

ACCESS SERVICE

33. Reserved for Future Use

(TR 1)

Issued: March 17, 2008

Effective: April 1, 2008

Vice President, Regulatory
521 East Morehead St., Suite 250, Charlotte, NC 28202

ACCESS SERVICE

34. Dedicated Ring and Optical Services34.1 Dedicated SONET Ring#

(A) General

- (1) Dedicated SONET Ring (DSR) provides a customer a dedicated high capacity customized network. The network is in a ring architecture or topology that assures survivability and can be arranged as a full (closed) ring or as a partial ring. Partial rings are offered on Special Access DSR only. Full rings may subtend (interconnect with) each other as described in (B)(4) following.
- (2) DSR is an alternative to basic High Capacity Special Access Service between multiple customer locations or to basic High Capacity Switched Access Service between a customer's location and an end office or access tandem. DSR is, therefore, rated discretely. Rate elements include nodes, port nodes, ports, high speed interfaces (certain partial ring configurations only), and mileage between nodes. Rates are specified in Section 30.34.1 preceding for price band rates and 31.34.1 preceding for all other rates.
- (3) Certain general service descriptions and rate regulations for DSR, including mileage measurement, shared billing arrangements, and service discount plans, can be found in Sections 6.1 and 6.7 preceding for Switched Access DSR and Sections 7.1, 7.2, and 7.4 preceding for Special Access DSR.

The following footnote is not applicable to the DS1, DS3, DS3 Transmux or STS1 Port, DS1, DS3 or STS1 Partial Ring Channel Mapping rate elements of DSR. Effective May 31, 2007, orders for new DSR are no longer permitted. The Telephone Company will continue to provide DSR pursuant to this Section 34.1 on any existing DSR that is in-service as of May 31, 2007, or any order for DSR that is placed with the Telephone Company prior to May 31, 2007 (collectively, Existing DSR), subject to the following conditions:

- a. For any Existing DSR that is currently subscribed to a term plan (i.e., commitment periods of 3-, 5-, and 7-years), the Telephone Company will continue to provide the Existing DSR for an additional six (6) months beyond the expiration date of the customer's current commitment period, or until the customer replaces the Existing DSR with a comparable Telephone Company provided service, or discontinues service, whichever comes first. Subject to the availability of facilities and equipment, additions and/or changes to the Existing DSR are permitted provided that such additions and/or changes do not require a new commitment period or an extension to an existing commitment period.
- b. For any Existing DSR whose term plan expired prior to May 31, 2007, but the Existing DSR continued on a month-to-month basis at prevailing rates, the Telephone Company will continue to provide the Existing DSR until November 30, 2007, or until the customer replaces the Existing DSR with a comparable Telephone Company provided service, or discontinues service, whichever comes first. Additions and/or changes are not permitted.

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(A) General (Cont'd)

- (4) Minimum period obligations can be found in Section 6.7.2(A) preceding for Switched Access DSR and in Section 7.4.4(E) preceding for Special Access DSR.
- (5) Technical specifications are set forth in Section 7.2 preceding for Special Access DSR. Technical specifications for Switched Access DSR are the same as those for Special Access DSR.

(B) Service Description

(1) Full Ring

- (a) A full DSR provides connectivity to multiple customer designated locations (nodes). A full ring must have a minimum of three nodes with at least one of the nodes being located in a Telephone Company Central Office (CO) and one of the nodes being located at a customer designated premises. One or more full rings may interconnect with each other in a subtending ring configuration as described in (B)(4) following.

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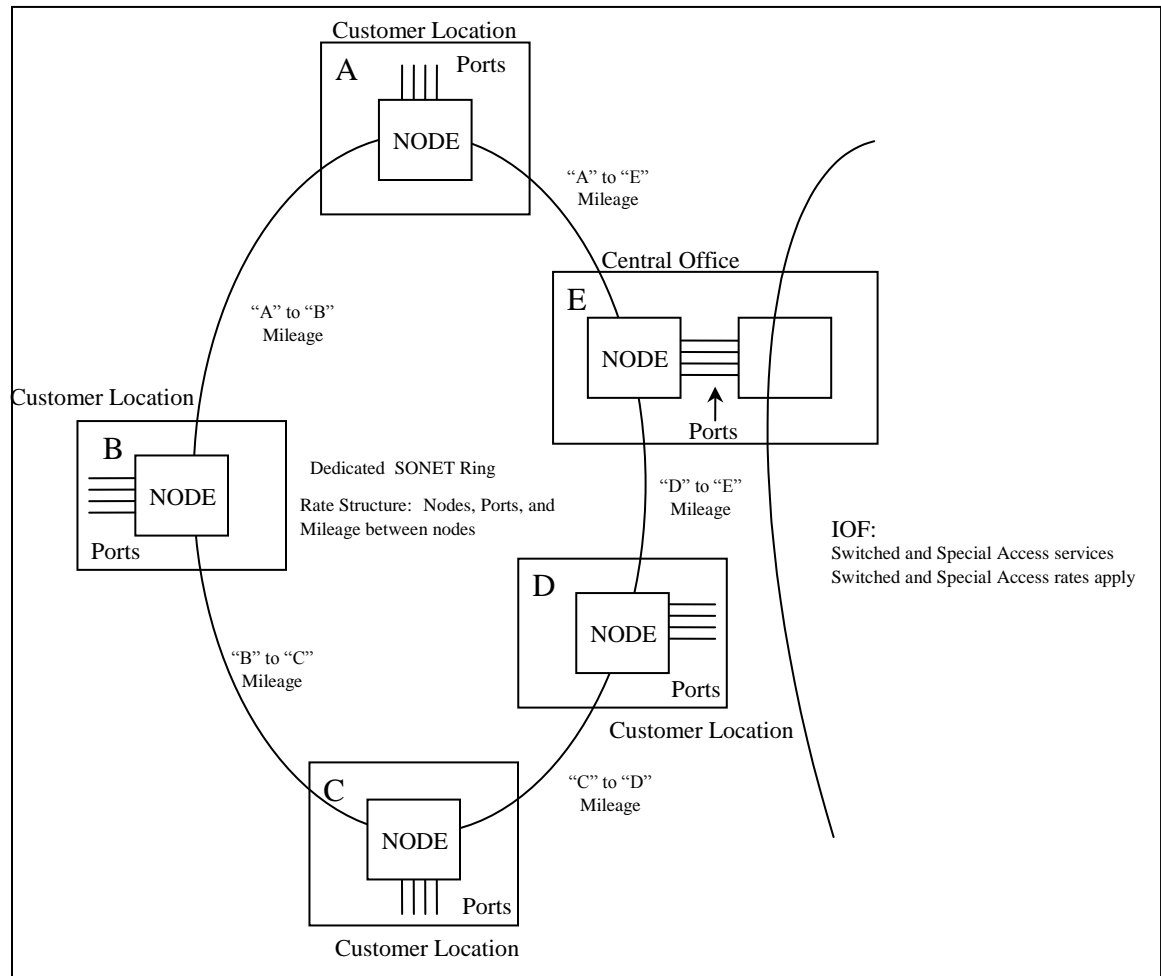
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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(B) Service Description (Cont'd)

(1) Full Ring (Cont'd)

(b) An example of a DSR full ring is diagrammed below:



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(B) Service Description (Cont'd)

(2) Partial Ring*

- (a) A partial DSR ring provides connectivity to multiple customer designated locations (nodes) between fiber meet locations at which high speed interconnection of the Telephone Companies backbone network facilities to the customer's facilities or the facilities of a third party occurs. Partial ring service may only be interconnected to (1) another partial ring provided by the Telephone Company or (2) ring facilities provided by the customer or a third party. Subtending rings may not interconnect with, or be associated with, a partial ring. The portion of the ring provided by the customer or third party must use vendor equipment that matches the equipment used by the Telephone Company and must maintain the same vintage in software release as the Telephone Company. Upon written notice by the Telephone Company, the customer or third party will have sixty (60) days in which to complete the change out of any software release deployed by the Telephone Company.
- (b) The partial ring must have a minimum of two devices (enhanced nodes or high speed interfaces) with a device at each fiber meet location and at least one node on the partial ring was in a CO. When the partial ring is provided over an IntelliBeam Optical Transport Service (IOTS) or a Telephone Company provided DWDM ring service, the IOTS/DWDM ring service device(s) are counted towards satisfying the minimum device requirement at each fiber meet location on the DSR partial ring. High speed interconnection may occur at a customer's designated premises, a Telephone Company central office or a location that is mutually agreeable to both the customer and the Telephone Company (such location will be designated as a premises for the purpose of administering the general regulations set forth in this tariff).
- (c) Fiber Meet
 - (1) When the fiber meet occurs at a customer's designated premises, the point of interconnection between the Telephone Company's facilities and the facilities of the customer or of a third party shall be a node.
 - (2) When the fiber meet occurs in a Telephone Company wire center, high speed interconnection from the device (DSR node, IOTS/DWDM ring service node or IOTS/DWDM ring service amplifier, as applicable) occurs at a collocation arrangement via fiber cross-connects between the Telephone Company's fiber optic facilities and the customer's or third party's facilities.

* Special Access configurations only

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(B) Service Description (Cont'd)

(2) Partial Ring* (Cont'd)

(c) Fiber Meet (Cont'd)

- (3) When the fiber meet occurs at a mutually agreed upon location, the point of interconnection shall be a high speed (pass-through) interface.
- (4) The Telephone Company's network design will define the optical parameters at the fiber meet locations. The Telephone Company is responsible for the quality and integrity of the high speed optical signal at the fiber meet where its facilities are interconnected to the facilities of the customer or of the third party. The Telephone Company bears no responsibility for the optical parameters beyond the fiber meet (i.e., in the facilities of the customer or of the third party). The customer or third party is responsible for engineering its portion of the jointly provided ring. At their option, the Telephone Company will engineer the customer or third party's portion of the ring within the LATA subject to Additional Engineering as set forth in Section 13.1 preceding.

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(B) Service Description (Cont'd)

(2) Partial Ring* (Cont'd)

(c) Fiber Meet (Cont'd)

- (5) The customer must provide the Telephone Company with its fiber optic facility requirements (i.e., whether it will use single mode fiber or multi-mode fiber) prior to the Telephone Company ordering the necessary SONET network equipment to provide the requested service. The customer may utilize its own fiber optic facilities or the facilities of a third party.
- (6) Interconnection to DSR partial ring services may occur (i) at the customer's designated premises for which interconnection will occur via a node; (ii) in a Telephone Company wire center for which interconnection from a device will occur at a collocation arrangement via fiber cross-connects. The fiber cross-connects used with DSR partial ring service are the IBT fiber cross-connects as described in Section 26.1.5(D)(1)(a) preceding; or (iii) at a mutually agreed upon location where interconnection occurs via a high speed (pass-through) interface. Interconnection to other Telephone Company services may not occur at a mutually agreed upon fiber meet location utilizing a high speed interface.
- (7) Interconnection to DSR partial ring service is limited to high speed fiber interconnection of the Telephone Company's backbone network fiber optic facilities and the fiber optic facilities of the customer or of a third party.
- (d) When ordering lower speed channels that originate at and terminate to nodes that are not within the partial ring provided by the Telephone Company, the customer must provide the Telephone Company with a copy of the order. This order provides the Telephone Company with authority to perform the necessary mapping of the channel through the partial ring to ensure continuity of the signal over the jointly provided ring. A Channel Mapping nonrecurring charge will apply for each channel mapped through the Telephone Company provided partial ring. Channel mapping charges do not apply when ordering channels that originate at and/or terminate to nodes on the Telephone Company's portion of the partial ring.

* Special Access configurations only

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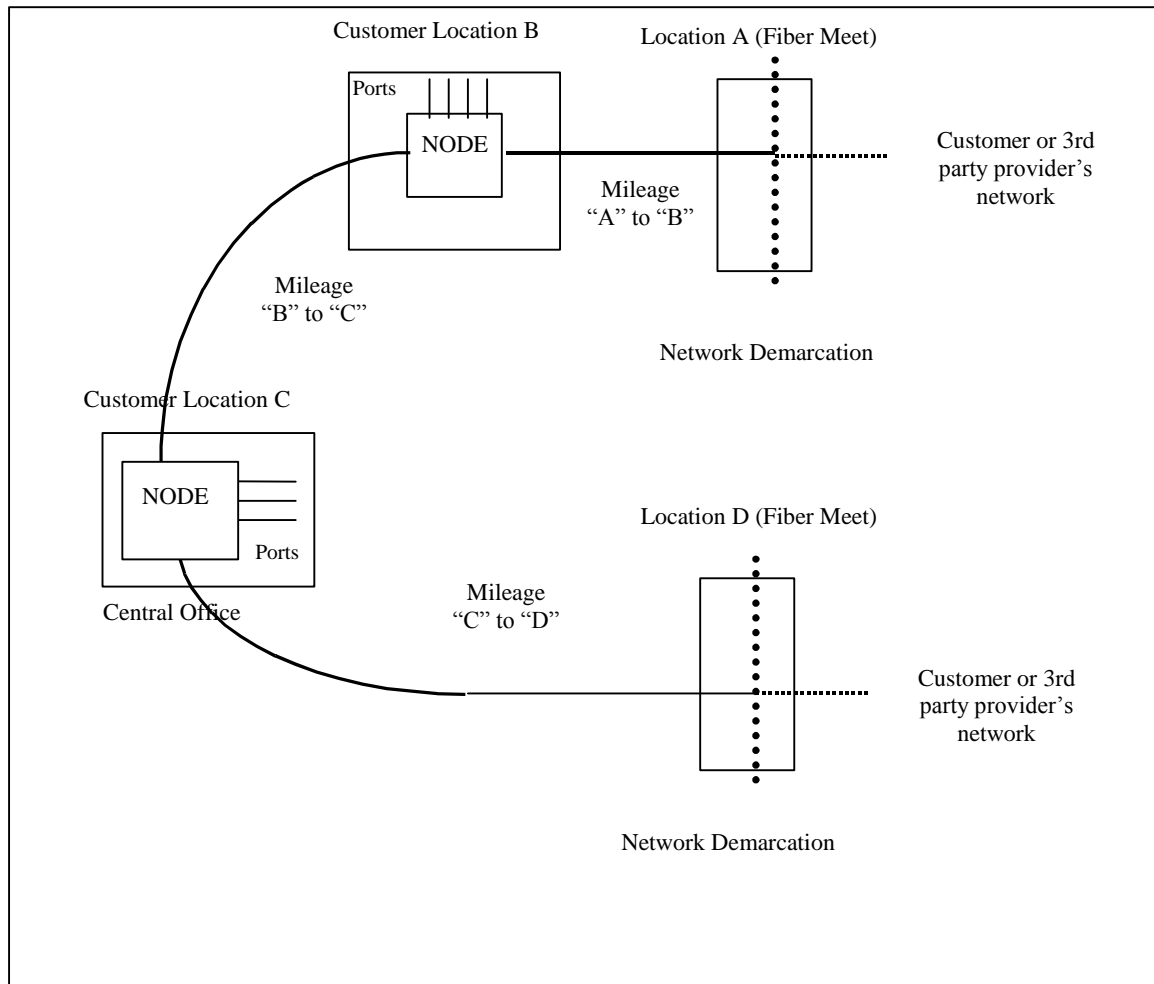
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(B) Service Description (Cont'd)

(2) Partial Ring* (Cont'd)

(e) An example of a DSR partial ring is diagrammed below:



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(B) Service Description (Cont'd)

(3) Ring-on-Ring

When DSR is provided in a Ring-on-Ring design, the following requirements apply:

- The lower speed ring must have a minimum of two nodes located at either the customer designated premises or a Telephone Company wire center; and
- The Telephone Company must provide the lower speed nodes; and
- Each lower speed node was located at the same customer designated premises or Telephone Company wire center as its corresponding higher speed node.
- Ring-on-Ring designs may not include a mix of enhanced nodes and those nodes that are not enhanced.

(4) Subtending Rings

The customer may interconnect two (2) or more full rings in a subtending ring configuration subject to the following:

- (a) One (1) of the DSR full rings was designated by the customer as the main ring from which the other DSR full ring(s) will subtend. The main ring was of equal or greater capacity than each DSR full ring that subtended the main ring. For example, a main ring that is an OC12 DSR can have an OC3 and/or OC12 subtending ring but can not have an OC48 subtending ring. The number of rings that can subtend a main ring may be limited by the type and capacity of the nodes and the port configuration specific to the customer's overall DSR service configuration.
- (b) Interconnection between the main ring and the subtending ring occurs via a port node. A port node provides high speed interconnection between an enhanced node on the main ring and the high speed facilities of the port node on the subtending ring, and applies in lieu of the enhanced node on the subtending ring at that location. Each subtending ring requires one port node at the point of interconnection to the enhanced node on the main ring. Interconnection between the main ring and a subtending ring may occur at a customer designated premises or within a Telephone Company wire center where such nodes are located. Up to two (2) points of interconnection are allowed per subtending ring. A port node is required per point of interconnection.
- (c) Only DSR full rings that utilize suitably equipped enhanced nodes can be arranged in subtending ring configurations. Subtending ring configurations are not available on DSR full rings utilizing nodes that are not enhanced.

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(B) Service Description (Cont'd)

(4) Subtending Rings (Cont'd)

- (d) Each ring in a subtending ring configuration was arranged as a unidirectional path switched ring (UPSR) and must use enhanced nodes. Bidirectional line switched rings (BLSR) may not be arranged in subtending ring configurations.
 - (e) DSR partial rings may not be arranged in subtending ring configurations.
 - (f) Where two (2) points of interconnection between the subtending ring and the main ring are provided, circuits originating on the main ring may be mapped to the subtending ring and circuits originating on the subtending ring may be mapped to the main ring. Channels mapped across the two (2) interconnecting nodes are subject to Dual Node Cross-connect Channel Mapping charges as described in (B)(4)(m) following.
 - (g) The main ring and any subtending rings associated with the main ring must individually meet the minimum requirement of three (3) nodes, except that only one (1) node for the entire service configuration was located in a Telephone Company wire center. For example, if the main ring has one node located in a Telephone Company wire center and two nodes located at customer designated premises, the subtending ring(s) need not have a node that is located in a Telephone Company wire center.
- (1) When determining if the minimum number of nodes on a subtending ring has been met, the port node providing interconnection to the main ring is included in the count.
 - (2) When determining if the minimum number of nodes on a subtending ring has been met, the enhanced node on the main ring that interconnects with the subtending ring is not included in the count.

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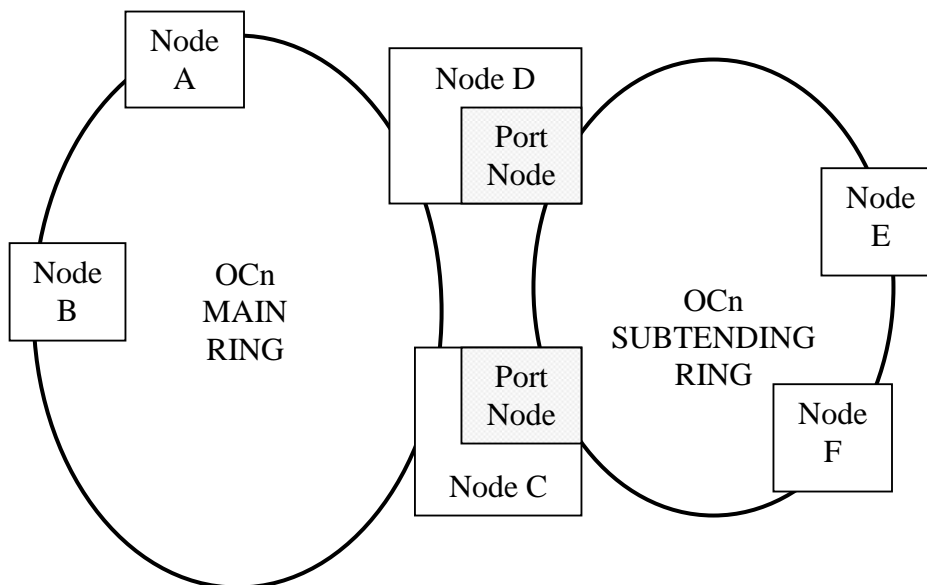
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(B) Service Description (Cont'd)

(4) Subtending Rings (Cont'd)

- (h) Each subtending ring may only interconnect with one (1) main ring.
- (i) Subtending ring configurations may be established using new DSR full rings, existing DSR full rings, or a combination of new and existing DSR full rings.
- (j) All DSR rings in the same subtending ring configuration was billed to the same customer.
- (k) An example of a subtending ring configuration with two (2) points of interconnection to the main ring is diagrammed below:



Applicable rate elements:

- Nodes (6)
- Port Node (2)
- Mileage for circumference of Main Ring
- Mileage for circumference of Subtending Ring

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(B) Service Description (Cont'd)

(4) Subtending Rings (Cont'd)

- (l) Lower speed services provided over DSR must ingress at a node on either ring (the main ring or the subtending ring) and egress at a node on either ring (the subtending ring or the main ring). A single port charge applies at the point of ingress and a single port charge applies at the point of egress, unless the ingress and/or egress occurs via an asymmetrical port facility in which case a separate port charge will not apply for each such ingress or egress.
- (m) At the customer's option, a lower level service may interconnect the main and one (1) or more of the subtending ring(s) through two (2) separate points of interconnection with each subtending ring. In this case, a single Dual Node Cross-connect Charge applies per lower level service provided across the interconnecting port nodes, regardless of the number of subtending rings involved. The Dual Node Cross-connect Charge does not apply when a lower level service interconnects the main and subtending ring(s) through a single point of interconnection.
- (n) In the event that the customer elects to make a subtending ring an independent full DSR, the independent full DSR ring must meet all of the requirements for a DSR full ring as set forth in (B)(1) preceding. This may require an additional node in order to satisfy the minimum node requirement for a single, independent ring.
- (5) The customer must provide, at no cost to the Telephone Company, suitable and secure space, suitable environmental conditions, and uninterrupted power supply, building entrance facilities, and conduit for placement of the facilities and network equipment at its locations as necessary to provide the service.
- (6) The customer will be billed additional charges for any charges levied the Telephone Company for space and power required to place ADMs on the Telephone Company's side of the network interface.

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(B) Service Description (Cont'd)

(7) Connections to Other Services

- (a) DSR may connect to IntelliBeam Optical Transport Service (IOTS) optical transport channels as set forth in Section 6.2.14 or 7.2.19 preceding. IOTS combines Dense Wave Division Multiplexing and SONET technologies to create a high-speed backbone network configured in a ring architecture. When the DSR partial ring is provided over an IntelliBeam Optical Transport Service, the IOTS node(s) through which the DSR partial ring is configured are included in the minimum device requirement at each fiber meet location for a DSR partial ring.
- (b) A Switched or Special Access DSR port may connect to an equal speed IntelliBeam Broadband Transport (IBT) service, an equal speed IBT multiplexing node or an equal speed port of a multiplexed IBT service.
- (c) When a DS1 service is provided between a Special Access DS1 port on a DSR central office Node and a channel of a multiplexed 44.736 Mbps, or groomed FES DS3 facility or multiplexed IBT, a ThruPath Connection nonrecurring charge as set forth in Section 31.7.9(B)(2) preceding applies. ThruPath connections at service levels less than DS1 are prohibited with DSR. ThruPath connections at service levels greater than DS1 are allowed in conjunction with multiplexed IBT service only.
- (d) Optical Network STS1, OC3, OC3c, OC12, OC12c, and OC48 Ethernet-to-SONET mapped services (as set forth in Section 7.2.16 preceding) may be connected to Special Access STS1, OC3, OC3c, OC12, OC12c, and OC48 ports, respectively, via symmetrical or asymmetrical port arrangements.
 - (1) In a symmetrical port arrangement, one (1) of such ports applies on the higher-speed node at the Telephone Company wire center where the service enters the ring, and a second port of the same capacity applies on the higher-speed node where the service exits the ring. For example, an Optical Network OC3c Ethernet-to-SONET mapped service would require two (2) OC3c ports in a symmetrical port arrangement (one port to enter the ring and one port to exit the ring).

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(B) Service Description (Cont'd)

(7) Connections to Other Services (Cont'd)

(d) (Cont'd)

- (2) In an asymmetrical port arrangement, one of such ports referenced above applies on the higher-speed node at the Telephone Company wire center where the service enters the ring, and the service exits the ring via the OCn port associated with the Asymmetrical Port Facility. More than one such service referenced above may utilize the same Asymmetrical Port Facility and OCn Port of that Asymmetrical Port Facility. For example, three (3) Optical Network OC12 Ethernet-to-SONET mapped services require 3 OC12 ports (one port for each service) to enter the ring, and all 3 of such services could be provided over an OC48 Asymmetrical Port Facility, and exit the ring via the same OC48 port of that facility. The number of services that can exit the ring via the same port is limited by the STS1 capacity utilized for the connecting service.
- (e) Ethernet services are provided on a point-to-point basis (i.e., native Ethernet to native Ethernet) between two suitably equipped DSR premises nodes. Additionally, Optical Network Gigabit Ethernet (transmitted at 50, 150, 300, 450, 600 Mbps or Full Rate) may be connected to a DSR Enhanced CO Node. The connection of Optical Network Gigabit Ethernet to DSR will occur via a Special Access DSR GigE-1, 3, 6, 9, 12 or 24 port on the CO Node. When customers who subscribe to Optical Network Gigabit Ethernet service to DSR, the commitment period connect their Optical Network Gigabit Ethernet service to DSR, the DSR GigE ports will be billed at month-to-month rates. Optical Network Gigabit Ethernet is further described in Section 7.2.20 preceding. Native to native Ethernet services may not be provided over an asymmetrical port facility.
- (f) When a customer transmits STS1, internet protocol, or Ethernet signals, the mapping feature was designated.
- (g) Extended Superframe Format (ESF) is preferred on all DS1 circuits in order to ensure performance objectives.
- (h) DSR may also be connected to the following Telephone Company provided services, provided that such connections are technically and operationally feasible, as determined by the Telephone Company:
 - DWDM ring service
 - point-to-point SONET service
 - Optical Network service
 - dedicated SONET ring service

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(C) Service Components

The service components of DSR include:

- Nodes and Subtending Nodes
- Port Nodes
- Ports
- High Speed Interfaces (certain partial ring configurations only)
- Mileage between nodes
- Optional Features

(1) Nodes and Subtending Nodes

- (a) The customer specifies the ring capacity in terms of optical carrier rates. DSR is available in capacities of OC3, OC12, OC48, and OC192. Lower speed channel services are provided between nodes via port designations. DSR may be provided with enhanced nodes that allow for additional port options. Enhanced nodes are available on ring capacities of OC12, OC48, or OC192 for Switched Access Service. Enhanced nodes are available on ring capacities of OC3, OC12, OC48, or OC192 for Special Access Service.
- (b) The following ports are accepted speeds on nodes that are not enhanced.

<u>Nodes:</u>	<u>OC3</u>	<u>OC12</u>	<u>OC48</u>	<u>OC192</u>
DS1 Ports	X			
DS3 Ports	X	X	X	X
STS1 Ports*		X	X	X
OC3 Ports*		X	X	X
OC3c Ports*		X	X	X
OC12 Ports*			X	X
OC12c Ports*			X	X
OC48 Ports*				X
OC48c Ports*				X

* May also be utilized with service connecting to certain advanced data services. Concatenation is not allowed on Switched Access ports.

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(C) Service Components (Cont'd)

(1) Nodes and Subtending Nodes (Cont'd)

- (c) The type of ports that are supported on an enhanced node may limit the maximum number of ports that are provided on that node. Upon installation of a new ring, the customer must provide the Telephone Company with an initial port requirement and a forecast of future port requirements on that node which the Telephone Company will utilize when engineering the port configuration for that node.

Enhanced Nodes:	OC3	OC12	OC48	OC192
DS1 Ports	X	X	X	X
DS3 Ports	X	X	X	X
DS3 Transmux Ports	X	X	X	X
STS1 Ports	X	X	X	X
OC3 Ports*		X	X	X
OC3c Ports*		X	X	X
OC12 Ports*			X	X
OC12c Ports*			X	X
OC48 Ports*				X
OC48c Ports*				X
Ethernet Ports				
GigE-1 Ports	X	X	X	X
GigE-3 Ports		X	X	X
GigE-6 Ports		X	X	X
GigE-9 Ports		X	X	X
GigE-12 Ports			X	X
GigE-24 Ports			X	X
Storage Interface Ports				
Fibre Channel at 1 Gbps			X	X
FICON at 1 Gbps			X	X

- (d) Additional nodes could be required to maintain service quality levels. Generally, a transmission of 20 or more miles or a transmission through 6 or more COs will be subject to loss of signal integrity, and would require an additional node. A regeneration node requires a full capacity node.

* May also be utilized with service connecting to certain advanced data services. Concatenation is not allowed on Switched Access ports.

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(C) Service Components (Cont'd)

(1) Nodes and Subtending Nodes (Cont'd)

- (e) Except for DSR utilizing enhanced nodes, the customer may provide a single node and associated port equipment at one of its premises subject to compatibility with the Telephone Company's equipment in the COs. This compatibility requires that the customer, at its own expense, uses matching vendor's equipment and maintains the same vintage in software release as the Telephone Company. Upon written notification from the Telephone Company, the customer has 60 days in which to complete the change out of software. In addition, the customer must configure the node to limit access to the data communications channel of the node.
- (f) The Telephone Company can not ensure the performance monitoring of the ring when it is equipped with customer provided nodes.
- (g) Subtending Nodes
 - (1) A Subtending Node is an enhanced node that subtended another enhanced node of a higher speed (e.g., an OC12 enhanced node may subtend an OC192 enhanced node).
 - (2) More than one (1) lower speed enhanced node may subtend the same higher speed enhanced node.
 - (3) The connection between the higher and lower speed enhanced nodes is a SONET facility (Subtending Node Facility) between an OCn port on the higher speed node and the lower speed node which was of the same optical carrier rate as the OCn port on the higher speed node.
 - (4) When the higher speed enhanced node is located at a customer designated premises, the subtending node(s) was located at the same customer designated premises.
 - (5) When the higher speed enhanced node is located at a Telephone Company wire center, the subtending node(s) may be located within that same wire center or extended to a customer designated premises that is served by that wire center or by a different wire center. When extending the subtending node to a customer designated premises, the Subtending Node Facility is subject to a channel extension charge. When the customer designated premises is not served by the same wire center as the higher speed enhanced node, mileage applies between the wire centers involved. Mileage applies in addition to the channel extension charge.
- (h) When a customer premises node is located in the same building as a CO node, there will be no diversity between the two nodes.

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(C) Service Components (Cont'd)

(2) Ports

- (a) Ports may be ordered in a symmetrical arrangement (e.g., DS3 Port to DS3 Port) or an asymmetrical arrangement (e.g., OC12 Port to DS3 Port) or in certain transmuxing arrangements as specified preceding. Ports are not provided at mutually agreed upon locations where a high speed (pass-through) interface is utilized.

- (b) Signals transported over DSR will be mapped as follows:

DS1 mapped as VT1.5
DS3 mapped as STS1
STS1 mapped as STS1
OC3 mapped as 3 STS1s
OC3c* mapped as one STS3c channel or STS1-3v
OC12 mapped as 12 STS1s
OC12c* mapped as one STS12c channel or STS1-12v
OC48 mapped as 48 STS1s
OC48c* mapped as one STS48c channel or STS1-48v
Gigabit Ethernet* (available with enhanced nodes only)
GigE1 (mapped as 1 STS1 or STS1-1v channel)
GigE3 (mapped as a STS1-3v channel or 1 STS3c channel)
GigE6 (mapped as a STS1-6v channel or 1 STS6c channel)
GigE9 (mapped as a STS1-9v channel or 1 STS9c channel)
GigE12 (mapped as a STS1-12v channel or 1 STS12c channel)
GigE24 (mapped as a STS1-21v channel or 1 STS24c channel)
Storage Interface* (available with enhanced nodes only)
Fibre Channel (mapped as a STS1-19v channel)
FICON (mapped as a STS1-19v channel)

* Special Access Ports only

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(C) Service Components (Cont'd)

(2) Ports (Cont'd)

(c) Asymmetrical Ports

- (1) Asymmetrical ports allow lower level services to be added to, and dropped from, DSR using ports with different transmission rates. For example, a DS1 channel can be added to the ring via a DS3 port and dropped from the ring via a DS1 port. These lower level services may originate and/or terminate at locations that are on or off of the DSR.
- (2) For OCn ports, the port with the higher transmission rate uses a facility (Asymmetrical Port Facility or (APF), which is also referred to as a Stub Hub), which is channelized to individual services requiring lower capacity facilities and lower capacity ports. Only one (1) such higher transmission rate OCn port applies per asymmetrical port arrangement. The number of lower capacity services that can utilize the same APF is limited by the total STS1 capacity of the connecting services. Available transmission rates for the APF are dependent on the capacity of the port to which it is connected. For example, an OC12 APF cannot be established on an OC3 Port. Additionally, the capacity of the port is dependent on the capacity of the node involved.
- (3) The APF provides a two-point channelized facility between a customer designated premises or an Expanded Interconnection arrangement and the OCn higher transmission rate port of the asymmetrical port combination. Such port may be associated with a node that is located at either the customer designated premises or within a Telephone Company wire center.
 - (a) When the APF is located at the customer's designated premises, the APF is provided between the customer designated premises and the port on the associated node located at that same premises. Rates and charges for the port apply as set forth in (D) following.
 - (b) When the APF is located in a Telephone Company wire center and the APF connects to a customer designated premises that is served by the same wire center, an asymmetrical port channel extension applies to extend the APF to the customer designated premises. Rates and charges for the asymmetrical port channel extension apply in addition to the rates and charges for the port as set forth in (D) following.

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(C) Service Components (Cont'd)

(2) Ports (Cont'd)

(c) Asymmetrical Ports (Cont'd)

(3) (Cont'd)

- (c) When the APF is located in a Telephone Company wire center and the APF connects to a customer designated premises that is served by a different wire center, an asymmetrical port channel extension and mileage applies to extend the APF to the customer designated premises. Rates and charges for the asymmetrical port channel extension and mileage apply in addition to the rates and charges for the port as set forth in (D) following.
- (d) When the APF is located in a Telephone Company wire center and the APF connects to an Expanded Interconnection arrangement that is located within the same wire center as the node, a port charge applies as set forth in (D) following.
- (e) When the APF is located in a Telephone Company wire center and the APF connects to an Expanded Interconnection arrangement that is not located within the same wire center as the node, mileage applies to extend the APF to the Expanded Interconnection arrangement. Rates and charges for the mileage apply in addition to the rates and charges for the port as set forth in (D) following.
- (f) For (C)(2)(c)(3)(c) through (e) preceding, channel termination or cross-connect charges apply in addition to the port, asymmetrical port channel extension and mileage charges. Channel termination charges apply in accordance with Sections 6.1.3(A) and 7.1.2 preceding. Cross-connection to Expanded Interconnection arrangements apply in accordance with Section 28 following.

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(C) Service Components (Cont'd)

(2) Ports (Cont'd)

(c) Asymmetrical Ports (Cont'd)

(4) Asymmetrical ports are available in the following combinations.

<u>Ring Capacity</u>	<u>APF Rate</u>	<u>Asymmetrical Port Combinations**</u>
OC3 DSR Ring	N/A	DS3 Transmux – DS1*
	STS1	STS1 – DS3 STS1 – DS1*
OC12 DSR Ring	N/A	STS1 – DS3 DS3 Transmux – DS1*
	OC3	OC3 – STS1 OC3 – DS3 OC3 – DS1* OC3 – GigE3* OC3 – GigE1*

* Requires enhanced node. For Ethernet (GigE) port options, the associated Ethernet Service was SONET mapped.

** Concatenation is not available on Switched Access Ports

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(C) Service Components (Cont'd)

(2) Ports (Cont'd)

(c) Asymmetrical Ports (Cont'd)

(4) (Cont'd)

<u>Ring Capacity</u>	<u>APF Rate</u>	<u>Asymmetrical Port Combinations**</u>
OC48 DSR Ring	N/A	STS1 – DS3 DS3 Transmux – DS1*
	OC12	OC12 – OC3 OC12 – OC3c OC12 – STS1 OC12 – DS3 OC12 – DS1* OC12 – GigE12* OC12 – GigE9* OC12 – GigE6* OC12 – GigE3* OC12 – GigE1*
	OC3	OC3 – STS1 OC3 – DS3 OC3 – DS1* OC3 – GigE3* OC3 – GigE1*

* Requires enhanced node. For Ethernet (GigE) port options, the associated Ethernet Service was SONET mapped.

** Concatenation is not available on Switched Access Ports

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(C) Service Components (Cont'd)

(2) Ports (Cont'd)

(c) Asymmetrical Ports (Cont'd)

(4) (Cont'd)

<u>Ring Capacity</u>	<u>APF Rate</u>	<u>Asymmetrical Port Combinations**</u>
OC192 DSR Ring	N/A	STS1 – DS3 DS3 Transmux – DS1*
	OC48	OC48 – OC12 OC48 – OC12c OC48 – OC3 OC48 – OC3c OC48 – STS1 OC48 – DS3 OC48 – DS1* OC48 – GigE24* OC48 – GigE12* OC48 – GigE9* OC48 – GigE6* OC48 – GigE3* OC48 – GigE1*
	OC12	OC12 – OC3 OC12 – OC3c OC12 – STS1 OC12 – DS3 OC12 – DS1* OC12 – GigE12* OC12 – GigE9* OC12 – GigE6* OC12 – GigE3* OC12 – GigE1*
	OC3	OC3 – STS1 OC3 – DS3 OC3 – DS1* OC3 – GigE3* OC3 – GigE1*

* Requires enhanced node. For Ethernet (GigE) port options, the associated Ethernet Service was SONET mapped.

** Concatenation is not available on Switched Access Ports

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(C) Service Components (Cont'd)

(2) Ports (Cont'd)

(d) Transmux Ports

- (1) The DS3 Transmux Port performs a DS3 to DS1 conversion at an Enhanced DSR Node. The DS3 to DS1 conversion allows a single DSR DS3 Transmux port (which includes a DS3 Transmux Facility to which the DS1 circuits are mapped) to be a facility associated with up to twenty-eight (28) VT1.5 mapped DSR DS1 ports. Such DS3 Transmux Facility will be provisioned upon ordering the associated DS1 Transmux port. Transmuxing is only available on an enhanced node and where suitable facilities and equipment exist to provide the DS3 Transmux Port.
- (2) DS3 Transmux Ports utilize a DS3 Transmux Facility to which VT1.5 mapped DSR DS1 ports are associated. Such facility will be provisioned upon ordering the associated DS3 Transmux port.
- (3) When transmuxing arrangements are ordered in symmetrical or asymmetrical port combinations, the following conditions apply:
 - A DS1 port associated with a DS3 Transmux port and facility may not coexist as a separate DS1 port within the same DSR node.
 - DS3 Transmux ports are available on enhanced nodes only.
 - An end-to-end DS1 service provided over DSR may not be associated with more than one DS3 Transmux port or DS3 Transmux Facility.
 - DS3 Transmux ports are available at premises nodes or at wire center nodes.
 - When a DS3 Transmux port is utilized on an enhanced node located in a Telephone Company wire center, such port was connected to DS3 High Capacity Service as set forth in Section 6.2.11 or 7.2.9 preceding.
 - The higher speed port of an asymmetrical port combination will be mapped based on the speed of the connecting service and port.
- (e) When High Capacity Service, ISSP or IBT is provided between two DSR rings, the associated ports was symmetrical.

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(C) Service Components (Cont'd)

(2) Ports (Cont'd)

(e) Storage Interface Port

- (1) The FICON Storage Interface Port provides an optical transport channel for transmission of 1 Gbps Fibre CONnection among mainframes, storage devices and on a single channel. A FICON signal is limited to a maximum distance of 100km (physical route kilometers) between the locations involved.
 - (2) The Fibre Channel Storage Interface Port provides an optical transport channel for transmission of 1 Gbps signals in a serial link between supercomputers, mainframes, workstations, desktop computers, storage devices, displays and other peripherals. A Fibre Channel signal is limited to a maximum distance of 100 km (physical route kilometers) between the locations involved.
- (f) When High Capacity Service, ISSP, or IBT is provided between two DSR rings, the associated ports was symmetrical.

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(C) Service Components (Cont'd)

(3) High Speed (Pass-through) Interfaces

A High Speed (Pass-through) Interface applies at a mutually agreed upon location associated with partial ring DSR as set forth in (B)(2) preceding. The High Speed (Pass-through) Interface applies in lieu of a node at such location.

(4) Mileage

(a) DSR Mileage on a full ring is the total of airline distances between nodes rounded up to the nearest mile.

(b) DSR Mileage on a partial ring is the total of airline distances between fiber meet locations (customer designated premises, wire center or mutually agreed upon pass-through location, as applicable) and each node on the partial ring. The total mileage is then rounded up to the nearest mile.

(c) The mileage rate is based on total ring capacity and not on individual services between nodes. For example, the mileage charge for a four-node OC3 ring with 5.1 miles between each node (20.4 total miles) would be calculated by multiplying the OC3 mileage rate in Section 30.34.1 preceding for price band rates and 31.34.1 preceding for all other rates by 21 miles. This mileage calculation applies regardless of the number of services (e.g., DS3s) on the ring.

(d) When DSR is provided over an IntelliBeam Optical Transport Service (IOTS) backbone network as set forth in Section 6.2.14 or 7.2.19 preceding, connection between the DSR nodes is provided using IOTS optical transport channels in lieu of DSR channel mileage between the nodes.

(e) When DSR is provided over a Telephone Company provided DWDM ring service backbone network, DSR channel mileage will not apply between the nodes.

(5) Optional Features

Optional features are described in (K) following.

(6) Port Nodes

A port node allows interconnection between two (2) full DSR rings. One (1) of the rings will be designated as the main ring and the other ring is designated as a subtending ring. Subtending rings are described in (B)(4) preceding.

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(D) Application of Rates and Charges

- (1) All monthly recurring rate elements for DSRs are available for 3, 5 and 7-year commitment periods. DSR ports and asymmetrical port facilities are also available on monthly terms. Nodes, port nodes, optional features, subtending node facilities, asymmetrical port facilities, and ports* added subsequent to the initial installation may be coterminous to the expiration date of the DSR provided the addition is prior to the 21st month for a 3-year plan, prior to the 36th month for a 5-year plan, or prior to the 50th month for a 7-year plan. Nodes, port nodes, optional features, subtending node facilities, and asymmetrical port facilities added after the aforementioned periods require extending the commitment period for an additional one year for a 3-year plan, an additional 2 years for a 5-year plan, or an additional 3 years for a 7-year plan. However, ports and asymmetrical port facilities in a Month-to-Month plan may be added at any time.
- (2) Once a term period expires, the prevailing monthly rates of the current plan will continue until the customer service or requests a new term plan.
- (3) Nonrecurring Charges
 - (a) First and Additional Nonrecurring Charges for Ports
 - (1) A First Nonrecurring Charge applies to the first of each port type and speed installed at a node. The Additional Nonrecurring Charge applies for each additional port of the same type and same speed added at the same node on the same order. For example, if a customer places an order for ten (10) GigE3 Ports at the same OC48 node, one First Nonrecurring Charge and nine Additional Nonrecurring Charges will apply for the GigE3 Ports. With the exception of Storage Interface Ports, the charge will vary based on whether the installation is in connection with the initial installation of the DSR service or a subsequent installation of ports.

* A mix of enhanced nodes and those nodes that are not enhanced is prohibited. Ports requiring enhanced nodes may not be added to nodes that are not enhanced.

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(D) Application of Rates and Charges (Cont'd)

(3) Nonrecurring Charges (Cont'd)

(a) First and Additional Nonrecurring Charges for Ports (Cont'd)

- (2) With the exception of Storage Interface Ports, nonrecurring charges for DSR ports purchased on a month-to-month plan, at the initial installation of DSR service apply on a first and additional basis.
 - (3) With the exception of Storage Interface Ports, nonrecurring charges for DSR ports purchased under a term plan apply on a first and additional basis for each DSR port that is ordered subsequent to the initial installation of DSR Service.
 - (4) For Storage Interface Ports purchased on a month-to-month basis, nonrecurring charges apply to the installation of ports on a first and additional basis regardless of whether the installation of such Storage Interface Port is in connection with the initial or subsequent installation of DSR.
 - (5) Changes in Month-to-Month billed ports or changes in term planned billed port nodes are treated as disconnects and subsequent installations for which subsequent nonrecurring charges apply.
- (b) Nonrecurring charges for DSR nodes apply to all nodes and port nodes installed subsequent to the initial installation of DSR.
- (c) A Channel Mapping nonrecurring charge as set forth in Section 30.34.1 preceding for price band rates and 31.34.1 preceding for all other rates applies for each channel which the Telephone Company must map over the partial ring. Channel mapping is only required on channels that originate at and terminate to devices that are not within the partial ring.

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(D) Application of Rates and Charges (Cont'd)

(3) Nonrecurring Charges (Cont'd)

- (d) When a lower capacity service is dropped from a DSR ring, the associated ports will be billed to the lower capacity service. Lower capacity services may not be dropped at locations utilizing a high speed (pass-through) interface. However, a Channel Mapping Charge will apply for each lower capacity service that originates at and terminates to devices that are not within the partial ring provided by the Telephone Company. The Channel Mapping Charge is billed to the lower capacity service.
 - (e) When a lower capacity service is provided between two separate asymmetrical port facilities (APF) on the same DSR, the Telephone Company must map the facility assignment on the first APF to the facility assignment on the second APF for which an Asymmetrical Port Mapping Nonrecurring Charge applies per lower capacity service mapped.
 - (f) Nonrecurring charges for the installation of optional features are described in (K)(1)(a) and (K)(1)(b) following.
 - (g) A single Dual Node Cross-connect Charge applies per lower level service provided across the interconnecting port nodes of a subtending ring(s) configuration, regardless of the number of subtending rings involved. Dual Node Cross-connect Charges as set forth in (L) following apply for each channel which the Telephone Company must cross-connect between the port nodes of the interconnecting ring(s).
- (4) When a node is disconnected prior to the end of the commitment period, the node is subject to termination liability under (E)(1) following.
 - (5) Reserved

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(D) Application of Rates and Charges (Cont'd)

- (6) Where an Ethernet, Fibre Channel, or FICON signal is mapped to a SONET service, and that SONET service is provided in a symmetrical port arrangement, two (2) OCn ports apply (one where the mapped signal enters the ring and one where the mapped signal exits the ring).
- (7) Where one or more Ethernet, Fibre Channel or FICON signals are mapped to a SONET service, and that SONET service utilizes an asymmetrical port combination (e.g., the signals enter the ring mapped to an OC12 SONET service and exit the ring via an OC48 port associated with an asymmetrical port facility), only one OCn port applies per mapped signal to enter the ring and the signal exits the ring over the asymmetrical port facility. The total number of such mapped Ethernet, Fibre Channel, or FICON signals that can be associated with the OCn Port of the asymmetrical port facility is limited by the STS1 capacity required to map each signal into the SONET service. For example, assume that an OC48 APF is ordered for which an OC48 port, OC48 mileage, and, when applicable, an OC48 Extension applies (an OC48 has a capacity of 48 STS1s). Further assume that 2 Optical Network 600 Mbps Ethernet-to-SONET mapped services are ordered, each of which requires 6 STS1s when mapped into an OC12 SONET signal. In this example, the OC48 asymmetrical port arrangement would still have 36 available STS1s.
- (8) Changes in Month-to-Month billed asymmetrical port facilities are treated as disconnects and subsequent installations.

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(E) Termination Liability

- (1) Unless otherwise set forth in this Section (E), termination liability applies when DSR service or an Optional Feature is terminated prior to the end of the applicable commitment term. Termination liability is charged per monthly rate element on all nodes, port nodes, high speed (pass-through) interfaces, optional features, subtending node facilities or asymmetrical port facilities, and ports (other than Month-to-Month billed ports for which the one month minimum service charge applies).
- (2) A separate termination liability charge is assessed for each rate element associated with the disconnected DSR service or an Optional Feature. For example, assume that the customer subscribes to a full DSR ring that is arranged with the Direct TL1 Monitoring Optional Feature, as set forth in (K)(2) following. Further assume that the customer disconnects the DSR ring along with the Direct TL1 Monitoring Optional Feature prior to the end of the commitment term. Then, the customer shall pay termination liability on the nodes, ports, and the Direct TL1 Monitoring Optional Feature monthly recurring rate elements as set forth in this section.
- (3) DSR service or an Optional Feature may be canceled without termination liability when cancellation of the DSR service or Optional Feature occurs within thirty (30) days of the effective date of a Telephone Company initiated rate increase of eight percent (8%) or more on any rate applicable to the DSR service or Optional Feature.
- (4) Termination liability will not apply on any DSR service or Optional Feature if a customer changes to a longer term commitment period for such service.

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(E) Termination Liability (Cont'd)

- (5) Termination liability will not apply to a customer upgrade (change to a higher capacity) DSR service, if all of the following conditions are met. These conditions do not apply to Optional Features.
- (a) A new commitment period commences with the upgrade.
 - (b) The new expiration date extended beyond the discontinued plan date.
 - (c) The upgrade consists of either one (1) existing DSR service being upgraded into a higher capacity DSR service or two (2) existing DSR services being upgraded into a single, higher capacity DSR service.
 - (d) The new DSR service has at least one customer premises Node and one CO Node in common with the discontinued service(s).
 - (e) When two (2) existing DSR services are being upgraded into a single, higher capacity DSR service, the aggregate amount of all monthly charges for the nodes and ports included under the new commitment period is at least 25% greater than the aggregate amount of the monthly charges remaining in the commitment period for the nodes and ports being disconnected.

For illustrative purposes, assume the following:

- Customer has 2 separate OC3 DSR services
- One OC3 DSR is in its twenty-fourth (24th) month of a 3-year term plan (i.e., 12 months remain in the term commitment period) and is configured with 3 nodes and 6 ports (Ring A)
- The other OC3 DSR is in its twenty-first (21st) month of a 3-year term plan (i.e., 15 months remain in the term commitment period) and is configured with 3 nodes and 6 ports (Ring B)
- The customer is upgrading Rings A & B to a single OC12 DSR with a term plan of 3 years that is to be configured with 3 nodes and 6 ports (Ring C)

Based on the above assumptions, the following calculations are used to determine if the aggregate amount of monthly charges for the commitment period of Ring C is greater than the combined aggregate amount of monthly charges for the remainder of the commitment periods on Rings A & B and therefore, whether or not termination liability will apply to Rings A & B for the upgrade.

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(E) Termination Liability (Cont'd)

(5) (Cont'd)

Step 1 – Determine the amount of monthly charges remaining on Ring A for the balance of the term commitment by multiplying the monthly rates for the 3 nodes and 6 ports (assume \$4680 per month) by the 12 months remaining in the term commitment = \$56,160.

Step 2 - Determine the amount of monthly charges remaining on Ring B for the balance of the term commitment by multiplying the monthly rates for the 3 nodes and 6 ports (assume \$4680 per month) by the 15 months remaining in the term commitment = \$70,200.

Step 3 – Determine the combined aggregate amount of monthly charges remaining for Rings A & B by summing the amounts determined in Steps 1 and 2 (\$56,160 + \$70,200 = \$126,360).

Step 4 – Determine the aggregate amount of monthly charges associated with Ring C by multiplying the monthly rates (assume \$9390) by 36 months for the term commitment = \$338,040.

Step 5 – Determine the difference between the monthly charges for the existing service and the monthly charges for the upgraded service by subtracting the combined aggregate amount determined in Step 3 from the aggregate amount determined in Step 4 (\$338,040 - \$126,360 = \$211,680).

Step 6 - Divide the result obtained in Step 5 by the aggregate amount determined in Step 3 (\$211,680/\$126,360 = 1.675). Convert the decimal amount to a percentage by multiplying by 100 (1.675 x 100 = 167.5%).

If the result is equal to or greater than 25%, then the upgrade occurs without the application of termination liability on Rings A & B. If the result is less than 25%, termination liability applies to Rings A & B in accordance with this Section (E). Standard rounding rules apply. For this example, the result is 167.5%; therefore, termination liability does not apply.

Additional nodes and ports added at the time of the upgrade incur all applicable rates.

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(E) Termination Liability (Cont'd)

(5) (Cont'd)

- (f) Termination liability will apply when the conditions above are not met and the customer service prior to expiration of the plan period. If the cancellation occurs within the first two years of a term plan, termination liability is equal to 100 percent of the monthly charges for the unexpired portion of the first two years, and 25 percent of the monthly charges for the remainder of the plan. If the customer after the first two years of service, then termination liability is equal to 25 percent of the monthly charges for the remaining life of the term.
- (g) For DSR with a commitment period which was extended under (I) following, termination liability is calculated as the difference between the monthly rates for the highest Term Pricing Plan commitment period that could have been satisfied prior to disconnection of the service or cancellation of the plan and the monthly rates already paid for the expired commitment period and the extended commitment period for the period of time the service was in effect.

(F) Conversions

Customers who wish to move or convert existing High Capacity Switched or Special Access Services to a DSR may do so without conversion charges (termination liability and installation charges) as long as the total capacity of Switched or Special Access service purchased by the customer does not decrease.

(G) Deployment and Availability

Since DSR service provides a dedicated high capacity customized network, it is deployed upon customer request. Where SONET facilities are not generally available, rates and charges as set forth in the Special Construction, Section 20 of this Tariff, may apply.

DSR is available based on negotiated intervals as described in 5.2.1(B) preceding.

(H) Shared Use

The regulations applicable to the shared use of DSR are set forth in Section 5.2.7 preceding. Shared Use and Switched Access Services are prohibited on DSR partial ring configurations.

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(I) Extension of a Commitment Period

- (1) For DSR, the customer also has the option, within sixty (60) days prior to the expiration date for its commitment period, to extend its expiring Term Pricing Plan to a plan with a longer commitment period, for which time-in-service credit will be allowed for the expiring plan. The commitment period selected for the extended plan was longer than the commitment period of the expiring plan as follows:
 - An expiring 3-Year Term may be extended to either a 5-Year or 7-Year Term Plan.
 - An expiring 5-Year Term may be extended to a 7-Year Term Plan.
- (2) Time-in-service credit on the expiring plan will be granted and applied towards the new extended plan. For example, an expiring 3-Year term plan will allow for 3 years of time-in-service credit towards the extended plan.
- (3) The rate for the longer commitment period will apply effective with the first bill day following expiration of the commitment period for the existing plan and continue through the remainder of the commitment period associated with the extended plan. No adjustment for the increased discount associated with the extended plan will be made to the monthly rates already billed on the expiring plan.

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(J) Channel Interface Codes

The following channel interface codes are for use with DSR:

<u>Compatible CIs</u>	<u>Compatible CIs</u>
02CXF.A, B or C	04DS6.44
02LNF.A02	04DS6.44I
02LNF.A03	04DS9.15
02LNF.A04	04DS9.15K
02LNF.A05	04DS9.15S
02LNF.A06	04DS9.1K
02LNF.A07	04DS9.1S
02LNF.A08	04DS9.1SN
02LNF.A09	04DU9.1KN
02SMF.000	04DU9.1SN
02SNF.000	04DU9.CN
02SOF.B	04DU9.SN
02SOF.BB	04SOF.B
02SOF.BU	04SOF.D
02SOF.D	04SOF.F
02SOF.DB	04ST6.A
02SOF.DU	04SOF.X
02SOF.F	02SSF.A02
02SOF.FB	02SSF.A03
02SOF.FU	02SSF.A02
02SOF.I	02SSF.A05
02SOF.U	02SSF.A06
02SOF.X	02SSF.A07
02SQF.000	02SSF.A08
02SSF.B01	02SSF.A09
02SSF.B02	02SSF.B01
02SSF.C01	02SSF.B02
02SSF.C02	02SSF.C01
02SSF.C03	02SSF.C02
02QBF.LL	02SSF.C03
02QEF.LL	

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(K) Optional Features

The customer has the option of purchasing one of the following Optional Features for use with Special Access DSR service provided by the Telephone Company in accordance with this Section 34.1. Only one of these Optional Features may be provided on a single DSR service. In order to purchase one of the Optional Features, the customer was subscribed to a DSR service and must use such DSR service in conjunction with the selected Optional Feature.

- Customer Service Management Optional Feature, as set forth in (K)(1) following
- Direct TL1 Monitoring Optional Feature, as set forth in (K)(2) following

(1) Customer Service Management Optional Feature (CSM)

(a) Description

CSM provides a customer with real-time information about the operational status of its DSR network and the ability to reconfigure lower level services riding the DSR ring. Three (3) Service Levels of support are offered for CSM. Each Service Level provides different functionalities to which the customer may gain access. These functionalities are described following and include access to real-time information about the customer's DSR network, the ability to generate reports, and the ability to reconfigure lower level services riding the DSR ring. When ordering CSM, the customer must specify the level of CSM support as one of the following three (3) Service Levels.

- (1) Level 1 support provides a network view of real-time detection and reporting of network alarm conditions within the customer's DSR network.
- (2) Level 2 support provides the same support described in Level 1 along with the ability for the customer to generate basic network performance reports for its DSR network. The customer may also request network performance reports that are customized to meet their specific needs.

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(K) Optional Features (Cont'd)

(1) Customer Service Management Optional Feature (CSM) (Cont'd)

(a) Description (Cont'd)

(3) Level 3 support provides the same support described in Levels 1 and 2 along with the ability to reconfigure (re-map) the end points of lower level services riding the ring.

- (a) Reconfiguration using CSM consists of re-mapping the end point of a primary circuit to its preplanned (backup) port location. The customer must specify a preplanned port location for each primary circuit installed. The preplanned port location is a backup location that is activated and de-activated when a primary circuit is reconfigured at the request of the customer via the CSM platform. A reconfiguration is limited to the mapping of one primary circuit to its assigned preplanned location. For each preplanned port location, a monthly recurring rate and a nonrecurring installation charge apply per port in accordance with (K)(1)(b) following. When the primary circuit and preplanned port are part of a Shared Billing Arrangement, the Service User's Letter of Authorization for the Shared Billing Arrangement (as set forth in Section 5.2 preceding) must include an acknowledgment that the Host Customer has the ability to perform CSM functions (e.g., reconfiguration) on the portion of the Service User's service that rides the DSR.
- (b) A Telephone Company Performed Reconfiguration charge, as described in (K)(1)(b) following, will apply when the customer requests that the Telephone Company perform a reconfiguration of service on its behalf. This charge does not apply when a customer performs its own service reconfiguration.
- (c) Reconfiguration is not permitted on services arranged in the following service configurations:
 - (i) Switched Access Service;
 - (ii) service provided under a shared use arrangement;
 - (iii) service associated with Centrex-CO or Primary Rate ISDN service;
 - (iv) primary circuits for which the customer has not specified a preplanned backup location; or
 - (v) Fibre Channel/FICON service.
- (d) The type of nodes deployed within the DSR network may limit reconfiguration of OC12/OC12c circuits within an OC48 DSR. CSM is not available on partial ring configurations.

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(K) Optional Features (Cont'd)

(1) Customer Service Management Optional Feature (CSM) (Cont'd)

(a) Description (Cont'd)

(3) (Cont'd)

- (e) When CSM is added to an existing ring, existing circuits that are being made reconfigurable will require that an Access Order be issued to designate the circuit as reconfigurable. Nonrecurring charges as set forth in Section 5 preceding may apply. The Telephone Company's ability to provide CSM on a particular ring may be limited by the overall configuration of that ring. Reconfiguration is limited to those circuits that originate and/or terminate on the ring (i.e., at locations served by a node on the ring) and utilize ports that are symmetrical. For circuits that originate or terminate off the ring (i.e., at locations not served by a node on the ring), the reconfiguration is limited to customer premises node locations on the ring.

(b) Rate Regulations

CSM rates and charges are set forth in Section 30.34.1 preceding for Price Band Rates and Charges and Section 31.34.1 preceding for Rate Zone Rates and Charges, unless noted otherwise. CSM rates and charges apply in addition to any applicable DSR rates and charges as described in (D) preceding. Unless otherwise indicated below, CSM rates and charges apply regardless of the Service Level selected by the customer.

(1) Monthly Recurring Rates

- (a) A CSM Service Level rate applies for each DSR ring provided with CSM.
- (b) For customers subscribing to Service Level 3 support, a Preplanned Port rate, as set forth in Section 30.34.1 preceding for Price Band Rates and Charges and Section 31.34.1 preceding for Rate Zone Rates and Charges, applies for each preplanned port location established.

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(K) Optional Features (Cont'd)

(1) Customer Service Management Optional Feature (CSM) (Cont'd)

(b) Rate Regulations (Cont'd)

(2) Nonrecurring Charges

- (a) A Node Setup charge applies for each node that is equipped with CSM at the time that CSM is initially established on the ring.
- (b) An Add/Remove Node charge applies for each node that is subsequently added to, or removed from, a ring that has already been equipped to provide CSM.
- (c) An Initial CSM Setup charge applies for establishment of the customer's initial CSM database partition. The initial CSM database partition includes setup for up to six (6) users.
- (d) A Setup of Additional Users charge applies for the setup of up to six (6) additional users beyond those provided with the initial database setup when CSM is initially established on the ring.
- (e) A Setup of Additional Partition or Change in CSM Service Level charge applies for the setup of an additional CSM database partition created for the same customer or to change from one CSM service level to another (e.g., change Service Level 2 to Service Level 3). Each additional CSM database provides for the setup of up to six (6) additional users.
- (f) A Consultation and Support charge applies for each thirty (30) minutes or fraction thereof that the customer requests Telephone Company consultation and support of its CSM network. This charge does not apply during initial setup of CSM on the ring.

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(K) Optional Features (Cont'd)

(1) Customer Service Management Optional Feature (CSM) (Cont'd)

(b) Rate Regulations (Cont'd)

(2) Nonrecurring Charges (Cont'd)

- (g) A Telephone Company Performed Reconfiguration charge applies for Service Level 3 customers only when the customer requests that the Telephone Company perform a reconfiguration based on its pre-mapping instructions.
- (h) A Preplanned Port charge, as set forth in Section 30.34.1 preceding for Price Band Rates and Charges and Section 31.34.1 preceding for Rate Zone Rates and Charges, applies for Service Level 3 customers only for each port associated with a preplanned location that is established during the initial establishment of CSM on the ring.

(c) Terms and Conditions

- (1) The customer must utilize Internet web access to connect its customer-provided terminal equipment to the Telephone Company's CSM management system. Access to the Internet and any associated rates and charges are the responsibility of the customer. The customer is also responsible for obtaining communications software that is compatible with the software the Telephone Company utilizes to provide CSM. The Telephone Company will work cooperatively with the customer to determine compatibility of its communications software.
- (2) CSM is provided only when the Telephone Company provides all nodes on the ring.
- (3) Subject to the restrictions set forth in (K)(1)(c)(4) following, CSM is provided coincident with the installation of the associated DSR ring or may be added to an existing ring. The customer will be responsible for the rates and charges set forth in (K)(1)(b) preceding.

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(K) Optional Features (Cont'd)

(1) Customer Service Management Optional Feature (CSM) (Cont'd)

(c) Terms and Conditions (Cont'd)

- (4) CSM Service Level is provided under a term plan of 3 years, 5 years, or 7 years, as described following.
 - (a) The duration of the term plan for CSM Service Level was the same duration as the term plan for the DSR nodes provided with CSM. The customer has the option of subscribing to Preplanned Ports on a month-to-month basis or under a term plan of 3, 5, or 7 years. At the expiration of its 3, 5, or 7 year term plans for CSM Service Levels or Preplanned Ports, the customer has the option of extending CSM Service Level or Preplanned Ports with a coterminous end date as described in (K)(1)(c)(4)(b) following.
 - (b) The expiration date of each CSM Service Level added subsequent to the initial installation was coterminous to the expiration date of the associated DSR service, provided that the addition is prior to the 21st month for a 3-year plan, prior to the 36th month for a 5-year plan, or prior to the 50th month for a 7-year plan. A CSM added after the aforementioned periods requires extension of the commitment period for the associated DSR service in accordance with Section (I) preceding. Such extension results in the establishment of a new plan that includes both the DSR and the CSM under the same plan with the same expiration date.
- (5) With Service Level 2 or 3 support, the customer may retrieve certain basic reports containing performance-monitoring information on its DSR network, as designated and provided by the Telephone Company. Basic reports are available at no additional charge to the customer. The customer may also request that a report be customized to meet its particular needs. Rates and charges for customized reports are provided on an individual case basis (ICB) only. Reports are not provided with Level 1 support.
- (6) CSM is subject to termination liability if CSM is removed prior to completion of the existing commitment period. The terms and conditions in (E) preceding, as applicable, apply to removal of CSM prior to completion of the existing commitment period.
- (7) When the Shared Billing Arrangement is requested for a service that will be part of the Host Customer's DSR equipped with the CSM optional feature, the Service User's Letter of Authorization for the Shared Billing Arrangement (as required under Section 5.2 preceding) must include an acknowledgment that the Host Customer has the ability to perform CSM functions (e.g., reconfiguration) on the portion of the Service User's service that rides the DSR.

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34. Dedicated Ring and Optical Services (Cont'd)34.1 Dedicated SONET Ring# (Cont'd)

(K) Optional Features (Cont'd)

(2) Direct TL1 Monitoring Optional Feature (DTM)

(a) Description

Direct Transaction Language 1 (TL1) Monitoring Optional Feature (DTM) provides a customer with near real-time information about the operational status of its DSR network over a TL1 connection. A TL1 connection is a machine-to-machine communication language protocol. The connection allows a customer to monitor its DSR network via a limited set of executable TL1 commands in order to query alarm and performance criteria.

(1) DTM enables the following:

- (a) Near real-time access to system-generated alarm and performance messages originating from the customer's DSR network elements.
- (b) Query and response capability that enables two-way communications with the capability to poll and retrieve messages, such as command alarms and performance messages.
- (c) Access to DSR ring inventory information that will enable the customer to maintain its own inventory database containing network element configurations and usage records for active service channels.
- (d) Notification that a power failure has occurred at a DSR network element and that the affected network element has reverted to battery backup.
- (e) Ability to monitor the ring, as well as all service channels riding the ring. When a channel riding the ring is part of a Shared Billing Arrangement, the Service User's Letter of Authorization for the Shared Billing Arrangement (as required under Section 5.2 preceding) must include an acknowledgment that the Host Customer has the ability to perform DTM functions (e.g., monitoring) on the portion of the Service User's service that rides the DSR.

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(K) Optional Features (Cont'd)

(2) Direct TL1 Monitoring Optional Feature (DTM) (Cont'd)

(b) Rate Regulations

DTM rates and charges are set forth in Section 30.34.1 preceding for Price Band Rates and Charges and Section 31.34.1 preceding for Rate Zone Rates and Charges and apply in addition to any applicable DSR rates and charges as described in (D) preceding.

(1) Monthly Recurring Rates

A DTM rate applies for each DSR ring provided with DTM.

(2) Nonrecurring Charges

- (a) A Node Setup charge applies for each node that is equipped with DTM at the time that DTM is initially established on the ring.
- (b) An Add/Remove Node charge applies for each node that is subsequently added to, or removed from, a ring that has already been equipped to provide DTM.
- (c) An Initial DTM Setup charge applies for establishment of the customer's initial DTM database partition.
- (d) A Consultation and Support charge applies for each thirty (30) minutes or fraction thereof that the customer requests Telephone Company consultation and support of its DTM network. This charge does not apply during initial setup of DTM on the ring.

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(K) Optional Features (Cont'd)

(2) Direct TL1 Monitoring Optional Feature (DTM) (Cont'd)

(c) Terms and Conditions

- (1) Subject to the restrictions set forth in this Section (K)(2)(c), DTM is provided coincident with the installation of the associated DSR ring or may be added to an existing ring. The customer will be responsible for the rates and charges set forth in (K)(2)(b) preceding.
- (2) The customer must order two (2) Special Access Services as provided by the Telephone Company under Section 7 preceding in order to ensure secure, dedicated private line access and enable full redundancy for DTM. These Special Access Lines must originate at the customer's designated premises and terminate at a DTM site designated by the Telephone Company. Special Access services will only be provided in accordance with the terms and conditions of this tariff. The customer is responsible for procuring any additional services that may be necessary to connect the Special Access Service to the customer's designated premises.
- (3) When requested by the customer, and where technically feasible to do so, the Telephone Company will provide encryption capabilities on the Special Access Services used to access DTM. The Telephone Company will specify any equipment or software required to provide encryption. Obtaining such equipment or software is the responsibility of the customer. The customer is also responsible for:
 - (i) security of any equipment, servers, systems, or other facilities provided by the customer and which have access to the DTM network; and
 - (ii) monitoring access to the DTM service using the facilities, systems, equipment, or servers provided by the customers.
- (4) DTM is only provided when the Telephone Company provides all the nodes on the ring. DTM is not available on partial ring configurations.

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(K) Optional Features (Cont'd)

(2) Direct TL1 Monitoring Optional Feature (DTM) (Cont'd)

(c) Terms and Conditions (Cont'd)

- (5) The monthly recurring charges for DTM are provided under a term plan of 3 years, 5 years, or 7 years. The duration of the term plan for DTM was the same duration as the term plan for the DSR nodes.
- (6) The expiration date of each DTM added subsequent to the initial installation was coterminous to the expiration date of the associated DSR service, provided that the addition of DTM is prior to the 21st month for a 3-year plan, prior to the 36th month for a 5-year plan, or prior to the 50th month for a 7-year plan. A DTM added after the aforementioned periods requires extension of the commitment period for the associated DSR service in accordance with (I) preceding. Such extension results in the establishment of a new plan that includes both the DSR and DTM under the same plan with the same expiration date.
- (7) Termination liability will apply if DTM is removed prior to completion of the existing commitment period. The terms and conditions in (E) preceding, as applicable, will apply.

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ACCESS SERVICE

35. TARIFFED SERVICE COMPONENTS

The Tariffed Service Components offered in this Section 35 are for the exclusive use of customers for connecting to the interstate services provided by the Telephone Company as described in more detail herein.

35.1 Integrated Optical Service Riders

35.1.1 General

- (A) Telephone Company provided integrated optical service, which is provided where technically and operationally feasible as determined by the Telephone Company, provides a customer with a single network platform that is capable of converging SONET, Dense Wave Division Multiplexing, and Ethernet technologies.
- (B) An Integrated Optical Service Rider is a service component provided under tariff that allows a lower level signal to be transported only between two points (nodes) on a Telephone Company provided integrated optical service.
- (C) Integrated Optical Service Riders are provided in the following protocols:
 - (1) DS1 Special Access – for transmission of isochronous serial data at a rate of 1.544 Mbps.
 - (2) DS3 Special Access – for transmission of isochronous serial data at a rate of 44.736 Mbps.
- (D) Integrated Optical Service Riders are only available on a protected basis. A protected rider allows for a single signal from the customer to be duplicated and sent over separate diverse routes (working and protect).

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35. TARIFFED SERVICE COMPONENTS (Cont'd)35.1 Integrated Optical Service Riders (Cont'd)

35.1.2 Deployment and Availability

Integrated Optical Service Riders may only be added to an in-service Telephone Company provided integrated optical service. Integrated Optical Service Riders are provided based on negotiated intervals as described in Section 5.2.1(B) preceding.

35.1.3 Connection to Other Services

- (A) A High Capacity Special Access DS1/DS3 service may be connected to an in-service Telephone Company provided integrated optical service to be originated or terminated to an integrated optical service customer designated premises node via an Integrated Optical Service DS1/DS3 Rider.
- (B) The High Capacity Special Access Service was ordered with the same length Commitment Period as the Integrated Optical Service Rider.
- (C) For purposes of administering the regulations and rates contained in this tariff, the portion of the High Capacity Special Access Service which is delivered over the Telephone Company provided integrated optical service is considered to be a High Capacity Special Access service, except as follows: Rates and charges for the High Capacity Special Access service are not applicable to the portion of the service which is delivered over the Telephone Company provided integrated optical service. Rates for the Integrated Optical Service Rider are applicable to the portion of the service which is delivered over the Telephone Company provided integrated optical service.

35.1.4 Responsibility of the Customer

- (A) All Integrated Optical Service Rider signals generated by CPE and delivered to the Telephone Company for multiplexing on to an integrated optical service must meet industry standards and specifications for the underlying protocol. The customer is responsible to perform any error detection and error correction of the data generated by its equipment. The Telephone Company assumes no responsibility for the quality of the signal generated by the customer or any CPE and will deliver the signal to the receiving location in the same format and condition as generated by the customer.

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35. TARIFFED SERVICE COMPONENTS (Cont'd)35.1 Integrated Optical Service Riders (Cont'd)

35.1.4 Responsibility of the Customer (Cont'd)

(B) Shared Billing Arrangement

- (1) A Shared Billing Arrangement is a service offering that enables a customer (the "Service User") to connect Integrated Optical Service Riders to a Telephone Company provided integrated optical service of another customer (the "Host Customer"), with the Telephone Company maintaining separate records and billing. Each customer will be billed for those rate elements associated with his own portion of the service configuration. Under no circumstances will the rates or charges for individual rate elements be split.
- (2) When establishing an Integrated Optical Service Rider under a Shared Billing Arrangement, the Host Customer and the Service User must coordinate with each other the design, testing and maintenance of the service; additionally, the Service User must provide to the Telephone Company the Connecting Facility Assignment (CFA) of the Host Customer.

Upon receipt of a letter of authorization for a Shared Billing Arrangement from the Host Customer, the Telephone Company will undertake to connect the Service User's Riders to the Host Customer's service and to establish and maintain separate billing for the Service User's portion of the service.
- (3) Under the Shared Billing Arrangement, the Telephone Company may share with the Host Customer record information pertaining to the services of other users of the arrangement. Such disclosure will be under the sole discretion of the Telephone Company as is necessary to perform billing reconciliations and/or other functions required in connection with maintaining account records.
- (4) Section 7.4.11 preceding contains rate regulations specific to Shared Billing Arrangements.

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35. TARIFFED SERVICE COMPONENTS (Cont'd)35.1 Integrated Optical Service Riders (Cont'd)

35.1.5 Conversions

- (A) Customers who wish to convert both points of termination of an existing High Capacity Special Access Service to an Integrated Optical Service Rider may do so without termination liability as long as the capacity of the Integrated Optical Service Rider purchased by the customer is equal to or greater than the capacity of the converted High Capacity Special Access Service.
- (B) Customers who wish to convert one point of termination of an existing High Capacity Special Access Service to an Integrated Optical Service Rider, as specified in Section 35.1.3 preceding, may do so without termination liability.

35.1.6 Application of Rates

- (A) For each Integrated Optical Service Rider, monthly recurring rates apply at the ingress and egress locations (Appearances) on the integrated optical service. Two Appearances (one for ingress and one for egress) apply for an Integrated Optical Service Rider provided in a point-to-point (node-to-node) configuration.
- (B) When a High Capacity Special Access Service is ordered to connect to a Telephone Company provided integrated optical service as specified in Section 35.1.3 preceding, the Integrated Optical Service Rider rates will be billed to the customer of record for the associated High Capacity Special Access service.

35.1.7 Term Plans

Integrated Optical Service Riders are available on a month-to-month basis and for term plan lengths of two (2) years, three (3) years, five (5) years, or seven (7) years (Commitment Periods).

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35. TARIFFED SERVICE COMPONENTS (Cont'd)35.1 Integrated Optical Service Riders (Cont'd)

35.1.8 Expiration of Commitment Period

Upon expiration of any Commitment Period, the Telephone Company will continue to provide Integrated Optical Service Riders on a month-to-month basis, under the prevailing rates of the current term plan, until the customer service or requests a new term plan.

35.1.9 Termination Liability

(A) Only Integrated Optical Service Riders provided under a term plan (i.e., two (2) years, three (3) years, five (5) years, or seven (7) years) are subject to termination liability if service is disconnected prior to the end of the Commitment Period. Termination liability is calculated as follows:

- (1) If the disconnection occurs during the first year of the Commitment Period, the Minimum Period obligation specified in 35.1.10 following applies for the unexpired portion of the first year. Termination liability is calculated at one hundred percent (100%) of the monthly recurring rates for the second year and twenty-five percent (25%) of the monthly recurring rates for the 25th month through the remainder of the Commitment Period, as applicable.
- (2) If the disconnection occurs during the second year of the Commitment Period, termination liability is calculated at one hundred percent (100%) of the monthly recurring rates for the unexpired portion of the second year and twenty-five percent (25%) of the monthly recurring rates for the 25th month through the remainder of the Commitment Period, as applicable.
- (3) If the disconnection occurs after the first two (2) years of the Commitment Period, termination liability is calculated at twenty-five (25%) of the monthly recurring rates from the date of disconnection through the remainder of the Commitment Period.

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35. TARIFFED SERVICE COMPONENTS (Cont'd)35.1 Integrated Optical Service Riders (Cont'd)

35.1.9 Termination Liability (Cont'd)

(B) Termination liability will not apply in the following situations:

- (1) An Integrated Optical Service Rider is upgraded to a higher capacity Integrated Optical Service Rider (i.e., DS1 to DS3), and the following conditions are met:
 - (a) The new Integrated Optical Service Rider has an equal or longer Commitment Period than the existing Integrated Optical Service Rider; and
 - (b) All of the locations of the existing Integrated Optical Service Rider and new Integrated Optical Service Rider are the same.

The Customer remains responsible for satisfying any outstanding Minimum Period obligations.

- (2) The customer its term plan in order to establish a new term plan with a Commitment Period that is equal to, or longer than, the term plan being cancelled.

35.1.10 Minimum Period

- (A) If an Integrated Optical Service Rider is disconnected during the Minimum Period, the customer shall pay to the Telephone Company one hundred percent (100%) of the monthly recurring rates from the date of disconnection through the end of the Minimum Period.
- (B) Integrated Optical Service Riders are subject to a one (1) year Minimum Period.

(TR 1)

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