
ACCESS SERVICE

23. Dedicated Ring and Optical Services23.1 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 point-to-point service between multiple customer locations. DSR is an alternative to basic High Capacity Switched Access premises to hub service between a customer's location and an end office or tandem office. 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 (L) following.
- (3) Minimum period obligations can be found in Section 6.8.2(A) preceding for Switched Access DSR and in Section 7.4.4(B) preceding for Special Access DSR.
- (4) Certain terms used in this Section 23.1 are defined in Section 6.8.25(B) preceding for Switched Access DSR and in Section 7.2.14(B) preceding for Special Access DSR.
- (5) Technical specifications are set forth in Section 6.8.25(A) preceding for Switched Access DSR and in Section 7.2.14(A) 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 23.1 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 during the current commitment period 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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23. Dedicated Ring and Optical Services23.1 Dedicated SONET Ring# (Cont'd)

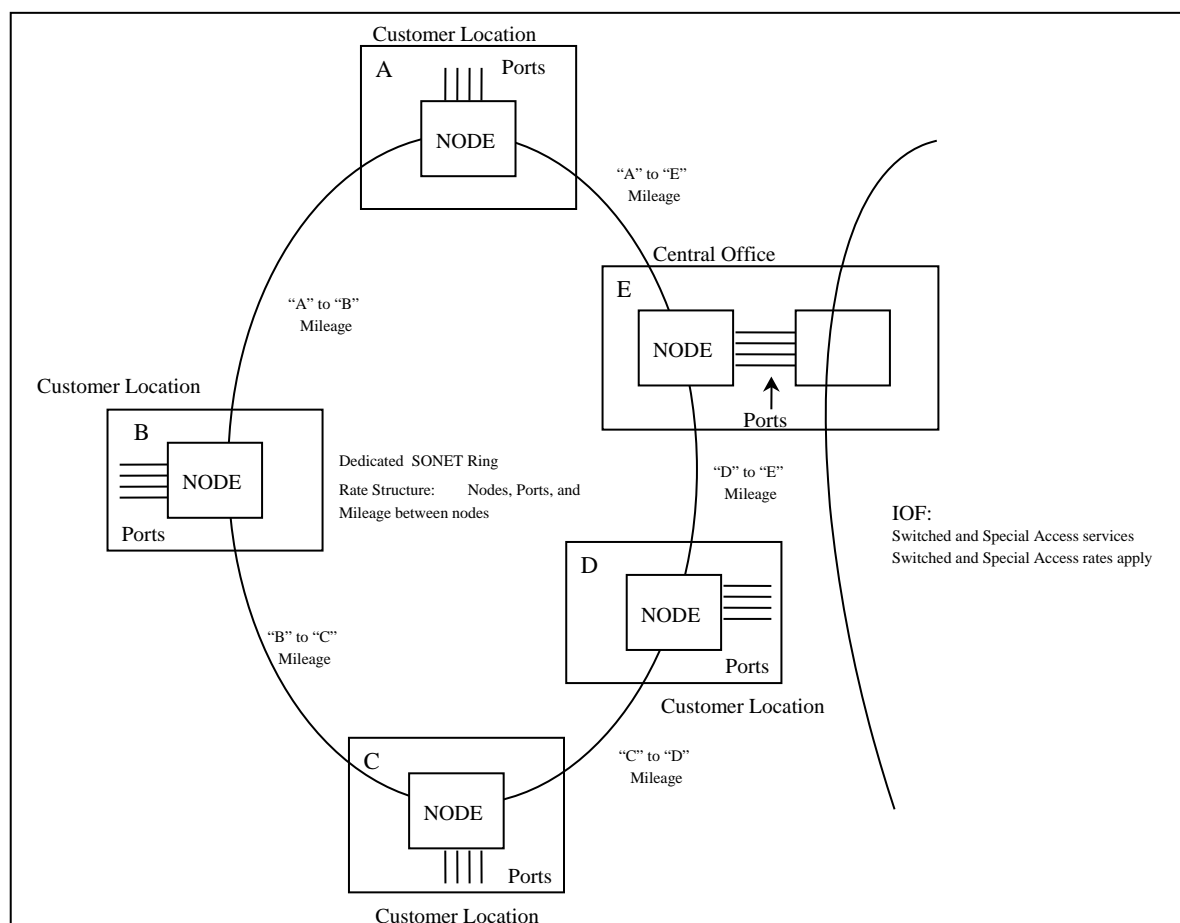
(A) General (Cont'd)

(B) Service Description

(1) Full Ring

(a) A full DSR ring 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 Company Central Office (CO) and one being located at a customer premises. One or more full rings may interconnect with each other in a subtending ring configuration as described in (B)(4) following.

(b) An example of a full Dedicated SONET Ring is diagrammed below:



Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 Company's 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 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 must be in a CO. When the partial ring is provided over an Dedicated SONET Optical Transport Service (DSOTS) or a Telephone Company provided DWDM ring service, the DSOTS/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, DSOTS/DWDM ring service node or DSOTS/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.
 - (3) When the fiber meet occurs at a mutually agreed upon location, the point of interconnection shall be a high speed (pass-through) interface.

* Special Access configurations only.

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(B) Service Description (Cont'd)

(2) Partial Ring* (Cont'd)

(c) Fiber Meet (Cont'd)

- (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.
- (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 as described in Section 19 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 the 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 which 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.

Service availability limited. Refer to # footnote on Page 23-1.

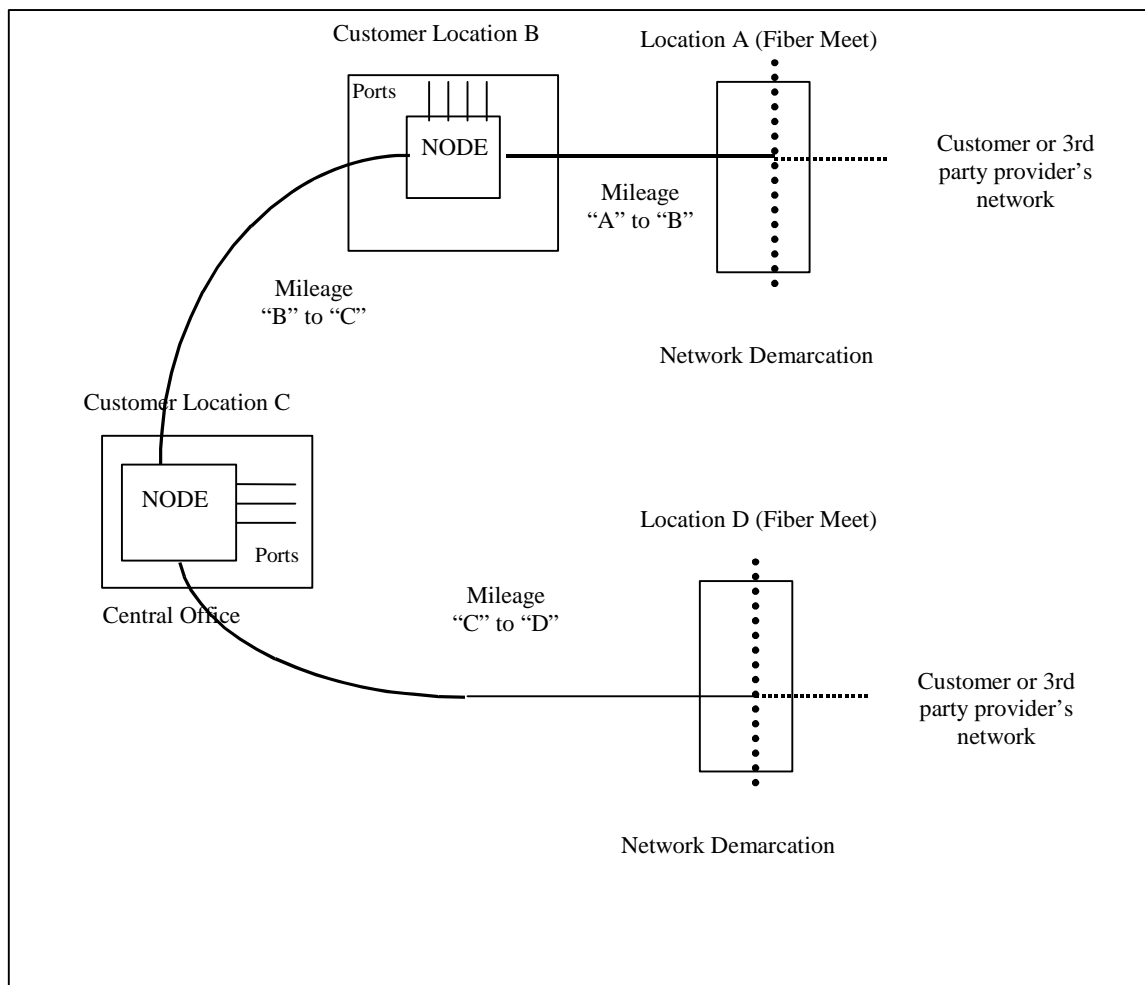
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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(B) Service Description (Cont'd)

(2) Partial Ring* (Cont'd)

(e) An example of a partial Dedicated SONET Ring is diagrammed below:



* Special Access configurations only.

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 the customer premises or Company wire center.
- The Company must provide the lower speed nodes.
- Each lower speed node must be located at the same customer premises or 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 must be designated by the customer as the main ring from which the other DSR full ring(s) will subtend. The main ring must be of equal or greater capacity than each DSR full ring that subtends 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 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.

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(B) Service Description (Cont'd)

(4) Subtending Rings (Cont'd)

- (d) Each ring in a subtending ring configuration must be 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 must be located in a Telephone Company wire center. For example, if the main ring has one (1) node located in a Telephone Company wire center and two (2) 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.

Service availability limited. Refer to # footnote on Page 23-1.

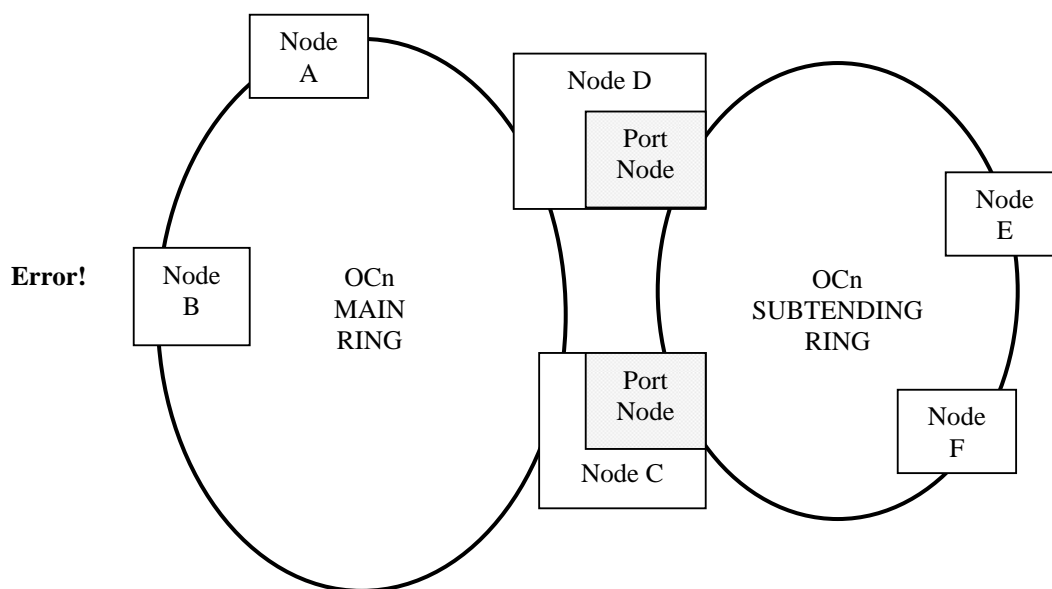
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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 must be 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

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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.

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(B) Service Description (Cont'd)

(7) Connections to Other Services

- (a) DSR may connect to Dedicated SONET Optical Transport Service (DSOTS) optical transport channels as set forth in Section 6.8.25 (C)(6) or 7.2.14(C)(4) preceding. DSOTS combines Dense Wave Division Multiplexing (DWDM) and SONET technologies to create a high-speed backbone network configured in a ring architecture. When the DSR partial ring is provided over a DSOTS, the DSOTS nodes 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 Dedicated SONET Broadband Transport (DSBT) Service, an equal speed DSBT multiplexing node or an equal speed port of a multiplexed DSBT service.
- (c) Reserved
- (d) Ethernet Private Line 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 Ethernet Private Line 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).
 - (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) Ethernet Private Line 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.

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(B) Service Description (Cont'd)

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

- (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, Ethernet Private Line Gigabit Ethernet (transmitted at 50, 150, 300, 450, 600 Mbps or Full Rate) may be connected to a DSR OC48 or OC192 enhanced CO node. The connection of Ethernet Private Line 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 Ethernet Private Line customers under a three, five, or seven-year commitment period connect their Ethernet Private Line Gigabit Ethernet service to DSR, the DSR GigE ports must be provided under the same length commitment period. When Ethernet Private Line customers under a one-year commitment period connect their Ethernet Private Line Gigabit Ethernet service to DSR, the DSR GigE ports will be provided at month-to-month rates. Ethernet Private Line Gigabit Ethernet is further described in Section 7.2.16 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 must be designated.
- (g) Extended Superframe Format (ESF) is required 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
 - Ethernet private line service
 - dedicated SONET ring service

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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. In addition, an OC12/3 node is available on OC12 DSRs. 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, and OC192 for Switched Access services. Enhanced nodes are available on ring capacities of OC3, OC12, OC48, and OC192 for Special Access services.
- (b) The following ports are accepted speeds on nodes that are not enhanced.

Nodes:	OC3	OC12/3	OC12	OC48	OC192
DS1 Ports	X	X			
DS3 Ports	X	X	X	X	X
STS1 Ports	X	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

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

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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, i.e., an OC12/3 node cannot be used to regenerate transmission on an OC12 ring.

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

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 subtends 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 must be 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) must be 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.

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(C) Service Components (Cont'd)

(2) Ports

- (a) Ports may be ordered in a symmetrical arrangement (e.g., DS3 Port to DS3 Port), 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 STS1-24v 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

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 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 Stub Hub 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 a Collocated 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's 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.

Service availability limited. Refer to # footnote on Page 23-1.

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23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 a Collocated 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 a Collocated Interconnection arrangement that is not located within the same wire center as the node, mileage applies to extend the APF to the Collocated 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 and 7 preceding. Cross-connection to Collocated Interconnection Service arrangements apply in accordance with Section 19 preceding.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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*
	STS-1	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*
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 must be SONET mapped.

** Enhanced nodes and concatenation are not available on Switched Access Ports

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 must be SONET mapped.

** Enhanced nodes and concatenation are not available on Switched Access Ports

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 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 conversions allows a single DSR DS3 Transmux port to be a facility associated with up to twenty-eight (28) VT1.5 mapped DSR DS1 ports. 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 with 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 must be connected to DS3 High Capacity Service as set forth in Section 6.8.1 or 7.4.13 preceding.
 - The higher speed port of an asymmetrical port combination will be mapped based on the speed of the connecting service and port.

(e) Storage Interface Ports

- (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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 (L) following by 21 miles. This mileage calculation applies regardless of the number of services (e.g., DS3s) on the ring.
- (d) When DSR is provided entirely or in part over an Dedicated SONET Optical Transport Service (DSOTS) backbone network as set forth in Section 6.8.25(C)(6) or 7.2.14(C)(4) preceding, connection between the DSR nodes is provided using DSOTS optical transport channels in lieu of DSR channel mileage between the nodes.
- (e) When DSR is provided entirely or in part 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 cancels service or requests a new term plan.
- (3) Nonrecurring Charges
 - (a) First and Additional Nonrecurring Charges for Ports
 - (1) The 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.
 - (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 plan billed port nodes, are treated as disconnects and subsequent installations for which subsequent nonrecurring charges apply.

* 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

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

(3) Nonrecurring Charges (Cont'd)

- (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 (L) following 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.
- (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 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 (2) separate asymmetric 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 apply for the installation of an Optional Feature as described in (K)(1) and (K)(2) 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).

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

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

- (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) Changes from OC12 to OC12/3 and OC12/3 to OC12 Nodes are treated as upgrades. Subsequent installation nonrecurring charges are applicable.
- (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 Ethernet Private Line 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 extends 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.

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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(E) Termination Liability (Cont'd)

(5) (Cont'd)

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.

- (f) Termination liability will apply when none of the conditions above are met and the customer cancels 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 cancels 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 Dedicated SONET Ring (DSR) with a commitment period which was extended under (l) 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(F) Conversions

Customers who wish to move or convert existing High Capacity Special Access Services to a DSR may do so without conversion charges (termination liability and installation charges) as long as the total capacity of Special Access Services 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 Interstate Special Construction Tariffs may apply.

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

(H) Shared Use

- (1) Shared use is permitted whenever Special Access and Switched Access are provided over the same DSR. At least one channel of a service (e.g., DS1 or DS3) on the ring must be Special Access for the service to be billed as Special Access.
- (2) The node, mileage and port rate elements are reduced (ratcheted) to offset the Switched Access charges for the entrance facility, and mileage. Two separate reduction ratios are used. The reduction ratio for the node and mileage charges is calculated by dividing the number of switched DS0 equivalents in use on the DSR by the total DS0 equivalent quantities for the ring; see the table below.

<u>Ring Type</u>	<u>DS3 Quantities</u>	<u>DS1 Quantities</u>	<u>DS0 Quantities</u>
OC3	3	84	2,016
OC12	12	336	8,064
OC48	48	1,344	32,256
OC192	192	5,376	129,024
- (3) The reduction ratio for the port charge is calculated by dividing the number of switched DS0 equivalents in use on the channelized services on the DSR (the lower speed services on the ring) by the total number of DS0 equivalents that are in use on the channelized services on the DSR.
- (4) If the DSR is used to route Switched Access traffic between Telephone Company Wire Centers, then Switched Access Direct Trunk Transport rates are also applied.
- (5) Shared Use and Switched Access Services are prohibited on DSR partial ring configurations.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(I) Extension of a Commitment Period

- (1) For Dedicated SONET Ring (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 must be 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 discount percentage associated with the extended plan 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 percentage associated with the extended plan will be made to the monthly rates already billed on the expiring plan.

(J) Reserved

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 23.1. 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 must be 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.
- (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 Network Arrangement, the Service User's Letter of Authorization for the Shared Network 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 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)

- (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.
- (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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(K) Optional Features (Cont'd)

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

(b) Rate Regulations

CSM rates and charges are set forth in (L) following, 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 (L) following, applies for each preplanned port location established.

(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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 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 (L) following, 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 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 must be 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 must be 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 (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 Network 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 Network 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 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 Network Arrangement, the Service User's Letter of Authorization for the Shared Network 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 (L) following 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(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 Services 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.
- (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 must be the same duration as the term plan for the DSR nodes.
- (6) The expiration date of each DTM added subsequent to the initial installation must be 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.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges

(1) Nodes

(A) Monthly Rates, Per Node

(1) Switched Access

Node Type3-Year Term*5-Year Term*7-Year Term*

* 3-year, 5-year and 7-year term plans are not available in West Virginia.

(2) Special Access

<u>Node Type</u>	<u>3-Year Term</u>	<u>5-Year Term</u>	<u>7-Year Term</u>
OC3			
N-MSA	\$2,228.00	\$1,290.00	\$1,186.00
Price Band 4	2,228.00	1,290.00	1,186.00
Price Band 5	2,228.00	1,290.00	1,186.00
Price Band 6	2,228.00	1,290.00	1,186.00
Enhanced OC3			
N-MSA	2,228.00	1,290.00	1,186.00
OC12/3			
N-MSA	3,837.00	2,132.00	1,918.00
Price Band 4	3,837.00	2,132.00	1,918.00
Price Band 5	3,837.00	2,132.00	1,918.00
Price Band 6	3,837.00	2,132.00	1,918.00
OC12			
N-MSA	2,768.00	2,050.00	1,975.00
Price Band 4	3,943.00	2,238.00	2,015.00
Price Band 5	3,943.00	2,238.00	2,015.00
Price Band 6	3,943.00	2,238.00	2,015.00
Enhanced OC12			
N-MSA	4,860.00	2,700.00	2,430.00
Price Band 4	4,860.00	2,700.00	2,430.00
Price Band 5	4,860.00	2,700.00	2,430.00
Price Band 6	4,860.00	2,700.00	2,430.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(1) Nodes (Cont'd)

(A) Monthly Rates, Per Node (Cont'd)

OC48

N-MSA	5,717.00	4,235.00	4,050.00
Price Band 4	10,658.00	4,604.00	4,143.00
Price Band 5	10,658.00	4,604.00	4,143.00
Price Band 6	10,658.00	4,604.00	4,143.00

Enhanced OC48

N-MSA	10,658.00	4,604.00	4,143.00
Price Band 4	10,658.00	4,604.00	4,143.00
Price Band 5	10,658.00	4,604.00	4,143.00
Price Band 6	10,658.00	4,604.00	4,143.00

OC192

N-MSA	15,525.00	11,500.00	10,350.00
Price Band 4	20,700.00	11,500.00	10,350.00
Price Band 5	20,700.00	11,500.00	10,350.00
Price Band 6	20,700.00	11,500.00	10,350.00

Enhanced OC192

4,050.00			
N-MSA	\$16,560.00	\$9,200.00	\$8,280.00
Price Band 4	16,560.00	9,200.00	8,280.00
Price Band 5	16,560.00	9,200.00	8,280.00
Price Band 6	16,560.00	9,200.00	8,280.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(1) Nodes (Cont'd)

(B) Nonrecurring Charges

(1) Subsequent Installation, Per Node or Port Node

	<u>Nonrecurring Charge</u>
(a) Switched Access*	
OC3, OC12, OC48, or OC192	\$1,599.00
(b) Special Access	
OC3, OC12, OC48, or OC192	
N-MSA	1,599.00
Price Band 4	1,599.00
Price Band 5	1,599.00
Price Band 6	1,599.00

* 3-year, 5-year and 7-year term plans are not available in West Virginia.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(2) Mileage, Per Mile Between Nodes

(a) Switched Access

<u>Ring Type</u>	<u>USOC</u>	<u>3-Year Term*</u>
		<u>5-Year Term*</u>
		<u>7-Year Term*</u>

* 3-year, 5-year and 7-year term plans are not available in West Virginia.

(b) Special Access

<u>Ring Type</u>	<u>3-Year Term</u>	<u>5-Year Term</u>	<u>7-Year Term</u>
OC3			
N-MSA	\$352.00	\$235.00	\$223.00
Price Band 4	352.00	235.00	223.00
Price Band 5	352.00	235.00	223.00
Price Band 6	352.00	235.00	223.00
OC12			
N-MSA	400.00	310.00	300.00
Price Band 4	671.00	359.00	341.00
Price Band 5	671.00	359.00	341.00
Price Band 6	671.00	359.00	341.00
OC48			
N-MSA	625.00	450.00	400.00
Price Band 4	1,279.00	639.00	607.00
Price Band 5	1,279.00	639.00	607.00
Price Band 6	1,279.00	639.00	607.00
OC192			
N-MSA	1,215.00	900.00	850.00
Price Band 4	2,559.00	1,279.00	1,215.00
Price Band 5	2,559.00	1,279.00	1,215.00
Price Band 6	2,559.00	1,279.00	1,215.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports

(a) Monthly Rates, Per Port

(1) Switched Access

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term*</u>	<u>5-Year Term*</u>
DS1 at OC3 or OC12/3 Node	\$ 28.00		
DS1 at OC12 Node#	28.00		
DS1 at OC48 Node#	28.00		
DS1 at OC192 Node#	115.00		
DS3 or STS1 at OC3 or OC12/3 Node	115.00		
DS3 or STS1 at OC12 Node	115.00		
DS3 or STS1 at OC48 Node	115.00		
DS3 or STS1 at OC192 Node	115.000		
DS3 Transmux at OC3#	400.00		
DS3 Transmux at OC12#	400.00		
DS3 Transmux at OC48#	400.00		
DS3 Transmux at OC192#	400.00		

* 3, 5 and 7-year term plans are not available in West Virginia.

Requires an enhanced node.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(1) Switched Access (Cont'd)

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term*</u>	<u>5-Year Term*</u>	<u>7-Year Term***</u>
OC3 at OC12 Node	\$250.00			
OC3 at OC48 Node	250.00			
OC3 at OC192 Node	250.00			
OC12 at OC48 Node	500.00			
OC12 at OC192 Node	500.00			
OC48 at OC192 Node	1,200.00			

* 3, 5 and 7-year term plans are not available in West Virginia.

** Ports with 7-year term plans are only available when used in the provision of asymmetrical port facilities or subtending node facilities which are under a 7-year term plan.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(2) Special Access

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term</u>	<u>5-Year Term</u>	
DS1 at OC3 or OC12/3 Node				
Price Band 4	28.00	28.00	28.00	(D)
Price Band 5	28.00	28.00	28.00	
Price Band 6	28.00	28.00	28.00	
DS1 at OC12 Node*				(D)
Price Band 4	28.00	28.00	28.00	
Price Band 5	28.00	28.00	28.00	
Price Band 6	28.00	28.00	28.00	
DS1 at OC48 Node*				(D)
Price Band 4	28.00	28.00	28.00	
Price Band 5	28.00	28.00	28.00	
Price Band 6	28.00	28.00	28.00	
DS1 at OC192 Node*				(D)
Price Band 4	28.00	28.00	28.00	
Price Band 5	28.00	28.00	28.00	
Price Band 6	28.00	28.00	28.00	
DS3 or STS1 at OC3, or OC3/12 Node				(D)
Price Band 4	143.00	115.00	115.00	
Price Band 5	143.00	115.00	115.00	
Price Band 6	143.00	115.00	115.00	
DS3 or STS1 at OC12 Node				(D)
Price Band 4	115.00	115.00	115.00	
Price Band 5	115.00	115.00	115.00	
Price Band 6	115.00	115.00	115.00	
DS3 or STS1 at OC48 Node				(D)
Price Band 4	115.00	115.00	115.00	
Price Band 5	115.00	115.00	115.00	
Price Band 6	115.00	115.00	115.00	

* Requires enhanced node.

Service availability limited. Refer to # footnote on Page 23-1.

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(2) Special Access (Cont'd)

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term</u>	<u>5-Year Term</u>
DS3 or STS1 at OC192 Node			
Price Band 4	115.00	115.00	115.00
Price Band 5	115.00	115.00	115.00
Price Band 6	115.00	115.00	115.00
DS3 Transmux at OC3 Node*			
Price Band 4	400.00	400.00	400.00
Price Band 5	400.00	400.00	400.00
Price Band 6	400.00	400.00	400.00
DS3 Transmux at OC12 Node*			
Price Band 4	400.00	400.00	400.00
Price Band 5	400.00	400.00	400.00
Price Band 6	400.00	400.00	400.00
DS3 Transmux at OC48 Node*			
Price Band 4	400.00	400.00	400.00
Price Band 5	400.00	400.00	400.00
Price Band 6	400.00	400.00	400.00
DS3 Transmux at OC192 Node*			
Price Band 4	400.00	400.00	400.00
Price Band 5	400.00	400.00	400.00
Price Band 6	400.00	400.00	400.00

* Requires an Enhanced Node.

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(2) Special Access (Cont'd)					
Port Type	M-to-M	3-Year Term	5-Year Term	7-Year Term**	
OC3 at OC12 Node					
N-MSA	250.00	250.00	250.00		\$250.00
Price Band 4	343.00	343.00	343.00		
Price Band 5	343.00	343.00	343.00		
Price Band 6	343.00	343.00	343.00		
OC3 at OC48 Node					
N-MSA	250.00	250.00	250.00		250.00
Price Band 4	343.00	343.00	343.00		
Price Band 5	343.00	343.00	343.00		
Price Band 6	343.00	343.00	343.00		
OC3 at OC192 Node					
N-MSA	250.00	250.00	250.00		250.00
Price Band 4	343.00	343.00	343.00		
Price Band 5	343.00	343.00	343.00		
Price Band 6	343.00	343.00	343.00		
OC3c at OC12 Node					
N-MSA	\$250.00	\$250.00	\$250.00		
Price Band 4	274.00	274.00	274.00		
Price Band 5	274.00	274.00	274.00		
Price Band 6	274.00	274.00	274.00		
OC3c at OC48 Node					
N-MSA	250.00	250.00	250.00		
Price Band 4	274.00	274.00	274.00		
Price Band 5	274.00	274.00	274.00		
Price Band 6	274.00	274.00	274.00		
OC3c at OC192Node					
N-MSA	250.00	250.00	250.00		
Price Band 4	274.00	274.00	274.00		
Price Band 5	274.00	274.00	274.00		
Price Band 6	274.00	274.00	274.00		

** Ports with 7-year term plans are only available when used in the provision of asymmetrical port facilities or subterminating node facilities which are under a 7-year term plan.

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(2) Special Access (Cont'd)

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term</u>	<u>5-Year Term</u>	<u>7-Year Term**</u>
OC12 at OC48 Node				
N-MSA	500.00	500.00	500.00	\$500.00
Price Band 4	642.00	642.00	642.00	
Price Band 5	642.00	642.00	642.00	
Price Band 6	642.00	642.00	642.00	
OC12 at OC192 Node				
N-MSA	500.00	500.00	500.00	500.00
Price Band 4	642.00	642.00	642.00	
Price Band 5	642.00	642.00	642.00	
Price Band 6	642.00	642.00	642.00	
OC12c at OC48 Node				
N-MSA	\$500.00	\$500.00	\$500.00	
Price Band 4	514.00	514.00	514.00	
Price Band 5	514.00	514.00	514.00	
Price Band 6	514.00	514.00	514.00	
OC12c at OC192Node				
N-MSA	500.00	500.00	500.00	
Price Band 4	514.00	514.00	514.00	
Price Band 5	514.00	514.00	514.00	
Price Band 6	514.00	514.00	514.00	
OC48 at OC192 Node				
N-MSA	1,200.00	1,200.00	1,200.00	\$1,200.00
Price Band 4	1,400.00	1,400.00	1,400.00	
Price Band 5	1,400.00	1,400.00	1,400.00	
Price Band 6	1,400.00	1,400.00	1,400.00	
OC48c at OC192 Node				
N-MSA	1,200.00	1,200.00	1,200.00	
Price Band 4	1,200.00	1,200.00	1,200.00	
Price Band 5	1,200.00	1,200.00	1,200.00	
Price Band 6	1,200.00	1,200.00	1,200.00	

** Ports with 7-year term plans are only available when used in the provision of asymmetrical port facilities or subterminating node facilities which are under a 7-year term plan.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(2) Special Access (Cont'd)

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term</u>	<u>5-Year Term</u>
Gigabit Ethernet*			
GigE1 at OC3 Node N-MSA	\$230.00	\$230.00	\$230.00
GigE1 at OC12 Node N-MSA	230.00	230.00	230.00
Price Band 4	230.00	230.00	230.00
Price Band 5	230.00	230.00	230.00
Price Band 6	230.00	230.00	230.00
GigE1 at OC48 Node N-MSA	230.00	230.00	230.00
Price Band 4	230.00	230.00	230.00
Price Band 5	230.00	230.00	230.00
Price Band 6	230.00	230.00	230.00
GigE1 at OC192 Node N-MSA	230.00	230.00	230.00
Price Band 4	230.00	230.00	230.00
Price Band 5	230.00	230.00	230.00
Price Band 6	230.00	230.00	230.00
GigE3 at OC12 Node N-MSA	\$345.00	\$345.00	\$345.00
Price Band 4	345.00	345.00	345.00
Price Band 5	345.00	345.00	345.00
Price Band 6	345.00	345.00	345.00
GigE3 at OC48 Node N-MSA	345.00	345.00	345.00
Price Band 4	345.00	345.00	345.00
Price Band 5	345.00	345.00	345.00
Price Band 6	345.00	345.00	345.00

* Requires enhanced node.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(2) Special Access (Cont'd)

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term</u>	<u>5-Year Term</u>
Gigabit Ethernet* (Cont'd)			
GigE3 at OC192 Node			
N-MSA	345.00	345.00	345.00
Price Band 4	345.00	345.00	345.00
Price Band 5	345.00	345.00	345.00
Price Band 6	345.00	345.00	345.00
GigE6 at OC12 Node			
N-MSA	455.00	455.00	455.00
Price Band 4	455.00	455.00	455.00
Price Band 5	455.00	455.00	455.00
Price Band 6	455.00	455.00	455.00
GigE6 at OC48 Node			
N-MSA	455.00	455.00	455.00
Price Band 4	455.00	455.00	455.00
Price Band 5	455.00	455.00	455.00
Price Band 6	455.00	455.00	455.00
GigE6 at OC192 Node			
N-MSA	455.00	455.00	455.00
Price Band 4	455.00	455.00	455.00
Price Band 5	455.00	455.00	455.00
Price Band 6	455.00	455.00	455.00
GigE9 at OC12 Node			
N-MSA	\$535.00	\$535.00	\$535.00
Price Band 4	535.00	535.00	535.00
Price Band 5	535.00	535.00	535.00
Price Band 6	535.00	535.00	535.00

* Requires enhanced node.

Service availability limited. Refer to # footnote on Page 23-1.

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(2) Special Access (Cont'd)

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term</u>	<u>5-Year Term</u>
Gigabit Ethernet* (Cont'd)			
GigE9 at OC48 Node			
N-MSA	535.00	535.00	535.00
Price Band 4	535.00	535.00	535.00
Price Band 5	535.00	535.00	535.00
Price Band 6	535.00	535.00	535.00
GigE9 at OC192 Node			
N-MSA	535.00	535.00	535.00
Price Band 4	535.00	535.00	535.00
Price Band 5	535.00	535.00	535.00
Price Band 6	535.00	535.00	535.00
GigE12 at OC48 Node			
N-MSA	645.00	645.00	645.00
Price Band 4	645.00	645.00	645.00
Price Band 5	645.00	645.00	645.00
Price Band 6	645.00	645.00	645.00
GigE12 at OC192 Node			
N-MSA	645.00	645.00	645.00
Price Band 4	645.00	645.00	645.00
Price Band 5	645.00	645.00	645.00
Price Band 6	645.00	645.00	645.00
GigE24 at OC48 Node			
N-MSA	880.00	880.00	880.00
Price Band 4	880.00	880.00	880.00
Price Band 5	880.00	880.00	880.00
Price Band 6	880.00	880.00	880.00
GigE24 at OC192 Node			
N-MSA	880.00	880.00	880.00
Price Band 4	880.00	880.00	880.00
Price Band 5	880.00	880.00	880.00
Price Band 6	880.00	880.00	880.00

* Requires enhanced node.

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(a) Monthly Rates, Per Port (Cont'd)

(3) Storage Interface Ports*

<u>Port Type</u>	<u>M-to-M</u>	<u>3-Year Term</u>	<u>5-Year Term</u>
1 Gbps Fibre Channel at OC48 Node N-MSA	\$1,000.00	\$1,000.00	\$1,000.00
1 Gbps Fibre Channel at OC192 Node N-MSA	1,000.00	1,000.00	1,000.00
1 Gbps FICON at OC48 Node N-MSA	1,000.00	\$1,000.00	1,000.00
1 Gbps FICON at OC192 Node N-MSA	1,000.00	1,000.00	1,000.00

* Requires enhanced node

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring## (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(b) Nonrecurring Charges

(1) Initial Installation Charges,
Per Month-to-Month Ports Only
(excluding Storage Interface Ports)

(a) Switched Access

Port Type	Nonrecurring Charge	
	First	Additional
DS1#	\$525.00	\$210.00
DS3, STS1, OC3, or DS3 Transmux#	805.00	343.00
OC12	767.00	327.00
OC48	767.00	327.00

(b) Special Access

OC3			
N-MSA	\$805.00	\$343.00	
Price Band 4	805.00	343.00	
Price Band 5	805.00	343.00	
Price Band 6	805.00	343.00	
OC3c			
N-MSA	805.00	343.00	
Price Band 4	805.00	343.00	
Price Band 5	805.00	343.00	
Price Band 6	805.00	343.00	
DS3 or STS1			(D)
Price Band 4	805.00	343.00	
Price Band 5	805.00	343.00	
Price Band 6	805.00	343.00	
DS3 Transmux at OC3 Node#			(D)
Price Band 4	805.00	343.00	
Price Band 5	805.00	343.00	
Price Band 6	805.00	343.00	
DS3 Transmux at OC12 Node#			(D)
Price Band 4	805.00	343.00	
Price Band 5	805.00	343.00	
Price Band 6	805.00	343.00	

Requires enhanced node.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring## (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(b) Nonrecurring Charges (Cont'd)

(1) Initial Installation Charges,
Per Month-to-Month Ports Only
(excluding Storage Interface Ports) (Cont'd)

(b) Special Access (Cont'd)

<u>Port Type</u>	<u>Nonrecurring Charge</u>	
	<u>First</u>	<u>Additional</u>
DS3 Transmux at OC48 Node#		
Price Band 4	805.00	343.00
Price Band 5	805.00	343.00
Price Band 6	805.00	343.00
DS3 Transmux at OC192 Node#		
Price Band 4	805.00	343.00
Price Band 5	805.00	343.00
Price Band 6	805.00	343.00
DS1#		
Price Band 4	525.00	210.00
Price Band 5	525.00	210.00
Price Band 6	525.00	210.00
OC12 or OC12c		
N-MSA	767.00	327.00
Price Band 4	767.00	327.00
Price Band 5	767.00	327.00
Price Band 6	767.00	327.00
OC48 or OC48c		
N-MSA	767.00	327.00
Price Band 4	767.00	327.00
Price Band 5	767.00	327.00
Price Band 6	767.00	327.00
Gigabit Ethernet#		
- Any GigE		
N-MSA	767.00	327.00
Price Band 4	767.00	327.00
Price Band 5	767.00	327.00
Price Band 6	767.00	327.00

Requires an enhanced node.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)

23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(b) Nonrecurring Charges (Cont'd)

(2) Subsequent Installation Charges,
All Ports except Storage Interface Ports

(a) Switched Access

Port Type	Nonrecurring Charge	
	First	Additional
DS1**, DS3, STS1, OC3, OC12, or DS3 Transmux	\$1.00	\$0.75
OC48	1.00	0.75

** Requires enhanced node when provided from an OC12, OC48 or OC192 node.

(b) Special Access

OC3			
N-MSA	\$1.00	\$0.75	
Price Band 4	1.00	0.75	
Price Band 5	1.00	0.75	
Price Band 6	1.00	0.75	
OC3c			
N-MSA	1.00	0.75	
Price Band 4	1.00	0.75	
Price Band 5	1.00	0.75	
Price Band 6	1.00	0.75	
DS3 or STS1			
Price Band 4	1.00	0.75	(D)
Price Band 5	1.00	0.75	
Price Band 6	1.00	0.75	
DS3 Transmux**			
Price Band 4	1.00	0.75	(D)
Price Band 5	1.00	0.75	
Price Band 6	1.00	0.75	
DS1*			
Price Band 4	1.00	0.75	(D)
Price Band 5	1.00	0.75	
Price Band 6	1.00	0.75	

* Requires an enhanced node when provided from an OC12, OC48 or OC192 node.

** Requires an enhanced node.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(b) Nonrecurring Charges (Cont'd)

(2) Subsequent Installation Charges,
All Ports except Storage Interface Ports

(b) Special Access

<u>Port Type</u>	<u>Nonrecurring Charge</u>	
	<u>First</u>	<u>Additional</u>
OC12		
N-MSA	\$1.00	\$0.75
Price Band 4	1.00	0.75
Price Band 5	1.00	0.75
Price Band 6	1.00	0.75
OC12c		
N-MSA	1.00	0.75
Price Band 4	1.00	0.75
Price Band 5	1.00	0.75
Price Band 6	1.00	0.75
OC48		
N-MSA	1.00	0.75
Price Band 4	1.00	0.75
Price Band 5	1.00	0.75
Price Band 6	1.00	0.75
OC48c		
N-MSA	1.00	0.75
Price Band 4	1.00	0.75
Price Band 5	1.00	0.75
Price Band 6	1.00	0.75
Gigabit Ethernet*		
- Any GigE		
N-MSA	1.00	0.75
Price Band 4	1.00	0.75
Price Band 5	1.00	0.75
Price Band 6	1.00	0.75

* Requires an enhanced node when provided from an OC12, OC48 or OC192 node.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(3) Ports (Cont'd)

(b) Nonrecurring Charges (Cont'd)

(3) Initial and Subsequent Installation Charges: Month-to-Month Storage Interface Ports only

<u>Port Type</u>	<u>First</u>	<u>Additional</u>
Storage Interface Ports*		
- 1 Gbps Fibre Channel at OC48 Node N-MSA	\$767.00	\$327.00
- 1 Gbps Fibre Channel at OC192 Node N-MSA	767.00	327.00
- 1 Gbps FICON at OC48 Node N-MSA	767.00	327.00
- 1 Gbps FICON at OC192 Node N-MSA	767.00	327.00

* Requires an enhanced node when provided from an OC12, OC48 or OC192 node.

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(4) Optional Features

(a) Customer Service Management
Optional Feature (CSM)

(1) Service Level, per ring

<u>Service Level</u>	<u>Monthly Rate</u>
Level 1: Network View only	
<u>3-Year</u>	
N-MSA	\$250.00
Price Band 4	250.00
Price Band 5	250.00
Price Band 6	250.00
<u>5-Year</u>	
N-MSA	250.00
Price Band 4	250.00
Price Band 5	250.00
Price Band 6	250.00
<u>7-Year</u>	
N-MSA	250.00
Price Band 4	250.00
Price Band 5	250.00
Price Band 6	250.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(4) Optional Features (Cont'd)

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

(1) Service Level, per ring (Cont'd)

<u>Service Level</u>	<u>Monthly Rate</u>
Level 2: Network View & Basic Reports	
<u>3-Year</u>	
N-MSA	\$450.00
Price Band 4	450.00
Price Band 5	450.00
Price Band 6	450.00
<u>5-Year</u>	
N-MSA	450.00
Price Band 4	450.00
Price Band 5	450.00
Price Band 6	450.00
<u>7-Year</u>	
N-MSA	450.00
Price Band 4	450.00
Price Band 5	450.00
Price Band 6	450.00
Customized Reports	ICB

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(4) Optional Features (Cont'd)

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

(1) Service Level, per ring (Cont'd)

<u>Service Level</u>	<u>Monthly Rate</u>
Level 3: Network View, Basic Reports, & Reconfiguration	
<u>3-Year</u>	
N-MSA	\$850.00
Price Band 4	850.00
Price Band 5	850.00
Price Band 6	850.00
<u>5-Year</u>	
N-MSA	850.00
Price Band 4	850.00
Price Band 5	850.00
Price Band 6	850.00
<u>7-Year</u>	
N-MSA	850.00
Price Band 4	850.00
Price Band 5	850.00
Price Band 6	850.00
Customized Reports	ICB

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(4) Optional Features (Cont'd)

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

(2) Preplanned Port, per port

Rates and Charges are the same as
those set forth in (L)(3) preceding.Nonrecurring
Charge(3) Node Setup, per node on the
ring equipped during initial
establishment

N-MSA	\$200.00
Price Band 4	200.00
Price Band 5	200.00
Price Band 6	200.00

(4) Initial CSM Setup, first
partition with up to 6 users

N-MSA	\$500.00
Price Band 4	500.00
Price Band 5	500.00
Price Band 6	500.00

(5) Setup of additional
Partition or change in
CSM Service Level, each

N-MSA	\$500.00
Price Band 4	500.00
Price Band 5	500.00
Price Band 6	500.00

(6) Setup of Additional
Users, up to 6 additional
Users

N-MSA	\$350.00
Price Band 4	350.00
Price Band 5	350.00
Price Band 6	350.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(4) Optional Features (Cont'd)

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

	<u>Nonrecurring Charge</u>
(7) Add/Remove Node, per node added to, or removed from, the CSM ring	
N-MSA	\$200.00
Price Band 4	200.00
Price Band 5	200.00
Price Band 6	200.00
(8) Telephone Company performed Reconfiguration, per mapping	
N-MSA	\$300.00
Price Band 4	300.00
Price Band 5	300.00
Price Band 6	300.00
(9) Consultation and Support, each 30 minutes or fraction thereof	
N-MSA	\$100.00
Price Band 4	100.00
Price Band 5	100.00
Price Band 6	100.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(4) Optional Features (Cont'd)

(b) Direct TL1 Monitoring Optional Feature (DTM)

	<u>Monthly Rate</u>
(1) DTM, per ring	
3 year	
N-MSA	\$450.00
Price Band 4	450.00
Price Band 5	450.00
Price Band 6	450.00
5 year	
N-MSA	450.00
Price Band 4	450.00
Price Band 5	450.00
Price Band 6	450.00
7 year	
N-MSA	450.00
Price Band 4	450.00
Price Band 5	450.00
Price Band 6	450.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(4) Optional Features (Cont'd)

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

		Nonrecurring Charge
(2)	Node Setup, per node on the ring equipped during initial establishment	
	N-MSA	\$200.00
	Price Band 4	200.00
	Price Band 5	200.00
	Price Band 6	200.00
(3)	Initial DTM Setup	
	N-MSA	500.00
	Price Band 4	500.00
	Price Band 5	500.00
	Price Band 6	500.00
(4)	Add/Remove Node, per node added to, or removed from, the DTM ring	
	N-MSA	200.00
	Price Band 4	200.00
	Price Band 5	200.00
	Price Band 6	200.00
(5)	Consultation and Support, each 30 minutes or fraction thereof	
	N-MSA	100.00
	Price Band 4	100.00
	Price Band 5	100.00
	Price Band 6	100.00

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

- (5) Partial Ring Pass-Through Interface,
 - per Interface

	<u>Monthly Rate</u>
3-Year Term	
OC12	\$4,860.00
OC48	10,658.00
OC192	16,460.00
5-Year Term	
OC12	\$2,700.00
OC48	4,604.00
OC192	9,200.00
7-Year Term	
OC12	\$2,430.00
OC48	4,143.00
OC192	8,280.00

- (6) Partial Ring Channel Mapping,
 per channel mapped on a partial ring

<u>Channel Type</u>	<u>Nonrecurring Charge</u>	
DS1*	\$150.00	(T)
DS3 or STS1*	150.00	(T)
OC3	150.00	
OC3c	150.00	
OC12	150.00	
OC12c	150.00	
OC48	150.00	
OC48c	150.00	
GigE1	150.00	
GigE3	150.00	
GigE6	150.00	
GigE9	150.00	
GigE12	150.00	
GigE24	150.00	
1 Gbps Fibre Channel	150.00	
1 Gbps FICON	150.00	

* Rate applies to Price Bands 4, 5 and 6.

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(7) Asymmetrical Port Facility (APF)*

(a) Monthly Rates, per APF

(1) Month to Month Billing

(a) Switched Access

<u>APF Type</u>	<u>Monthly Rate</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 500.00
- OC3 Channel Extension, each	3,800.00
OC12 APF*	
- OC12 Mileage, per mile	1,000.00
- OC12 Channel Extension, each	7,000.00
OC48 APF*	
- OC48 Mileage, per mile	3,500.00
- OC48 Channel Extension, each	11,000.00
(b) Special Access	
<u>APF Type</u>	<u>Monthly Rate</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 500.00
- OC3 Channel Extension, each	3,800.00
OC12 APF*	
- OC12 Mileage, per mile	1,000.00
- OC12 Channel Extension, each	7,000.00
OC48 APF*	
- OC48 Mileage, per mile	3,500.00
- OC48 Channel Extension, each	11,000.00

* Requires an enhanced node

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(7) Asymmetrical Port Facility (APF)* (Cont'd)

(a) Monthly Rates, per APF (Cont'd)

(2) Term Plan Billing

(a) Switched Access

<u>APF Type</u>	<u>3-Year Rate</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 375.00
- OC3 Channel Extension, each	2,850.00
OC12 APF*	
- OC12 Mileage, per mile	750.00
- OC12 Channel Extension, each	5,500.00
OC48 APF*	
- OC48 Mileage, per mile	2,625.00
- OC48 Channel Extension, each	7,500.00
	<u>5-Year Term</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 337.50
- OC3 Channel Extension, each	2,565.00
OC12 APF*	
- OC12 Mileage, per mile	675.00
- OC12 Channel Extension, each	4,500.00
OC48 APF*	
- OC48 Mileage, per mile	2,362.00
- OC48 Channel Extension, each	6,350.50

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(7) Asymmetrical Port Facility (APF)* (Cont'd)

(a) Monthly Rates, per APF (Cont'd)

(2) Term Plan Billing (Cont'd)

(a) Switched Access (Cont'd)

<u>APF Type</u>	<u>7-Year Rate</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 303.75
- OC3 Channel Extension, each	2,308.50
OC12 APF*	
- OC12 Mileage, per mile	607.50
- OC12 Channel Extension, each	4,050.00
OC48 APF*	
- OC48 Mileage, per mile	2,126.25
- OC48 Channel Extension, each	5,715.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(7) Asymmetrical Port Facility (APF)* (Cont'd)

(a) Monthly Rates, per APF (Cont'd)

(2) Term Plan Billing (Cont'd)

(b) Special Access

<u>APF Type</u>	<u>3-Year Rate</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 375.00
- OC3 Channel Extension, each	2,850.00
OC12 APF*	
- OC12 Mileage, per mile	750.00
- OC12 Channel Extension, each	5,500.00
OC48 APF*	
- OC48 Mileage, per mile	2,625.00
- OC48 Channel Extension, each	7,500.00
	<u>5-Year Term</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 337.50
- OC3 Channel Extension, each	2,565.00
OC12 APF*	
- OC12 Mileage, per mile	675.00
- OC12 Channel Extension, each	4,500.00
OC48 APF*	
- OC48 Mileage, per mile	2,362.50
- OC48 Channel Extension, each	6,350.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(7) Asymmetrical Port Facility (APF)* (Cont'd)

(a) Monthly Rates, per APF (Cont'd)

(2) Term Plan Billing (Cont'd)

(b) Special Access (Cont'd)

<u>APF Type</u>	<u>7-Year Rate</u>
OC3 APF*	
- OC3 Mileage, per mile	\$ 303.75
- OC3 Channel Extension, each	2,308.50
OC12 APF*	
- OC12 Mileage, per mile	607.50
- OC12 Channel Extension, each	4,050.00
OC48 APF*	
- OC48 Mileage, per mile	2,126.25
- OC48 Channel Extension, each	5,715.00

(b) Nonrecurring Charges

(1) APF Mapping Charge,
- per lower capacity channel mapped
between two APFs on the same DSR

(a) Switched Access

<u>Channel Type</u>	<u>Nonrecurring Charge</u>
All Channel Types	\$500.00

(b) Special Access

<u>Channel Type</u>	<u>Nonrecurring Charge</u>
All Channel Types	\$500.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(8) Subtending Node Facility (SNF)*

(a) Monthly Rates, per SNF extended

(1) Term Plan Billing

(a) Switched Access

<u>SNF Type</u>	<u>3-Year Term</u>
OC3 SNF*	
- OC3 Mileage, per mile	\$ 375.00
- OC3 Channel Extension, each	2,850.00
OC12 SNF*	
- OC12 Mileage, per mile	750.00
- OC12 Channel Extension, each	5,500.00
OC48 SNF*	
- OC48 Mileage, per mile	2,625.00
- OC48 Channel Extension, each	7,500.00
	<u>5-Year Term</u>
OC3 SNF*	
- OC3 Mileage, per mile	\$ 337.50
- OC3 Channel Extension, each	2,565.00
OC12 SNF*	
- OC12 Mileage, per mile	675.00
- OC12 Channel Extension, each	4,500.00
OC48 SNF*	
- OC48 Mileage, per mile	2,362.50
- OC48 Channel Extension, each	6,350.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(8) Subtending Node Facility (SNF)* (Cont'd)

(a) Monthly Rates, per SNF extended (Cont'd)

(1) Term Plan Billing (Cont'd)

(a) Switched Access (Cont'd)

<u>SNF Type</u>	<u>7-Year Term</u>
OC3 SNF*	
- OC3 Mileage, per mile	\$ 303.75
- OC3 Channel Extension, each	2,308.50
OC12 SNF*	
- OC12 Mileage, per mile	607.50
- OC12 Channel Extension, each	4,050.00
OC48 SNF*	
- OC48 Mileage, per mile	2,126.25
- OC48 Channel Extension, each	5,715.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(8) Subtending Node Facility (SNF)* (Cont'd)

(a) Monthly Rates, per SNF extended (Cont'd)

(1) Term Plan Billing (Cont'd)

(b) Special Access

<u>SNF Type</u>	<u>3-Year Term</u>
OC3 SNF*	
- OC3 Mileage, per mile	\$ 375.00
- OC3 Channel Extension, each	2,850.00
OC12 SNF*	
- OC12 Mileage, per mile	750.00
- OC12 Channel Extension, each	5,500.00
OC48 SNF*	
- OC48 Mileage, per mile	2,625.00
- OC48 Channel Extension, each	7,500.00
	<u>5-Year Term</u>
OC3 SNF*	
- OC3 Mileage, per mile	\$ 337.50
- OC3 Channel Extension, each	2,565.00
OC12 SNF*	
- OC12 Mileage, per mile	675.00
- OC12 Channel Extension, each	4,500.00
OC48 SNF*	
- OC48 Mileage, per mile	2,362.50
- OC48 Channel Extension, each	6,350.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(8) Subtending Node Facility (SNF)* (Cont'd)

(a) Monthly Rates, per SNF extended (Cont'd)

(1) Term Plan Billing (Cont'd)

(b) Special Access (Cont'd)

<u>SNF Type</u>	<u>7-Year Term</u>
OC3 SNF*	
- OC3 Mileage, per mile	\$ 303.75
- OC3 Channel Extension, each	2,308.50
OC12 SNF*	
- OC12 Mileage, per mile	607.50
- OC12 Channel Extension, each	4,050.00
OC48 SNF*	
- OC48 Mileage, per mile	2,126.25
- OC48 Channel Extension, each	5,715.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(9) Port Nodes*
- Per Port Node

(a) Term Plan Billing

(1) Switched Access

<u>Port Node Type</u>	<u>Monthly Rate</u> <u>3-Year Rate</u>
- OC3 at OC3 Node	\$ 600.00
- OC3 at OC12 Node	600.00
- OC3 at OC48 Node	600.00
- OC3 at OC192 Node	600.00
- OC12 at OC12 Node	850.00
- OC12 at OC48 Node	850.00
- OC12 at OC192 Node	850.00
- OC48 at OC48 Node	1,800.00
- OC48 at OC192 Node	1,800.00
- OC192 at OC192 Node	4,500.00
<u>Port Node Type</u>	<u>Monthly Rate</u> <u>5-Year Rate</u>
- OC3 at OC3 Node	\$ 500.00
- OC3 at OC12 Node	500.00
- OC3 at OC48 Node	500.00
- OC3 at OC192 Node	500.00
- OC12 at OC12 Node	750.00
- OC12 at OC48 Node	750.00
- OC12 at OC192 Node	750.00
- OC48 at OC48 Node	1,600.00
- OC48 at OC192 Node	1,600.00
- OC192 at OC192 Node	3,800.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(9) Port Nodes* (Cont'd)
- Per Port Node

(a) Term Plan Billing (Cont'd)

(1) Switched Access (Cont'd)

<u>Port Node Type</u>	<u>Monthly Rate</u> <u>7-Year Rate</u>
- OC3 at OC3 Node	\$ 450.00
- OC3 at OC12 Node	450.00
- OC3 at OC48 Node	450.00
- OC3 at OC192 Node	450.00
- OC12 at OC12 Node	700.00
- OC12 at OC48 Node	700.00
- OC12 at OC192 Node	700.00
- OC48 at OC48 Node	1,500.00
- OC48 at OC192 Node	1,500.00
- OC192 at OC192 Node	3,000.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

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180 S. Clinton Ave., Rochester, NY 14646

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(9) Port Nodes* (Cont'd)
- Per Port Node

(a) Term Plan Billing (Cont'd)

(2) Special Access

<u>Port Node Type</u>	<u>Monthly Rate</u> <u>3-Year Rate</u>
- OC3 at OC3 Node	\$ 600.00
- OC3 at OC12 Node	600.00
- OC3 at OC48 Node	600.00
- OC3 at OC192 Node	600.00
- OC12 at OC12 Node	850.00
- OC12 at OC48 Node	850.00
- OC12 at OC192 Node	850.00
- OC48 at OC48 Node	1,800.00
- OC48 at OC192 Node	1,800.00
- OC192 at OC192 Node	4,500.00
<u>Port Node Type</u>	<u>Monthly Rate</u> <u>5-Year Rate</u>
- OC3 at OC3 Node	\$ 500.00
- OC3 at OC12 Node	500.00
- OC3 at OC48 Node	500.00
- OC3 at OC192 Node	500.00
- OC12 at OC12 Node	750.00
- OC12 at OC48 Node	750.00
- OC12 at OC192 Node	750.00
- OC48 at OC48 Node	1,600.00
- OC48 at OC192 Node	1,600.00
- OC192 at OC192 Node	3,800.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(9) Port Nodes* (Cont'd)
- Per Port Node

(a) Term Plan Billing (Cont'd)

(2) Special Access (Cont'd)

<u>Port Node Type</u>	<u>USOC</u>	<u>Monthly Rate</u> <u>7-Year Rate</u>
- OC3 at OC3 Node		\$ 450.00
- OC3 at OC12 Node		450.00
- OC3 at OC48 Node		450.00
- OC3 at OC192 Node		450.00
- OC12 at OC12 Node		700.00
- OC12 at OC48 Node		700.00
- OC12 at OC192 Node		700.00
- OC48 at OC48 Node		1,500.00
- OC48 at OC192 Node		1,500.00
- OC192 at OC192 Node		3,000.00

* Requires an enhanced node

Service availability limited. Refer to # footnote on Page 23-1.

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ACCESS SERVICE

23. Dedicated Ring and Optical Services (Cont'd)23.1 Dedicated SONET Ring# (Cont'd)

(L) Rates and Charges (Cont'd)

(10) Dual Node Cross-Connect Charge

- Per lower capacity channel provided through two interconnecting nodes in a subtending ring arrangement

(a) Switched Access

Channel TypeNonrecurring Charge

All Channel Types

\$500.00

(b) Special Access

Channel TypeNonrecurring Charge

All Channel Types

\$500.00

Service availability limited. Refer to # footnote on Page 23-1.