- 150 Mbps (3 STS-1)	850.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHN35
- 300 Mbps (6 STS-1)	850.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHN36
- 450 Mbps (9 STS-1)	850.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHN37
- 600 Mbps (12 STS-1)	850.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHN38

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## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.4 Rates and Charges (Cont'd)

##### A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)

##### 6. Customer Channel Interface (per Node) (Cont'd)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
(w) Per Fiber Connection (FICON) (21 STS-1)	\$500.00	\$1,093.00(I)	\$769.00(I)	\$570.00	\$520.00	\$470.00	SHNBC
(x) Per Fiber Connection (FICON) (24c STS-1)	500.00	1,093.00(I)	769.00(I)	570.00	520.00	470.00	SHNBD
(y) Per Fiber Connection (FICON) Express (48 STS-1)	520.00	1,728.00(I)	1,431.00(I)	1,060.00	970.00	840.00	SHNBE
(z) Per Fiber Connection (FICON) Express (48c STS-1)	520.00	1,728.00(I)	1,431.00(I)	1,060.00	970.00	840.00	SHNBF
(aa) Per Fiber Channel 100 (21 STS-1)	500.00	1,120.00(I)	783.00(I)	580.00	530.00	480.00	SHNBG
(ab) Per Fiber Channel 100 (24c STS-1)	500.00	1,120.00(I)	783.00(I)	580.00	530.00	480.00	SHNBH
(ac) Per Fiber Channel 200 (48 STS-1)	520.00	1,836.00(I)	1,525.00(I)	1,130.00	1,030.00	890.00	SHNBK
(ad) Per Fiber Channel 200 (48c STS-1)	520.00	1,836.00(I)	1,525.00(I)	1,130.00	1,030.00	890.00	SHNBK
7. Central Office Node (per Node)							
(a) OC-3 capacity	400.00	1,890.00(I)	1,336.00(I)	990.00	900.00	810.00	SHNH3
(b) OC-3+ capacity	400.00	3,037.00(I)	2,490.00(I)	1,845.00	1,575.00	1,350.00	SHNH5
(c) OC-12 capacity	460.00	3,618.00(I)	2,673.00(I)	1,980.00	1,800.00	1,575.00	SHNH1
(d) OC-48 capacity	460.00	6,561.00(I)	5,953.00(I)	4,410.00	4,050.00	3,510.00	SHNH8
(e) OC-48+ capacity	460.00	7,411.00(I)	5,953.00(I)	4,410.00	4,050.00	3,510.00	SHNH9
(f) OC-192 capacity	540.00	33,750.00(I)	12,656.00(I)	9,375.00	8,250.00	7,300.00	SHNH7
(g) OC-192+ capacity	540.00	33,750.00(I)	12,656.00(I)	9,375.00	8,250.00	7,300.00	SHNH6
(h) OC-3 Shared Node Interconnection	550.00	1,323.00(I)	931.00(I)	690.00	630.00	570.00	SHNHA
(i) OC-12 Shared Node Interconnection	550.00	2,457.00(I)	1,876.00(I)	1,390.00	1,260.00	1,100.00	SHNHB
(j) OC-48 Shared Node Interconnection	550.00	4,590.00(I)	3,888.00(I)	2,880.00	2,840.00	2,460.00	SHNHC
(k) OC-48+ Shared Node Interconnection	550.00	5,184.00(I)	3,888.00(I)	2,880.00	2,840.00	2,460.00	SHNHD

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## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.4 Rates and Charges (Cont'd)

##### A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)

##### 8. Central Office Channel Interface (per Central Office Node)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
(a) Per DS1	\$145.00	\$54.00(I)	\$40.00(I)	\$30.00	\$25.00	\$20.00	SHNCB
(b) Per DS3	210.00	155.00(I)	114.00(I)	85.00	80.00	75.00	SHNYT
(c) Per STS-1	210.00	202.00(I)	141.00(I)	105.00	100.00	90.00	SHNO2
(d) Per OC-3, 2 fiber	340.00	344.00(I)	256.00(I)	190.00	170.00	160.00	SHNCD
(e) Per OC-3, 4 fiber	340.00	695.00(I)	513.00(I)	380.00	340.00	320.00	SHNO4
(f) Per OC-12, 2 fiber	535.00	1,005.00(I)	695.00(I)	515.00	475.00	440.00	SHNCF
(g) Per OC-12, 4 fiber	535.00	2,011.00(I)	1,390.00(I)	1,030.00	950.00	880.00	SHNC9
(h) Per OC-48, 2 fiber	650.00	2,160.00(I)	1,788.00(I)	1,325.00	1,215.00	1,050.00	SHNCJ
(i) Per OC-48, 4 fiber	650.00	4,320.00(I)	3,577.00(I)	2,650.00	2,430.00	2,100.00	SHNCK
(j) Per OC-192, 2 fiber	1,600.00	10,125.00(I)	6,480.00(I)	4,800.00	3,300.00	2,850.00	SHNE3
(k) Per OC-192, 4 fiber	1,600.00	20,250.00(I)	12,960.00(I)	9,600.00	6,600.00	5,700.00	SHNE4
(l) Per 28 DS1 Channel System (DS3)	205.00	945.00(I)	742.00(I)	550.00	500.00	450.00	SHNW8
(m) Per 28 DS1 Channel System (STS-1)	205.00	1,012.00(I)	877.00(I)	650.00	600.00	575.00	SHNCS
(n) Per DS1 on 28 DS1 Channel System (DS3)	175.00	24.00(I)	16.00(I)	12.00	9.00	8.00	SHNCA
(o) Per DS1 on 28 DS1 Channel System (STS-1)	175.00	54.00(I)	47.00(I)	35.00	30.00	25.00	SHNCG
(p) Per DS1 within an STS-1 Asymmetrical Arrangement	360.00	33.00(I)	29.00(I)	22.00	20.00	18.00	SHNCH
(q) Per DS3 (Asymmetrical with DS1)	400.00	742.00(I)	607.00(I)	450.00	400.00	350.00	SHNCT
(r) Per 10 Mbps	450.00	675.00(I)	236.00(I)	175.00	155.00	140.00	SHNCM
(s) Per 100 Mbps (3 STS-1) - Electrical	450.00	729.00(I)	283.00(I)	210.00	190.00	170.00	SHNCN
(t) Per 100 Mbps (3 STS-1) - Optical	550.00	729.00(I)	283.00(I)	210.00	190.00	170.00	SHNDU

**Note 1:** All term plans for SMARTRing Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after February 1, 2019, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a Month-to-Month (MTM) basis at the applicable, then-current MTM rates. Notwithstanding anything to the contrary in the previous two sentences, this footnote does not apply to any term plans established after July 15, 2017.

Effective December 1, 2021, Payment Plans greater than 12 Months are no longer available for new or renewing subscribers.

## B7. DIGITAL NETWORK SERVICE

### B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)

#### B7.7.4 Rates and Charges (Cont'd)

##### A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)

##### 8. Central Office Channel Interface (per Central Office Node) (Cont'd)

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
(u) Per Fractional 1000 Mbps							
- 50 Mbps – 1 STS-1	\$450.00	\$702.00(I)	\$256.00(I)	\$190.00	\$170.00	\$150.00	SHNCO
- 150 Mbps – 3c STS-1	450.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHNCP
- 150 Mbps – 3 STS-1	450.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHNDV
- 300 Mbps – 6c STS-1	450.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHNCR
- 300 Mbps – 6 STS-1	450.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHNDX
- 450 Mbps – 9c STS-1	450.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHNCU
- 450 Mbps – 9 STS-1	450.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHNDY
- 600 Mbps – 12c STS-1	450.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHNCV
- 600 Mbps – 12 STS-1	450.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHNDZ
- 1000 Mbps – 21 STS-1	400.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHNCW
- 1000 Mbps – 24c STS-1	400.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHNDW
(v) Per Flex DS1	250.00	54.00(I)	40.00(I)	30.00	25.00	20.00	SHNCQ
(w) Per 100 Mbps (1 STS-1) Metro Ethernet Backbone	800.00	675.00(I)	236.00(I)	175.00	155.00	140.00	SHNOJ
(x) Per 100 Mbps (3 STS-1) Metro Ethernet Backbone	800.00	729.00(I)	283.00(I)	210.00	190.00	170.00	SHNCX
(y) Per 1000 Mbps Metro Ethernet Backbone	850.00	999.00(I)	702.00(I)	520.00	475.00	425.00	SHNC5
(z) Per Fractional 1000 Mbps Metro Ethernet Backbone							
- 150 Mbps (3 STS-1)	850.00	756.00(I)	310.00(I)	230.00	210.00	190.00	SHND5
- 300 Mbps (6 STS-1)	850.00	810.00(I)	405.00(I)	300.00	280.00	260.00	SHND6
- 450 Mbps (9 STS-1)	850.00	864.00(I)	459.00(I)	340.00	310.00	290.00	SHND7
- 600 Mbps (12 STS-1)	850.00	945.00(I)	513.00(I)	380.00	340.00	320.00	SHND8
(aa) Per Fiber Connection (FICON) (21 STS-1)	500.00	1,093.00(I)	769.00(I)	570.00	520.00	470.00	SHNDB
(ab) Per Fiber Connection (FICON) (24c STS-1)	500.00	1,093.00(I)	769.00(I)	570.00	520.00	470.00	SHNDC
(ac) Per Fiber Connection (FICON) Express (48 STS-1)	520.00	1,728.00(I)	1,431.00(I)	1,060.00	970.00	840.00	SHNDD
(ad) Per Fiber Connection (FICON) Express (48c STS-1)	520.00	1,728.00(I)	1,431.00(I)	1,060.00	970.00	840.00	SHNDE
(ae) Per Fiber Channel 100 (21 STS-1)	500.00	1,120.00(I)	783.00(I)	580.00	530.00	480.00	SHNDF
(af) Per Fiber Channel 100 (24c STS-1)	500.00	1,120.00(I)	783.00(I)	580.00	530.00	480.00	SHNDG
(ag) Per Fiber Channel 200 (48 STS-1)	520.00	1,836.00(I)	1,525.00(I)	1,130.00	1,030.00	890.00	SHNDH
(ah) Per Fiber Channel 200 (48c STS-1)	520.00	1,836.00(I)	1,525.00(I)	1,130.00	1,030.00	890.00	SHNDJ

**Note 1:** All term plans for SMARTRing Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after February 1, 2019, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a Month-to-Month (MTM) basis at the applicable, then-current MTM rates. Notwithstanding anything to the contrary in the previous two sentences, this footnote does not apply to any term plans established after July 15, 2017.

Effective December 1, 2021, Payment Plans greater than 12 Months are no longer available for new or renewing subscribers.

**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.4 Rates and Charges (Cont'd)**

**A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)**

**9. Channel Interface Capacity Reallocation**

(a) Per Node, Per occurrence	<b>Nonrecurring Charge</b>	<b>USOC</b>
	<b>\$365.00</b>	<b>SHRBC</b>

**10. Concatenation Rearrangement Charge**

(a) Per OC-3, OC-12 or OC-48 optical circuit rearranged as concatenated or non-concatenated subsequent to the initial installation of the circuit	<b>Monthly Rate</b>	<b>Nonrecurring Charge</b>	<b>USOC</b>
	\$-	<b>Initial Subsequent</b>	<b>NRCCN</b>
		\$- \$500.00	

**11. SMARTRing Service Rearrangement**

(a) Surveillance, Per Node, per SMARTRing service	-	-	255.00	SHNRR
(b) Reconfiguration, Per STS-1 group, per Node	-	-	365.00	SHNRI

**12. Basic Shared Ethernet LAN Access Link**

**(a) Customer Premises Access Links Link Connection**

	<b>Nonrecurring Charge</b>	<b>Month to Month</b>	<b>12 Months</b>	<b>24 to 48<sup>2</sup> Months</b>	<b>49 to 72<sup>2</sup> Months</b>	<b>73 to 96<sup>2</sup> Months</b>	<b>USOC</b>
(1) Per 10 Mbps Basic Shared Ethernet LAN Access Link - Electrical <sup>1</sup>	2,050.00	985.00(I)	337.00(I)	250.00	220.00	200.00	SHN1G
(2) Per 100 Mbps Basic Shared Ethernet LAN Access Link - Electrical <sup>1</sup>	2,050.00	1,053.00(I)	405.00(I)	300.00	280.00	250.00	SHN1H
(3) Per 100 Mbps Basic Shared Ethernet LAN Access Link – Optical 1310 nm Single-mode <sup>1</sup>	2,050.00	1,053.00(I)	405.00(I)	300.00	280.00	250.00	SHN1I
(4) Per Fractional 1000 Mbps Basic Shared Ethernet LAN Access Link - Optical <sup>1</sup>							
- 50 Mbps 850 nm Multi-mode	2,050.00	1,012.00(I)	378.00(I)	280.00	250.00	240.00	SHN1S
- 50 Mbps 1310 nm Single-mode	2,050.00	1,012.00(I)	378.00(I)	280.00	250.00	240.00	SHN3S
- 150 Mbps 850 nm Multi-mode	2,050.00	1,093.00(I)	445.00(I)	330.00	300.00	280.00	SHN1W
- 150 Mbps 1310 nm Single-mode	2,050.00	1,093.00(I)	445.00(I)	330.00	300.00	280.00	SHN3W
- 300 Mbps 850 nm Multi-mode	2,050.00	1,174.00(I)	594.00(I)	440.00	410.00	380.00	SHN1X
- 300 Mbps 1310 nm Single-mode	2,050.00	1,174.00(I)	594.00(I)	440.00	410.00	380.00	SHN3X
- 450 Mbps 850 nm Multi-mode	2,050.00	1,255.00(I)	661.00(I)	490.00	450.00	420.00	SHN1Y
- 450 Mbps 1310 nm Single-mode	2,050.00	1,255.00(I)	661.00(I)	490.00	450.00	420.00	SHN3Y
- 600 Mbps 850 nm Multi-mode	2,050.00	1,377.00(I)	742.00(I)	550.00	490.00	460.00	SHN1Z
- 600 Mbps 1310 nm Single-mode	2,050.00	1,377.00(I)	742.00(I)	550.00	490.00	460.00	SHN3Z
- 1000 Mbps 850 nm Multi-mode	2,050.00	1,512.00(I)	877.00(I)	650.00	590.00	560.00	SHNJA
- 1000 Mbps 1310 nm Single-mode	2,050.00	1,512.00(I)	877.00(I)	650.00	590.00	560.00	SHNKA

**Note 1:** Basic Shared Ethernet LAN Access Link interfaces are available based on equipment capability and only at Customer Nodes.

**Note 2:** All term plans for SMARTRing Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after February 1, 2019, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a Month-to-Month (MTM) basis at the applicable, then-current MTM rates. Notwithstanding anything to the contrary in the previous two sentences, this footnote does not apply to any term plans established after July 15, 2017.

Effective December 1, 2021, Payment Plans greater than 12 Months are no longer available for new or renewing subscribers.

**B7. DIGITAL NETWORK SERVICE**

**B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)**

**B7.7.4 Rates and Charges (Cont'd)**

A. Self-healing Multi-nodal Alternate Route Topology Ring (SMARTRing Service) (Cont'd)

12. Basic Shared Ethernet LAN Access Link (Cont'd)

(b) Metro Ethernet Access Link Connection

	Nonrecurring Charge	Month to Month	12 Months	24 to 48 <sup>1</sup> Months	49 to 72 <sup>1</sup> Months	73 to 96 <sup>1</sup> Months	USOC
(1) Per Fractional 1000 Mbps Access Link – Metro Ethernet Customer Premises							
- 150 Mbps 850 nm Multi-mode	\$2,050.00	\$1,323.00(I)	\$1,080.00(I)	\$800.00	\$500.00	\$400.00	SHNMA
- 150 Mbps 1310 nm Single-mode	2,050.00	1,323.00(I)	1,080.00(I)	800.00	500.00	400.00	SHNSA
- 300 Mbps 850 nm Multi-mode	2,050.00	1,647.00(I)	1,255.00(I)	930.00	580.00	540.00	SHNMB
- 300 Mbps 1310 nm Single-mode	2,050.00	1,647.00(I)	1,255.00(I)	930.00	580.00	540.00	SHNSB
- 450 Mbps 850 nm Multi-mode	2,050.00	1,768.00(I)	1,336.00(I)	990.00	630.00	590.00	SHNMC
- 450 Mbps 1310 nm Single-mode	2,050.00	1,768.00(I)	1,336.00(I)	990.00	630.00	590.00	SHNSC
- 600 Mbps 850 nm Multi-mode	2,050.00	1,930.00(I)	1,451.00(I)	1,075.00	690.00	650.00	SHNMD
- 600 Mbps 1310 nm Single-mode	2,050.00	1,930.00(I)	1,451.00(I)	1,075.00	690.00	650.00	SHNSD
- 1000 Mbps 850 nm Multi-mode	2,050.00	2,119.00(I)	1,620.00(I)	1,200.00	830.00	790.00	SHNME
- 1000 Mbps 1310 nm Single-mode	2,050.00	2,119.00(I)	1,620.00(I)	1,200.00	830.00	790.00	SHNSE
(2) Per Fractional 1000 Mbps Access Link – Metro Ethernet Central Office							
- 150 Mbps	2,050.00	1,323.00(I)	1,080.00(I)	800.00	500.00	400.00	SHNOA
- 300 Mbps	2,050.00	1,647.00(I)	1,255.00(I)	930.00	580.00	540.00	SHNOB
- 450 Mbps	2,050.00	1,768.00(I)	1,336.00(I)	990.00	630.00	590.00	SHNOC
- 600 Mbps	2,050.00	1,930.00(I)	1,451.00(I)	1,075.00	690.00	650.00	SHNOD
- 1000 Mbps	2,050.00	2,119.00(I)	1,620.00(I)	1,200.00	830.00	790.00	SHNOE

13. Virtual Packet Ring Rearrangement Charge

	Monthly Rate	Nonrecurring Charge		USOC
		Initial	Subsequent	
(a) Per service order associated with a rearrangement to increase or decrease a virtual packet ring subsequent to the initial setup of the virtual packet ring	-	-	\$500.00	SHNRP

**Note 1:** All term plans for SMARTRing Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after February 1, 2019, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a Month-to-Month (MTM) basis at the applicable, then-current MTM rates. Notwithstanding anything to the contrary in the previous two sentences, this footnote does not apply to any term plans established after July 15, 2017.

Effective December 1, 2021, Payment Plans greater than 12 Months are no longer available for new or renewing subscribers.

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## B7. DIGITAL NETWORK SERVICE

### B7.8 SMARTPath Service

(M)

#### B7.8.1 General

(M)

- A. SMARTPath service is furnished for Private Line IntraLATA Communications by the Company. (M)
- B. SMARTPath service is a service for transmission of digital signals only and uses only digital transmission facilities. (M)
- C. SMARTPath service is a shared high capacity network service capable of providing a 1.544 Mbps transport link with high performance and reliability parameters and a level of redundancy/diversity designed to limit a single event from interrupting service. (M)
- D. This service is available only in those locations within specified SMARTPath service Areas which the Company determines can be incorporated into the SMARTPath service network enabling the Company to provide the specified level of performance and reliability. For locations where a customer requests SMARTPath service and facilities are not available, construction charges will apply as set forth on Section B5. preceding. (M)
- E. SMARTPath service Areas are identified in the NATIONAL EXCHANGE CARRIER TARIFF (NECA) F.C.C. No. 4. (M)

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## B7. DIGITAL NETWORK SERVICE

### B7.8 SMARTPath Service (Cont'd)

#### B7.8.1 General (Cont'd)

- F. The technical specifications and standard network interfaces for SMARTPath service are contained in BellSouth Services Technical Reference Publication 73575. This publication is available from BellSouth Services Documentation Operations, North W5A1, 3535 Colonnade Parkway, Birmingham, Alabama 35243.
- G. DS1s carried over Synchronous Optical Network (SONET) transport systems can incur phase transients as a result of pointer adjustments. In some instances timing problems could surface in customer's equipment with Stratum 3 or better clocks. This may result in the customer's clock disqualifying its synchronization reference, generating an alarm and/or selecting an alternate reference or entering holdover. To insure proper operation, channelized DS1 circuits must comply with Bellcore Technical Advisory, TA-NWT-000436, Digital Synchronization Network Plan, and ANSI T1.101-1994. When timing is taken from a Company transported DS1, the customer's equipment must be capable of accommodating SONET pointer adjustments.

#### B7.8.2 Terms and Conditions

(T)

##### A. Description of Service

1. SMARTPath service provides a transport link between a customer designated premises where the network is accessed and (1) another customer designated premises, in the same SMARTPath service Area or (2) a serving wire center in the same SMARTPath service Area for connection to (a) MegaLink Channel Service, FlexServ service, or LightGate service, or (b) a SMARTPath service Area Junction of another SMARTPath service area in the same Metropolitan Area.
2. The performance objectives for SMARTPath service are as follows:
  - a. Meet or exceed 99.99 percent Circuit Availability on a monthly basis. This objective applies except where a customer's equipment is disconnected and/or inoperative.
  - b. Meet or exceed 99.95 percent Error Free Seconds on a monthly basis.
  - c. Meet or exceed .009 percent Severely Errored Seconds on a monthly basis.
3. The performance guarantee for SMARTPath service is as follows:
  - a. Guaranteed Service Installation - the Company will meet negotiated due date or credit an amount equal to the nonrecurring charge according to the Service Installation Guarantee described in B2.4.17.
  - b. Service Continuity - in the event of primary facility failure, service is guaranteed to switch to an alternate facility path in sixty seconds or less. Failure to meet this guarantee will result in a credit as described in B7.8.2.E.2. following where the trouble is in the network on public right-of-way.

##### B. Definitions

###### SMARTPath service Area Connection

The SMARTPath service Area Connection provides for the connection at the designated premises where the customer gains access to SMARTPath service and transport to a designated junction in the same SMARTPath service Area.

###### SMARTPath service Area Junction

The SMARTPath service Area Junction provides for the connection between the SMARTPath service network and (1) another customer designated premises, in the same SMARTPath service Area or (2) a serving wire center in the same SMARTPath service Area for connection to (a) DS1 Basic Channelization, FlexServ service, or LightGate service, or (b) a SMARTPath service Area Junction of another SMARTPath service Area in the same Metropolitan Area.

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## B7. DIGITAL NETWORK SERVICE

### B7.8 SMARTPath Service (Cont'd)

#### B7.8.2 Terms and Conditions (Cont'd)

(T)

##### C. Application of Rates

1. Monthly rates and charges as specified in B8.6.3 following apply for each SMARTPath service. The transport provided within a SMARTPath service Area is provided at 1.544 Mbps. Rate categories include a SMARTPath service Area Connection, and a SMARTPath service Area Junction.
2. Recurring and nonrecurring charges apply for each SMARTPath service Area connection and SMARTPath service Area Junction.
3. SMARTPath service is available under several payment plans: Month-to-month (with a 4 month minimum), Plan A (24-48 Months<sup>1</sup>), Plan B (49-72 Months<sup>1</sup>). Plan A and Plan B are provided under conditions specified in the Channel Services Payment Plan (CSPP), B2.4.9.B. preceding. If upon completion of a payment period option the customer does not select a new payment period or does not request discontinuance of service, service will be continued under the terms specified in B2.4.
4. The rates applicable to a month-to-month payment plan are subject to Company initiated changes. Rates stabilized under a CSPP arrangement are exempt from Company initiated increases, however, decreases for any rate element will automatically flow through to the customer.
5. A SMARTPath service performance credit, as specified in B7.8.2.E.2. will apply.

##### D. Connections

1. Customer-Provided Terminal Equipment, Customer-Provided Derivation Equipment and Customer-Provided Communications Systems may be connected to SMARTPath service when such connection is made in accordance with the provisions specified in 2. and 3. following.
2. Responsibility of the Company
  - a. The responsibility of the Company shall be limited to the furnishing and maintenance of SMARTPath service to a network interface on the customer's premises.
  - b. The Company shall not be responsible for installation, maintenance of any terminal equipment or communications systems provided by a customer. SMARTPath service is not represented as adapted for the use of such equipment or system. Where such equipment or system is connected to Company facilities, the responsibility of the Company shall be limited to furnishing of facilities suitable for SMARTPath service and to the maintenance and operation in a manner proper for such digital service. The Company shall not be responsible for:
    - the through transmission of signals generated by such equipment or system, or for the quality of, or defects in, such transmission or
    - the reception of signals by such equipment or systems, or
    - damage to terminal equipment or communication system provided by a customer or authorized user due to testing.
  - c. The Company shall not be responsible to the customer if changes in any of the facilities, operations or procedures of the Company utilized in the provision of SMARTPath service render any facilities or equipment provided by the customer obsolete, or require modification or alteration of such equipment or system or otherwise affects its use or performance.
  - d. The Company undertakes to maintain and repair facilities which it furnishes. The customer may not rearrange, disconnect, remove, or attempt to repair any equipment installed by the Company without prior written consent of the Company.

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

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## B7. DIGITAL NETWORK SERVICE

### B7.8 SMARTPath Service (Cont'd)

#### B7.8.2 Terms and Conditions (Cont'd)

(T)

##### D. Connections (Cont'd)

##### 3. Responsibility of the Customer

- a. The customer is responsible for installing and testing his premises equipment or facilities to insure that when they are connected to SMARTPath service such equipment or facilities are operating properly.
- b. The operating characteristics of the customer premises equipment shall be such as to not interfere with any of the services offered by the Company. Such use is subject to the further provisions that the equipment provided by the customer does not: endanger the safety of Company employees or the public; damage, require change in or alteration of the equipment or other facilities of the Company; interfere with the proper functioning of such equipment or facilities; impair the operation of the Company's facilities or otherwise injure the public in its use of the Company's services. Upon that the equipment provided by a customer is causing or is likely to cause such hazard or interference, the customer shall take such steps as such steps as shall be necessary to remove or prevent such hazard or interference.
- c. The customer's responsibility shall include cooperative testing with the Company as may be necessary. Where regeneration and/or equalization adjustments or changes may be required to compensate for rearrangements and/or changes in outside plant facilities, the customer will be responsible for all expenses incurred in changes to their premises equipment.
- d. ANSI T1.403-1989 Extended SuperFrame Format (ESF) is required on all circuits in order to assure performance objectives.

##### E. Payment Arrangements and Credit Allowances

1. The minimum service period for SMARTPath service is four (4) months.
2. For SMARTPath service rate elements, failure by the Company to meet the performance guarantee described in A.3.b. preceding will prompt a credit equal to 100 percent for affected SMARTPath service rate elements. The monthly charge shall be the total of all the monthly rate element charges associated with the service (i.e., SMARTPath service Area Connection and SMARTPath service Area Junction). A customer request for credit will not be required. The credit will be applied through normal administrative processes and the dollar amount will be reflected on the customer's bill. The credit will apply no more than once per calendar month and shall not exceed the monthly rate for the service.
3. (DELETED)
4. (DELETED)
5. SMARTPath service is eligible for credit of nonrecurring charges under "Service Installation Guarantee" found in B2.4.17 preceding.



**B7. DIGITAL NETWORK SERVICE**

**B7.8 SMARTPath Service (Cont'd)**

**B7.8.3 Rates and Charges**

**A. SMARTPath service Area Connection**

- 1. 1.544 Mbps

	Nonrecurring Charge		Month to	Plan A	Plan B	
	First	Add'l	Month	24 to 48 <sup>1</sup>	49 to 72 <sup>1</sup>	USOC
(a) Per SMARTPath service Area Connection	\$430.00	\$140.00	\$510.00	\$345.00	\$330.00	SP1AC (C)

**B. SMARTPath service Area Junction**

- 1. 1.544 Mbps

(a) Per Customer Designated Premises	430.00	140.00	160.00	110.00	90.00	SP1AJ
(b) Per Serving Wire Center Connection	430.00	140.00	75.00	45.00	30.00	SP1SW

**C. Service Rearrangements**

If the change involves changing a customer's MegaLink service, to SMARTPath service, the change will be considered a disconnect of the existing service and full nonrecurring charges will apply for the SMARTPath service. If the existing MegaLink service is provided under a Channel Services Payment Plan (CSPP) agreement, a change to SMARTPath service under CSPP will be considered an upgrade and termination liability charges will not apply.

**D. Moves**

- 1. A move involves a change in the physical location of one of the following:
  - a. The point of interface at the customer premises.
  - b. The customer's premises.
- 2. The charges for the move are dependent on whether the move is to a new location within the same building or to a different building.
  - a. Moves Within the Same Building

When the move is to a new location within the same building, the charge for the move will be an amount equal to one-half the nonrecurring charge. There will be no change in the minimum period requirements. If a move is made at the same time a service rearrangement is made, the total charge will never exceed a full nonrecurring charge for the basic service.

- b. To a Different Building

For SMARTPath service point-to-point arrangements within the same SMARTPath service area, moves to a different building will be treated as a service move rather than a discontinuance and start of service. Nonrecurring charges will apply for the SMARTPath service Area Connection or the SMARTPath service Area Junction at the location being moved.

For SMARTPath service point-to-point arrangements with termination points in different SMARTPath service Areas, a move to a different building within the same SMARTPath service Area will be treated as a service move rather than a discontinuance and start of service. Nonrecurring charges will apply for the SMARTPath service Area Connection or the SMARTPath service Area Junction at the location being moved.

For SMARTPath service point-to-point arrangements with terminating points in different SMARTPath service Areas, a move to a different building in a different SMARTPath service Area will be treated as a discontinuance and start of service. All associated nonrecurring charges will apply.

The customer will also remain responsible for satisfying all outstanding minimum period charges for the discontinued service.

- E. A termination liability charge will be applicable if services provided under a CSPP arrangement are disconnected prior to the end of the chosen service period. The termination charge is equal to the applicable rate per element for the current contract multiplied by the difference in months between the time the CSPP contract has been in effect and the minimum contract length multiplied times a factor. The factor is 50 percent for contracts that have been in effect twelve months or less, or 20 percent for contracts that have been in effect longer than twelve months.

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers. (N)

## **B7. DIGITAL NETWORK SERVICE**

### **B7.8 SMARTPath Service (Cont'd)**

#### **B7.8.3 Rates and Charges (Cont'd)**

(M)

## B7. DIGITAL NETWORK SERVICE

### B7.9 MegaLink Plus Service

#### B7.9.1 General

- A. MegaLink Plus service is furnished for Private Line IntraLATA Communications by the Company.
- B. MegaLink Plus service is a service for transmission of digital signals only and uses only digital transmission facilities.
- C. MegaLink Plus service is a fiber-based high capacity network service providing a 1.544 Mbps transport link with high performance and reliability parameters. This service utilizes structurally diverse loop facilities designed to limit single points of failure between a customer's location and its normal serving wire center.
- D. MegaLink Plus service is available to customer locations where existing loop facilities are fiber-based and utilize structurally diverse routes. For locations where loop facilities are not available to satisfy customer requests for MegaLink Plus service, special construction charges will apply as set forth in Section B5. preceding.
- E. The technical specifications and standard network interfaces for MegaLink Plus service are contained in BellSouth Technical Reference Publication 73525. This publication is available from Regional Documentation Services, 600 North 19th Street, 20th Floor, Birmingham, Alabama 35203.

#### B7.9.2 Terms and Conditions

##### A. Description of Service

1. MegaLink Plus service utilizes a self-healing diverse fiber-based local channel (loop) transport link between a customer designated premises and the normal serving wire center.
2. MegaLink Plus service is furnished on a link (partial) basis for connection at the normal serving wire center to another MegaLink Plus service, Centrex Type Services<sup>1</sup>, MegaLink channel service, FlexServ service, LightGate service or SMARTRing service. Connectivity between MegaLink Plus service and these other services may be provided via a MegaLink service Interoffice Channel between central offices.
3. All appropriate rates, charges, *terms and conditions* specified in other *guidebook* sections for connected services are in addition to those for MegaLink Plus service specified in this *guidebook*.
4. Performance objectives for MegaLink Plus service between the customer's location and the serving wire center are as follows:
  - a. Meet or exceed 99.98 percent Circuit Availability.
  - b. Meet or exceed 99.95 percent Error Free Seconds.
  - c. Meet or exceed .010 Severely Errored Seconds.

The objectives apply except when a customer's equipment and/or cabling is disconnected and/or inoperative, or when a MegaLink service Interoffice Channel is used in conjunction with a MegaLink Plus service Local Channel. Consult TR73525 for additional information concerning service performance objectives.

5. Performance guarantees for MegaLink Plus service are as follows:

##### a. Service Installation

The Company will meet negotiated due date or credit an amount equal to the month-to-month payment plan nonrecurring charge according to the Service Installation Guarantee provisions described in B2.4.17 preceding.

##### b. Service Continuity

In the event of primary failure, service is guaranteed to switch to an alternate facility path in sixty seconds or less. Failure to meet this guarantee will result in a credit as described in E.3. following where the trouble is in the local loop facility on public right-of-way.

**Note 1:** Connection from MegaLink Plus service to Centrex Type Services may not be available from all serving wire centers.

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## B7. DIGITAL NETWORK SERVICE

### B7.9 MegaLink Plus Service (Cont'd)

#### B7.9.2 Terms and Conditions (Cont'd)

(T)

##### B. Definitions

###### MEGALINK PLUS SERVICE LOCAL CHANNEL

The MegaLink Plus service Local Channel provides for the connection between a customer's designated premises to their serving wire center.

##### C. Application of Rates

1. Monthly rates and charges as specified in B7.9.3.A. following apply for each MegaLink Plus service local channel.
2. Recurring and nonrecurring rates and charges apply for each MegaLink Plus service. Nonrecurring charges will not apply for the MegaLink Plus service Local Channel rate element when MegaLink Plus service is furnished under a payment plan other than month-to-month. Available payment plans are described in 3. following.
3. MegaLink Plus service is available under several payment plans: Month-to-month (with a one month minimum), Plan A (24-48 Months<sup>1</sup>), Plan B (49-72 Months<sup>1</sup>), and Plan C (73-96 Months<sup>1</sup>) under conditions specified in the Channel Services Payment Plan (CSPP) in B2.4 preceding.
4. Month-to-month payment plan rates are subject to Company initiated changes. MegaLink Plus service rates provided under a CSPP arrangement are exempt from Company initiated rate increases for the duration of the payment plan length selected; however, decreases on recurring rates will flow through to the customer.
5. A Termination Liability Charge (TLC) is applicable at the date of termination. The applicable charge is dependent on the customer-specified payment period subscribed to and will be equal to fifty percent (50%) times the number of months remaining in the payment period times the monthly rate applicable. However, a TLC will not apply subject to the provisions set forth in B2.4.9.B. or customer requested changes to services not covered by the CSPP that are offered by the Company under an optional payment plan.
6. A service performance credit as specified in E.3 following will apply.

##### D. Connections

1. Customer-Provided Terminal Equipment, Customer-Provided Derivation Equipment and Customer-Provided Communications Systems may be connected to MegaLink Plus service when such connection is made in accordance with the provisions specified in 2. and 3. following.
2. Responsibility of the Company
  - a. The responsibility of the Company shall be limited to the furnishing and maintenance of MegaLink Plus service to a network interface on the customer's premises.
  - b. The Company shall not be responsible for installation, operation, or maintenance of any terminal equipment or communications system provided by a customer. MegaLink Plus service is not represented as adapted for the use of such equipment or system. Where such equipment or system is connected to Company facilities, the responsibility of the Company shall be limited to furnishing of facilities suitable for MegaLink Plus service and to the maintenance and operation in a manner proper for such digital service. The Company shall not be responsible for:
    - the through transmission of signals generated by such equipment or system, or for the quality of, or defects in, such transmission, or
    - the reception of signals by such equipment or systems, or
    - damage to terminal equipment or communication system provided by a customer or authorized user due to testing.
  - c. The Company shall not be responsible to the customer if changes in any of the facilities, operations, or procedures of the Company utilized in the provision of MegaLink Plus service render any facilities or equipment provided by the customer obsolete, or require modification or alteration of such equipment or system or otherwise affects its use or performance.
  - d. The Company undertakes to maintain and repair facilities which it furnishes. The customer may not rearrange, disconnect, remove, or attempt to repair any equipment installed by the Company without prior written consent of the Company.

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

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## B7. DIGITAL NETWORK SERVICE

### B7.9 MegaLink Plus Service (Cont'd)

#### B7.9.2 Terms and Conditions (cont'd)

##### D. Connections (Cont'd)

##### 3. Responsibility of the Customer

- a. The customer is responsible for installing and testing premises equipment or facilities to insure that when they are connected to MegaLink Plus service such equipment or facilities are operating properly.
- b. The operating characteristics of the customer premises equipment shall be such as to not interfere with any of the services offered by the Company. Such use is subject to the further provisions that the equipment provided by the customer does not: endanger the safety of Company employees or the public; damage, require change in or alteration of the equipment or other facilities of the Company; interfere with the proper functioning of such equipment or other facilities of the Company; impair the operation of the Company's facilities or otherwise injure the public in its use of the Company's services. Upon notice that the equipment provided by a customer is causing or is likely to cause such hazard or interference, the customer shall take such steps as shall be necessary to remove or prevent such hazard or interference.
- c. The customer's responsibility shall include cooperative testing with the Company as may be necessary. Where regeneration and/or equalization adjustments or changes may be required to compensate for rearrangements and/or changes in outside plant facilities, the customer will be responsible for all expenses incurred in changes to his premises equipment.
- d. When MegaLink Plus service is connected at the serving wire center to another service which is provisioned with ANSI T1.403-1995 Extended Superframe Format (ESF) and/or Clear Channel Capability, the customer will be required to add the same format and/or line code standard to the MegaLink Plus service to ensure compatibility. Rates, *terms and conditions* associated with Clear Channel Capability are located in B7.1.

##### E. Payment Arrangements and Credit Allowances

1. The minimum service period for MegaLink Plus service is one month.
2. Suspension of service is not allowed.
3. Failure by the Company to meet the performance guarantee described in A.5.b. preceding will result in a credit of an amount equal to the monthly rate billed for the service. Credit for interruptions of sixty (60) seconds or more will be applied through normal administrative processes and the dollar amount will be reflected on the customer's bill. A customer must report the outage in order to receive credit. The credit will apply no more than once per calendar month, and shall not exceed the monthly rate for the service.
4. MegaLink Plus service is eligible for credit of nonrecurring charges under "Service Installation Guarantee" found in B2.4.17 preceding.

**B7 DIGITAL NETWORK SERVICE**

**B7.9 MegaLink Plus Service**

**B7.9.3 Rates and Charges**

A. A MegaLink Plus service Local Channel is furnished between a customer's premises and the Serving Wire Center.

		Nonrecurring Charge		Month to	Plan A	Plan B	Plan C	
		First	Add'l	Month	24-48 <sup>3</sup>	49-72 <sup>3</sup>	73-96 <sup>3</sup>	USOC
					Months	Months	Months	
1.	MegaLink Plus service Local Channel, each <sup>1</sup>							
	(a) 1.544 Mbps	\$640.00	\$525.00	\$182.00	\$135.00	\$125.00	\$120.00	P2JP1
B.	MegaLink service Interoffice Channels are furnished between Central Offices to connect MegaLink Plus service Local Channels between two customer premises.							
1.	Interoffice Channel, each channel 0-8 miles <sup>2</sup>							
	(a) Fixed Monthly Rate	-	-	-	-	-	-	1LNG1
	(b) Each Airline Mile, or fraction thereof	-	-	-	-	-	-	1LNGA
2.	Interoffice Channel, each channel 9-25 miles <sup>2</sup>							
	(a) Fixed Monthly Rate	-	-	-	-	-	-	1LNG2
	(b) Each Airline Mile, or fraction thereof	-	-	-	-	-	-	1LNGB
3.	Interoffice Channel, each channel over 25 miles <sup>2</sup>							
	(a) Fixed Monthly Rate	-	-	-	-	-	-	1LNG3
	(b) Each Airline Mile, or fraction thereof	-	-	-	-	-	-	1LNGC

**Note 1:** Nonrecurring Charges do not apply to MegaLink Plus service Local Channels provided under a contract plan.

**Note 2:** Refer to B7.1.3.B for applicable nonrecurring charges and recurring rates.

**Note 3:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers. (N)

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## B7. DIGITAL NETWORK SERVICE

### B7.8 MegaLink Plus Service (Cont'd)

#### B7.9.3 Rates and Charges (Cont'd)

##### C. Service Rearrangements

If the change involves changing a customer's MegaLink service to MegaLink Plus service, the change will be considered a disconnect of the existing service and full nonrecurring charges will apply for the MegaLink Plus service, as appropriate<sup>1</sup>. Changes from MegaLink service to MegaLink Plus service will be considered an upgrade with regard to application of termination liability charges in accordance with the CSPP provisions provided in B2.4 preceding.

##### D. Moves

1. A move involves a change in the physical location of one of the following:

- a. The point of interface at the customer premises.
- b. The customer's premises.

2. The charges for the move are dependent on whether the move is to a new location within the same building or to a different building.

##### a. Moves Within the Same Building

When the move is to a new location within the same building, the charge for the move will be an amount equal to one-half the month-to-month nonrecurring charge. There will be no change in the minimum period requirements. If a move is made at the same time a service rearrangement is made, the total charge will never exceed a full nonrecurring charge for the month-to-month service.

##### b. To a Different Building

When the move is to a new location in Company territory within the same state, the charge for the move is equal to the sum of all nonrecurring charges applicable to a new MegaLink Plus service month-to-month service arrangement at the new location.

When the move is to a new location in Company territory in a different state, the move will be treated as a discontinuance and start of service. The customer will be responsible for satisfying all outstanding minimum period charges for the discontinued service. All applicable nonrecurring charges at the new location will apply.

**Note 1:** Nonrecurring charges do not apply to MegaLink Plus service Local Channels provided under a contract plan.

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## B7. DIGITAL NETWORK SERVICE

### B7.10 MegaLink Light Service

#### B7.10.1 General

- A. MegaLink Light service is furnished for Private Line IntraLATA Communications by the Company.
- B. MegaLink Light service is a service for transmission of digital signals only and uses only digital transmission facilities.
- C. MegaLink Light service is a fiber-based high capacity network service providing a 1.544 Mbps (DS1) transport link.
- D. MegaLink Light service provides for the simultaneous two-way transmission of serial, Bipolar Return-to-Zero (BPRZ) isochronous digital signals, except where intentional bipolar violations are introduced by Bipolar with 8 Zero Substitution (B8ZS) format, at DS1 speeds of 1.544 Mbps, and is available to customer locations where existing loop facilities are fiber-based. The rates specified for MegaLink Light service in B.7.10.3 following, contemplate the provision of a digital quality facility via existing exchange facilities compatible with this service. When MegaLink Light service is requested at locations where loop facilities are not available to satisfy customer requests for MegaLink Light service, special construction charges will apply as set forth in Section B5. preceding.
- E. The performance objectives, technical specifications and standard network interfaces for MegaLink Light service are contained in BellSouth Technical Reference Publication 73525. The performance objectives apply except when a customer's equipment and/or cabling is disconnected and/or inoperative, when customer provided power is disconnected and/or inoperative, or when a MegaLink Light service is extended beyond its normal Serving Wire Center. TR 73525 is available from Regional Documentation Services, 600 North 19th Street, 20th Floor, Birmingham, Alabama 35203.
- F. Unless specified following, the *terms and conditions* for MegaLink Light service specified herein apply in addition to the *terms and conditions* set forth in Section B2 preceding. (T)

#### B7.10.2 Terms and Conditions (T)

- A. Description of Service
  - 1. MegaLink Light service utilizes a fiber-based local channel (loop) transport link between a customer designated premises and its normal serving wire center.
  - 2. MegaLink Light service is furnished on a link (partial channel) basis for connection at the normal serving wire center to Centrex Type Services<sup>1</sup>, MegaLink channel service, FlexServ service, LightGate service or SMARTRing service. Connectivity between MegaLink Light service and these other services may be provided via a MegaLink service Interoffice Channel between central offices. Except for MegaLink service and MegaLink Plus service, those services connectable to a MegaLink service Interoffice Channel or a MegaLink Light service Local Channel may be utilized for completion of a customer's point-to-point channel service.
  - 3. All appropriate rates, charges, *terms and conditions* specified in other *guidebook* sections for connected services are in addition to those for MegaLink Light service specified in this *guidebook*. (T)
  - 4. Performance objectives for MegaLink Light service between the customer's location and the serving wire center are as specified in BellSouth Technical Reference Publication 73525.
  - 5. Performance guarantees for MegaLink Light service are as follows:
    - a. Service Installation
 

The Company will meet negotiated due date or credit an amount equal to the month-to-month payment plan nonrecurring charge according to the Service Installation Guarantee provisions described in B2.4.17 preceding.
    - b. Service Continuity
 

Service outages in the local loop facility, will result in a credit as described in E.3. following where the trouble is in the local loop facility on public right-of-way.

**Note 1:** Connection from MegaLink Light service to Centrex Type Services may not be available from all serving wire centers.



## B7. DIGITAL NETWORK SERVICE

### B7.10 MegaLink Light Service (Cont'd)

#### B7.10.2 Terms and Conditions (Cont'd)

(T)

##### B. Definitions

MegaLink Light Service Local Channel

The MegaLink Light service Local Channel denotes a path for MegaLink Light service furnished between the customer's premises and its normal serving wire center.

DS1

This denotes a channel service in terms of its digitally encoded data bit rate in accordance with the North American hierarchy of digital signal levels. It has a 1.544 Mbps data transmission rate, and provides for the two-way simultaneous transmission of isochronous timed, Bipolar Return-to-Zero (BPRZ) bit stream format except where intentional bipolar violations are introduced by Bipolar with 8 Zero Substitution (B8ZS) format. Unframed signal formats are not permitted or compatible with Company equipment. The required interface specifications are contained in BellSouth Technical Reference Publication 73525.

##### C. Application of Rates

1. MegaLink Light service Local Channels will be charged for at rates based on the first half mile and each additional half mile for the airline distance measured between the customer's premises and its normal Serving Wire Center.
2. Recurring and nonrecurring rates and charges apply for each MegaLink Light service. Available payment plans are described in 3. following.
3. MegaLink Light service is available under several payment plans: Month-to-Month, Plan A (24-48 Months<sup>1</sup>), Plan B (49-72 Months<sup>1</sup>), and Plan C (73-96 Months<sup>1</sup>) under conditions specified in the Channel Services Payment Plan (CSPP) in B2.4 preceding.
4. Month-to-Month payment plan rates are subject to Company initiated changes. MegaLink Light service rates provided under a CSPP arrangement, as specified in B2.4.9.B preceding, are exempt from Company initiated rate increases for the duration of the payment plan length selected; however, decreases on recurring rates will flow through to the customer. At the expiration date of the customer's payment period option, the customer may select a new payment period option at current rates or revert to current Month-to-Month rates. Renewal options for MegaLink Light service will be as specified in B2.4.9.B.7 preceding.
5. A Termination Liability Charge (TLC) is applicable at the date of termination. The applicable charge is dependent on the payment period subscribed to and will be equal to fifty percent (50%) times the number of months remaining in the payment period times the monthly rate applicable. However, a TLC will not apply for; 1) moves of service subject to the provisions set forth in B7.10.3.B.5., 2) customer requested changes as specified in B2.4.9.B., CSPP or 3) customer requested change to services not covered by the CSPP that are offered by the Company under a contract payment plan.
6. When a customer requests B8ZS format be provided on a MegaLink Light service Local Channel, *terms, conditions* and rates and charges appropriate for Clear Channel Capability (CCC) as specified for MegaLink service, located in B7.1 preceding, will apply.

(T)

##### D. Connections

1. Customer-Provided Terminal Equipment, Customer-Provided Derivation Equipment and Customer-Provided Communications Systems may be connected to MegaLink Light service when such connection is made in accordance with the provisions specified in 2. and 3. following.
2. Responsibility of the Company
  - a. The responsibility of the Company shall be limited to the furnishing and maintenance of MegaLink Light service to a network interface on the customer's premises.

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers.

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## B7. DIGITAL NETWORK SERVICE

### B7.10 MegaLink Light Service (Cont'd)

#### B7.10.2 Terms and Conditions (cont'd)

##### D. Connections (Cont'd)

##### 2. (Cont'd)

- b. The Company shall not be responsible for installation, operation, or maintenance of any terminal equipment or communications system provided by a customer. MegaLink Light service is not represented as adapted for the use of such equipment or system. Where such equipment or system is connected to Company facilities, the responsibility of the Company shall be limited to furnishing of facilities suitable for MegaLink Light service and to the maintenance and operation in a manner proper for such digital service. The Company shall not be responsible for:
  - the through transmission of signals generated by such equipment or system, or for the quality of, or defects in, such transmission, or
  - the reception of signals by such equipment or systems, or
  - damage to terminal equipment or communication system provided by a customer or authorized user due to testing.
- c. The Company shall not be responsible to the customer if changes in any of the facilities, operations, or procedures of the Company utilized in the provision of MegaLink Light service render any facilities or equipment provided by the customer obsolete, or require modification or alteration of such equipment or system or otherwise affects its use or performance.
- d. The Company undertakes to maintain and repair facilities which it furnishes. The customer may not rearrange, disconnect, remove, or attempt to repair any equipment installed by the Company without prior written consent of the Company.

##### 3. Responsibility of the Customer

- a. The customer is responsible for installing and testing premises equipment or facilities to insure that when they are connected to MegaLink Light service such equipment or facilities are operating properly.
- b. The operating characteristics of the customer premises equipment shall be such as to not interfere with any of the services offered by the Company. Such use is subject to the further provisions that the equipment provided by the customer does not: endanger the safety of Company employees or the public; damage, require change in or alteration of the equipment or other facilities of the Company; interfere with the proper functioning of such equipment or other facilities of the Company; impair the operation of the Company's facilities or otherwise injure the public in its use of the Company's services. Upon notice that the equipment provided by a customer is causing or is likely to cause such hazard or interference, the customer shall take such steps as shall be necessary to remove or prevent such hazard or interference.
- c. The customer's responsibility shall include cooperative testing with the Company as may be necessary. Where regeneration and/or equalization adjustments or changes may be required to compensate for rearrangements and/or changes in outside plant facilities, the customer will be responsible for all expenses incurred in changes to his premises equipment.
- d. When MegaLink Light service is connected at the serving wire center to another service which is provisioned with ANSI T1.403-1995 Extended Superframe Format (ESF) and/or Clear Channel Capability, the customer will be required to add the same format and/or line code standard to the MegaLink Light service to ensure compatibility. Rates, *terms and conditions* associated with Clear Channel Capability are located in B7.1.
- e. It will be the responsibility of the customer to make a power supply available when required by the Company for its use, using Company-provided, location specific, specifications for termination, type and location.

##### E. Payment Arrangements and Credit Allowances

- 1. The minimum service period for MegaLink Light service is 24 months.
- 2. Suspension of service is not allowed.

(T)

(T)

## B7. DIGITAL NETWORK SERVICE

### B7.10 MegaLink Light Service

#### B7.10.2 Terms and Conditions (Cont'd)

(T)

##### E. Payment Arrangements and Credit Allowances (Cont'd)

3. A service interruption of 30 minutes or more, attributable to the MegaLink Light service Local Channel portion of the customer's end-to-end service, will result in the credit of an amount as specified in a. through e. following. These credits are applicable to the Company's MegaLink Light service Local Channel portion of the customer's end-to-end service, where the trouble is in the Company's local channel facility on public right-of-way. Credits will be applied through normal administrative processes and the dollar amount will be reflected on the customer's bill. A customer must report the outage in order to receive service outage credit, and the total credit received in any month shall not exceed the monthly rate for the service.
  - a. For service interruptions of from 30 to 150 minutes duration, the customer will receive a credit of an amount equal to 25 percent of the Local Channel monthly recurring rate.
  - b. For service interruptions of from 151 to 210 minutes duration, the customer will receive a credit of an amount equal to 50 percent of the Local Channel monthly recurring rate.
  - c. For service interruptions greater than 210 minutes duration, the customer will receive a credit of an amount equal to 100 percent of the Local Channel monthly recurring rate.
  - d. Service outages of less than 30 minutes duration will not receive credit.
  - e. Service outage credits for services into which MegaLink Light service Local Channels are terminated will be as is appropriate for those other services.
4. MegaLink Light service is eligible for credit of nonrecurring charges under provisions of the "Service Installation Guarantee" found in B2.4.17 preceding.

##### F. Service Changes

If the change involves changing a customer's MegaLink service Local Channel to a MegaLink Light service Local Channel, the change will be considered a disconnect of the existing service and full nonrecurring charges will apply for the MegaLink Light service, as appropriate. Changes from MegaLink service to MegaLink Light service will be considered an upgrade with regard to application of termination liability charges in accordance with the CSPP provisions provided in B2.4 preceding.

##### G. Independent Company Territories

**Terms, conditions,** rates and charges applicable for MegaLink Light service apply to MegaLink Light service provided in **Company** serving areas and areas of Independent Companies that concur in **the Company's Private Line Guidebook**. In those cases where a portion of MegaLink Light service is furnished by an Independent Company that does not concur in **the Company's Private Line Guidebook**, the rates and regulations of the Independent Company apply to the portion of MegaLink Light service it furnishes.

(T)

#### B7.10.3 Rates and Charges

##### A. Recurring Rates

1. A MegaLink Light service Local Channel is furnished between a customer's premises and its normal Serving Wire Center (SWC). Rates are based on the airline distance between the customer's premises and its normal SWC.

##### B. Nonrecurring Charges

1. Service Establishment Charges are applicable, for each MegaLink Light service Local Channel ordered, for receiving and recording information and/or taking action in connection with a customer's request, and processing the necessary data. These charges include engineering design, common centralized testing and coordination.
2. Service Change Charges are applicable for receiving and recording information and/or taking action in connection with a customer's Inside Move or Transfer of Service responsibility request, for processing the necessary data on an existing MegaLink Light service Local Channel. A Service Change Charge is applicable for each MegaLink Light service Local Channel associated with the customer request (in lieu of a Service Establishment Charge).
3. A Premises Visit Charge is applicable, per MegaLink Light service Local Channel, for termination of the channel at a customer's premises or for Inside Moves. Only one Premises Visit Charge applies when more than one MegaLink Light service Local Channel is terminated or moved at the same premises, during the same visit.
4. Connection charges are applicable for the connection and testing of MegaLink Light service Local Channels. The applicable charges are those nonrecurring charges specified in C.1. following.

**B7. DIGITAL NETWORK SERVICE**

**B7.10 MegaLink Light Service**

**B7.10.3 Rates and Charges (Cont'd)**

B. Nonrecurring Charges (Cont'd)

5. Moves

a. A move involves a change in the physical location of one of the following:

- (1) the point of interface at the customer premises, or
- (2) the customer's premises.

b. The charges for the move are dependent on whether the move is to a new location within the same building or to a different building.

(1) Moves Within the Same Building

When the move is to a new location within the same building, the charge for the move will be an amount equal to one-half the nonrecurring charge. There will be no change in the minimum period requirements. If a move is made at the same time a service rearrangement is made, the total charge will never exceed a full nonrecurring charge for the month-to-month service.

(2) To a Different Building

When the move is to a new location in Company territory within the same state, the charge for the move is equal to the sum of all nonrecurring charges applicable to a new MegaLink Light service month-to-month service arrangement at the new location.

When the move is to a new location in Company territory in a different state, the move will be treated as a discontinuance and start of service. The customer will be responsible for satisfying all outstanding minimum period charges for the discontinued service. All applicable nonrecurring charges at the new location will apply.

C. Rate and Charge Amounts

1. Local Channel, each

	<b>Nonrecurring Charge</b>	<b>Month to Month</b>	<b>24 to 48<sup>l</sup> Months</b>	<b>49 to 72<sup>l</sup> Months</b>	<b>73 to 96<sup>l</sup> Months</b>	<b>USOC</b>	(C)
(a) First 1/2 Mile	<b>\$300.00</b>	<b>\$150.00</b>	<b>\$135.00</b>	<b>\$130.00</b>	<b>\$125.00</b>	<b>1LDPL</b>	
(b) Each additional 1/2 Mile, or fraction thereof	-	<b>31.00</b>	<b>27.00</b>	<b>25.00</b>	<b>23.00</b>	<b>1LDPM</b>	
2. Service Establishment Charge							
(a) Each	<b>575.00</b>	-	-	-	-	<b>MLLSE</b>	
3. Service Change Charge, Inside Move							
(a) Each	<b>425.00</b>	-	-	-	-	<b>MLL1M</b>	
4. Service Change Charge, Transfer of Responsibility							
(a) Each	<b>50.00</b>	-	-	-	-	<b>MLLTR</b>	
5. Premises Visit Charge							
(a) Each	<b>37.00</b>	-	-	-	-	<b>MLLPV</b>	

**Note 1:** As of October 1, 2013, Contract Terms greater than 36 months are no longer available for new or renewing subscribers. (N)

**B7. DIGITAL NETWORK SERVICE**

**B7.11 (DELETED)**

(D)

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**B7. DIGITAL NETWORK SERVICE**

**B7.11 (DELETED) (Cont'd)**

(D)