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PURPOSE: Withdraw OC3+ SMARTRing service.

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A32. INTEGRATION PLUS MANAGEMENT SERVICES (IPMS)
A32.1 Integration Plus Management Services (IPMS) Description (Cont'd)
A32.1.3 FlexServ Service (Cont'd)
A. Regulations (Cont'd)

1. Basic FlexServ Service (Cont'd)

   With the customer's initial order, the Company provides one customer training class for up to five (5) persons. The class length of this initial training is two consecutive eight hour days. These training classes are conducted at a designated Company location. Transportation, lodging and food for the attendees will be the responsibility of the customer. If the customer desires for the initial training to be conducted on his premises, then the customer is responsible for the transportation, lodging, and food for the trainer. In addition, the customer is responsible for having the appropriate equipment on his premises.

   Reconfiguration and monitoring are not available during the performance of routine maintenance of the Company's facilities and equipment used to provide FlexServ service.

   Different switching options may be available in the same central office. If customers desire more than one switching option in the same central office and facilities are available, a channel connection is required for each FlexServ service switching option connected.

   The regulations and rates specified herein are in addition to the applicable regulations and rates specified in other sections of this *Guidebook*. (T)

2. Customer Circuits

   There are five (5) types of channel connections which can be connected to FlexServ service - DS0 (Single channel), DS1 (1.544 Mbps) digital circuits, DS3 (44.736 Mbps) digital circuits, SMARTRing service and STS-1 (51.84Mbps) digital circuits.

   DS0 Channel Connections - There are two types of DS0 channel connections - Voice Grade and Digital. Both types of DS0 connections will be switched at a DS0 level.

   DS1 Channel Connections - There are two types of connections available for a customer desiring to terminate a DS1 circuit - DS0 switching and DS1 switching. For example, if a customer needs to be able to monitor or reconfigure the 24 DS0 circuits riding on the DS1 channel, then the customer would purchase a DS1 channel connection with DS0 switching. If the customer does not need access to the individual DS0 circuits, then the customer would purchase a DS1 channel connection with DS1 switching.

   DS3 Channel Connections - There are two types of connections available for terminating a DS3 circuit - DS0 switching and DS1 switching. If a customer needs monitoring or reconfiguration capability for 672 individual DS0 circuits, then the customer would purchase a DS3 channel connection with DS0 switching. If the customer only needs access to the 28 DS1 circuits, then the customer would purchase a DS3 channel connection with DS1 switching.

   SMARTRing service Channel Connections - FlexServ service is available only with OC-3, OC-12, OC-48, OC-48+, OC-192 or OC-192+ SMARTRing service. There are two options available for SMARTRing service channel connections - Surveillance and Reconfiguration. Surveillance allows the customer to monitor the ring and retrieve performance monitoring data. Surveillance will be ordered on a per SMARTRing node basis. Customers who order Surveillance must order it for all nodes on the ring. Reconfiguration will allow the customer to reconfigure circuits associated with SMARTRing service channel interfaces and must be ordered on a per interface basis. Customers who order Reconfiguration must already be subscribing to Surveillance or be ordering Surveillance coincident with Reconfiguration. Reconfiguration may not be ordered without Surveillance. Within each STS-1 group, all activated interfaces must be optioned the same (either all Surveillance only or all Surveillance and Reconfiguration). A Service Establishment Charge for new customer account setup applies as well as a charge for a Security Card, which is required for web access of the Management Terminal Interface. (C)

   FlexServ service is available on the following SMARTRing service Overlay Ring Arrangements: (S=Surveillance and R=Reconfiguration)

OVERLAYING SMARTRing Service	HOST SMARTRing Service									
O		OC-12		OC-48		OC-48+		OC-192		OC-192+	
n		S	R	S	R	S	R	S	R	S	R
	OC-3 (DELETED)	X	X	X	X	X	X	X	X	X	X
a	OC-12			X	X	X	X	X	X	X	X
n	OC-48							X	X	X	X

   (D)

   On an Overlay Ring arrangement, Surveillance must be ordered for each node on both the host ring and the overlay ring.

A32. INTEGRATION PLUS MANAGEMENT SERVICES (IPMS)
A32.1 Integration Plus Management Services (IPMS) Description (Cont'd)
A32.1.3 FlexServ Service (Cont'd)
D.   Rate Element Description (Cont'd)
   2.   Rates and Charges
      a.   Service Charge
         (1)   Service Charge found in Section A4 will apply.   (T)
      b.   Basic FlexServ Service

		Installation Charge	Month to Month	24 to 48 Months	49 to 72 Months	73 to 96 Months	USOC
(1)	DS0 Channel Connections						
(a)	Voice grade type, per DS0 channel	$ 35.00	$ 14.90	$ 13.70	$ 12.70	$ 11.90	DSLVA
(b)	Digital type, per DS0 channel	35.00	8.50	7.80	7.25	6.80	DSLSA
(2)	DS1 Channel Connections						
(a)	DS0 switching, Per DS1 channel	125.00	110.00	100.00	92.00	85.00	DSL1A
(b)	DS1 switching, Per DS1 channel	125.00	65.00	60.00	55.00	52.00	DSL1B
(3)	DS3 Channel Connections						
(a)	DS0 switching, Per DS3 channel	125.00	1,425.00	1,310.00	1,210.00	1,170.00	DSL3A
(b)	DS1 switching, Per DS3 channel	125.00	375.00	345.00	320.00	300.00	DSL3B
(4)	SMARTRing service Channel Connections						
(a)	Surveillance, Per Node, OC-3, OC-12	-	40.00	36.80	34.00	32.00	SHNSN
(b)	Surveillance, Per Node, OC-48, OC-48+	-	80.00	75.00	70.00	65.00	SHNS4
(c)	Surveillance, Per Node, OC- 192, OC-192+	-	120.00	110.00	100.00	95.00	SHNS9
(d)	Reconfiguration, Per Customer or Central Office Channel Interface, DS1, DS3, OC-3 and OC-12	15.00	5.00	4.50	4.00	3.50	SHNRC
(e)	Reconfiguration, Per Customer or Central Office Channel Interface, OC-48	15.00	5.00	4.50	4.00	3.50	SHNRC
(f)	Reconfiguration, Per Customer or Central Office Channel Interface, 10 Mbps, 100 Mbps, 1000 Mbps and Fractional 1000 Mbps	15.00	5.00	4.50	4.00	3.50	SHNRO
(g)	Service Establishment Charge, Per New Customer Account Setup	250.00	-	-	-	-	SHNTD
(h)	Security Card, per card	200.00	-	-	-	-	SHNTC
(5)	STS Channel Connections						
(a)	VT1.5 switching, Per STS-1 channel	250.00	375.00	345.00	320.00	300.00	DSL5X

(C)

      c.   FlexServ Service Options
         (1)   Additional Concurrent User Access

		Installation Charge	Month to Month	24 to 48 Months	49 to 72 Months	73 to 96 Months	USOC
(a)	Per Additional Concurrent User Access	125.00	68.00	60.00	57.00	54.00	FSSFU

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-12, OC-48, OC-48+, OC-192 and OC-192+ capacities.   (C)

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.

(DELETED)   (D)

(DELETED)   (D)

OC-12 SMARTRing service is available as an individual 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.   (C)

OC-48 SMARTRing service is available as an individual service, or with overlaying rings in capacities of 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.   (C)

OC-48+ SMARTRing service is available as an individual bi-directional service, or with overlaying rings in capacities of 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.   (C)

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

OC-192+ SMARTRing service is available as an individual bi-directional service, or with overlaying rings in capacities of 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.   (C)

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:

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

Note 1: DS1 interfaces are available via 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 November 28, 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.   (C)

Note 2: DS3, STS-1, channel systems and 1000 Mbps interfaces are only available for nodes installed after November 28, 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 May 12, 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>NODES</u>

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

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. 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.

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.

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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[1] 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.

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:

OVERLAYING SMARTRing Service	Host SMARTRing Service				
	OC-12	OC-48	OC-48+	OC-192	OC-192+
OC-3	X	X	X	X	X
(DELETED)						(D)
OC-12		X	X	X	X
OC-48				X	X
OC-48+					X

C. SMARTRing service is connectible 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 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 entrance facilities will be separate and will enter the customer node over such different routes. 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 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.

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

B7. DIGITAL NETWORK SERVICE
B7.7 Self-Healing Multi-Nodal Alternate Route Topology Ring (SMARTRing) Service (Cont'd)
B7.7.1 General (Cont'd)

J. SMARTRing service OC-3, OC-12, OC-48, OC-48+, OC-192 or OC-192+ capacity installed on or after June 3, 1994, is also   (C)
available with FlexServ service Customer Network Management (CNM) under the rates and regulations 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.

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 May 12, 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
Telephone 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.

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.

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.

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)

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

			CUSTOMER NODES				
Basic Shared Ethernet LAN Access Links	**OC-3**	**OC-12**	**OC-48**	**OC-48+**	**OC-192**	**OC-192+**	(C)
10 Mbps - Electrical	Yes	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	(C)
100 Mbps - Electrical	No	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	(C)
100 Mbps - Optical	No	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	(C)
Fractional 1000 Mbps – Optical at 50 Mbps	Yes	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	(C)
Fractional 1000 Mbps – Optical at 150 Mbps, 300 Mbps or 450 Mbps	No	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	(C)
Fractional 1000 Mbps – Optical at 600 Mbps or 1000 Mbps	No	No	Yes[1]	Yes[1]	Yes[1]	Yes[1]	(C)

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)					
SMARTRing Service Ring Capacity	**50**	**150**	**300**	**450**	**600**	**1000**
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)					
Basic Shared Ethernet Channel Interfaces	**50**	**150**	**300**	**450**	**600**	**1000**
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
100 Mbps Basic Shared Ethernet LAN Access Link - Optical	No	Yes	Yes	Yes	Yes	Yes
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
– Optical at 300 Mbps	No	No	Yes	Yes	Yes	Yes
– Optical at 450 Mbps	No	No	No	Yes	Yes	Yes
– Optical at 600 Mbps	No	No	No	No	Yes	Yes
– Optical at 1000 Mbps	No	No	No	No	No	Yes

Note 1:   Available for rings installed on or after May 12, 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 (see A40.13) 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.

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 – Fractional 1000 Mbps at:	OC-3	OC-12	OC-48	OC-48+	OC-192	OC-192+	
150 Mbps	No	Yes	Yes	Yes	Yes	Yes	(C)
300 Mbps	No	Yes	Yes	Yes	Yes	Yes	(C)
450 Mbps	No	Yes	Yes	Yes	Yes	Yes	(C)
600 Mbps	No	No	Yes	Yes	Yes	Yes	(C)
1000 Mbps	No	No	Yes	Yes	Yes	Yes	(C)

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-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-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). (C)

B. Nonrecurring charges for Local, Alternate Central Office, Interoffice and Internodal Channels apply for each channel. When the customer requests two separate routes and the routing is provided as described in B7.7.1.E., 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. (T)

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.

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.

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.

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.

B7. DIGITAL NETWORK SERVICE

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

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.

Applicable rate elements for this service are:

- Customer Node (at least one), provides ring switching capabilities at customer designated locations other than Company Premises that are part of SMARTRing service. This rate element offers OC-3, OC-12, OC-48, OC-48+, OC-192 or OC-192+ network capacities and requires the customer to obtain the appropriate number of SMARTRing service Channel Interfaces.   (C)

- 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 (at least one), provides ring switching capabilities at Company Central Offices that are a part of SMARTRing service. This rate element 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.   (C)

- Central Office 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 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 interfaces at the Customer Node, electing to connect with DS1 services at a Central Office Node, must obtain a 28 DS1 Channel System.

- 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.

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	24 to 48[1] Months	49 to 72[1] Months	73 to 96[1] Months	USOC
2.	Alternate Central Office Channel Mileage Rates (All Capacities)						
(a)	Alternate C.O. Channel, per channel	$500.00	-	-	-	-	1HAXX
(b)	Per quarter air mile	-	$ 685.00	$ 280.00	$ 175.00	$ 140.00	1HAAX
3.	Interoffice Channel Mileage Rates						
(a)	Fixed, OC-3 capacity	195.00	50.00	36.00	32.00	27.00	1HXFX
(b)	Fixed, OC-12 capacity	195.00	145.00	130.00	115.00	105.00	1HXFX
(c)	Per quarter air mile (OC-3 capacity)	-	45.00	32.00	23.00	18.00	1HXAX
(d)	Per quarter air mile (OC-12 capacity)	-	50.00	36.00	30.00	23.00	1HXAX
(e)	**(DELETED)**						(D)
(f)	Fixed, OC-48 and (OC-48+ capacity	195.00	340.00	270.00	260.00	250.00	1HXFX
(g)	Fixed, OC-192 and OC-192+ capacity	240.00	770.00	635.00	610.00	590.00	1HXFX
(h)	**(DELETED)**						(D)
(i)	Per quarter air mile (OC-48 and 48+ capacity)	-	50.00	36.00	30.00	23.00	1HXAX
(j)	Per quarter air mile (OC-192 and OC192+ capacity)	-	50.00	36.00	30.00	23.00	1HXAX
4.	Internodal Channel Mileage Rates						
(a)	Per Internodal Channel, Same Wire Center area	500.00	-	-	-	-	1HNXX
(b)	Per quarter air mile, Same Wire Center	-	1,400.00	535.00	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	-	1,600.00	650.00	465.00	390.00	1HNCX
5.	Customer Node (per Node)						
(a)	OC-3 capacity	435.00	2,200.00	990.00	900.00	810.00	SHNC3
(b)	**(DELETED)**						(D)
(c)	OC-12 capacity	465.00	3,400.00	1,980.00	1,800.00	1,575.00	SHNC1
(d)	OC-48 capacity	465.00	5,220.00	4,410.00	4,050.00	3,510.00	SHNN8
(e)	OC-48+ capacity	465.00	5,850.00	4,410.00	4,050.00	3,510.00	SHNN9
(f)	OC-192 capacity	540.00	25,000.00	9,375.00	8,250.00	7,300.00	SHNN6
(g)	OC-192+ capacity	540.00	25,000.00	9,375.00	8,250.00	7,300.00	SHNN2

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.

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)

7. Central Office Node (per Node)

		Nonrecurring Charge	Month to Month	24 to 48[1] Months	49 to 72[1] Months	73 to 96[1] Months	USOC
(a)	OC-3 capacity	$405.00	$ 1,400.00	$ 990.00	$ 900.00	$ 810.00	SHNH3
(b)	**(DELETED)**						
(c)	OC-12 capacity	455.00	2,600.00	1,980.00	1,800.00	1,575.00	SHNH1
(d)	OC-48 capacity	455.00	4,860.00	4,110.00	4,050.00	3,510.00	SHNH8
(e)	OC-48+ capacity	455.00	5,490.00	4,110.00	4,050.00	3,510.00	SHNH9
(f)	OC-192 capacity	540.00	25,000.00	9,375.00	8,250.00	7,300.00	SHNH7
(g)	OC-192+ capacity	540.00	25,000.00	9,375.00	8,250.00	7,300.00	SHNH6
(h)	OC-3 Shared Node Interconnection	550.00	980.00	690.00	630.00	570.00	SHNHA
(i)	OC-12 Shared Node Interconnection	550.00	1,820.00	1,390.00	1,260.00	1,100.00	SHNHB
(j)	OC-48 Shared Node Interconnection	550.00	3,400.00	2,880.00	2,840.00	2,460.00	SHNHC
(k)	OC-48+ Shared Node Interconnection	550.00	3,840.00	2,880.00	2,840.00	2,460.00	SHNHD

(D)

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.