MULTI-SERVICE OPTICAL NETWORK RING SERVICE

A. Description

Effective December 1, 2012, Multi-service Optical (MON) Ring Service is not available for new installations. Existing MON Ring customers will be permitted to modify their service by adding new circuits to their existing service, but will not be permitted to add new nodes in new locations. New circuits added to existing locations will utilize the customer's existing Term Pricing Plan (TPP) and should be coterminous with the customer's existing TPP. Customers with TPPs that expire may not extend their service contract. Effective December 1, 2016, no Move, Add or Change orders of any type will be accepted.

Multi-service Optical Network Ring (MON Ring) Service provides high volume optical transport utilizing multiplexing technology in a dedicated ring configuration. Multiple data signals are transmitted over fiber-optic cable using different wavelengths of light. Each of these wavelengths represents a transmission channel in the MON Ring system and is protocol independent of every other channel in the system.

MON Ring Service is only available within the Local Access and Transport Areas (LATAs) served by and within the service territories of the Company.

MON Ring Service allows customers to combine their multiple data signals so that they can be amplified and transported over one network. MON Ring Service provides dedicated capacity over a single pair of fiber in two directions that increases capacity without limiting customer-required data interfaces.

Sub-Rate Systems:

Sub-Rate System - provides a multiplexing system operating at 1.25 Gbps with 4 ports. Applicable to ESCON™, Fast Ethernet, D1 Video, DVB-ASI Video, and OC-3/OC-3c port interfaces. Sub-rate multiplexing is offered at the serving wire center only for OC-3/OC-3c. /1/

ESCON™ Sub-Rate System - provides a multiplexing system which allows customers to put up to 8 ESCON™ Channels (no other protocol) on one port card. /1/

GigE/FC/FICON™ Sub-Rate System - provides a multiplexing system which allows customers to put 2 Gigabit Ethernet (GigE) Channels or 2 Fibre Channels (1.0625 Gbps) or 2 FICON™ Channels (1.0625 Gbps), or any combination thereof totaling two channels on the sub-rate system, on one port card. Fibre Channel (2.125 Gbps) and FICON™ (2.125 Gbps) cannot be place on this sub-rate system.

OC-3/OC-12 Sub-Rate System – provides a multiplexing system which allows customers to put up to either 4 OC-3/OC-3c signals or OC-12/OC-12c signals or combinations thereof on one card. This sub-rate multiplexing system will have independent timing which allows multiple OC-3/OC-3c services or OC-12/OC-12c services on one port card. /1/

SONET OC-48 Sub-Rate System – provides a multiplexing system which allows customers to put up to four (4) OC-48/OC-48c signals on one card. /2/

/1/ Available where facilities and equipment permit.
/2/ Available where facilities and equipment permit beginning November 30, 2005.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

A. Description (cont'd)

SBC MON Ring Service offers the following port interfaces:

IBM Protocols:/1/

ESCON™ (200 Mbps) – Enterprise Systems Connection. An IBM duplex optical connection used for computer-to-computer data exchange. ESCON™ is limited to a maximum distance of 43 km and actual data throughput is distance sensitive. ESCON™ is offered as a riding circuit where facilities and equipment permit.

ETR/CLO™ (8 Mbps – Manchester Encoded) – External Timing References/Control Link Oscillator. This protocol is used for IBM GDPS™ architecture for multiple-location host processors. ETR™ is limited to a maximum distance of 40 km.

FICON™ (1.0625 Gbps and 2.125 Gbps) – A higher-speed evolution of ESCON™, enabling 1 Gbps connectivity among mainframes, storage devices and peripherals. FICON™ is limited to a maximum distance of 100 km and actual data throughput is distance sensitive. 1.0625 Gbps service is offered as a riding circuit where facilities and equipment permit. 1.0625 Gbps service is capable of being multiplexed on the GigE/FC/FICON™ Sub-Rate System.

ISC-1™ (1.0625 Gbps) – Inter-System Coupling. This protocol is used with IBM GDPS™ architecture for multiple-location host processors. ISC™ is limited to a maximum distance of 40 km.

ISC-3™ (2.125 Gbps) – Inter-System Channel. ISC-3™ links have a peak data rate of 2.125 Gbps and can interconnect IBM™ eServer z900 systems for distances up to 10 km.

Other Protocols:

Fibre Channel (FC) (1.0625 Gbps and 2.125 Gbps) – an industry standard protocol used to interconnect Storage Area Networks (SANs). Fibre Channel is limited to a maximum distance of 100 km and actual data throughput is distance sensitive. 1.0625 Gbps service is offered as a riding circuit where facilities and equipment permit. 1.0625 Gbps service is capable of being multiplexed on the GigE/FC/FICON™ Sub-Rate System.

Fast Ethernet – a version of Ethernet that allows data transmission rates of 100 Mbps. Offered as a riding circuit where facilities and equipment permit.

Gigabit Ethernet (GigE) – a version of Ethernet that allows data transmission rates of 1 Gbps. Gigabit Ethernet is offered as a riding circuit where facilities and equipment permit.

10 Gigabit Ethernet (WAN-PHY) – a version of Ethernet that allows data transmission rates of 9.953 Gbps with a WAN-PHY only interface.

10 Gigabit Ethernet (LAN-PHY) – a version of Ethernet that allows data transmission rates of 10.3125 Gbps with a LAN-PHY only interface.

/1/ ESCON™, ETR™, FICON™, ISC-1™, ISC-3™ and GDPS™ are registered trademarks of the International Business Machines (IBM) Corporation, Armonk, NY 10504

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

A. Description (cont'd)

Other Protocols: (cont'd)

D1 Video – uncompressed digital video signal operating at 270 Mbps. Offered as a riding circuit where facilities and equipment permit.

DVB-ASI Video – Digital Video Broadcasting – provides a 1310 nm optical interface at 270 Mbps. Offered as a riding circuit where facilities and equipment permit.

SONET OC-3/OC-3c - provides a fiber-based 155.52 Mbps synchronous optical full duplex data transmission capability. Offered as a riding circuit where facilities and equipment permit. /1/

SONET OC-12/OC-12c - provides a fiber-based 622.08 Mbps synchronous optical full duplex data transmission capability. Offered as a riding circuit where facilities and equipment permit. /1/

SONET OC-48/OC-48c - provides a fiber-based 2488.32 Mbps synchronous optical full duplex data transmission capability. Offered as a riding circuit where facilities and equipment permit beginning November 30, 2005. /1/

SONET OC-192/OC-192c - provides a fiber-based 9953.28 Mbps synchronous optical full duplex data transmission capability. /1/

/1/ These port interfaces are available at both the Customer Premises Node and the Central Office Node. All other port interfaces are available only at the Customer Premises Node.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

B. Definitions

Bulk Power - Provides for customer premises node power which will be required if the customer's power source is AC.

Central Office Node - Provides for the termination of service at a serving wire center.

Channel Mileage - Provides for the transmission facilities between the serving wire centers associated with the Central Office Nodes and Customer Premises Nodes.

Channel Protection (Optional) - Provides protection for a single channel toward the network. It does not protect the channel against failure towards the customer interface. Protection reduces the maximum individual channel capacity of the system.

Customer Premises Node - Provides for the termination of service at the customer's premises and presents the various selected ports to the customer.

Optical Amplifier - Provides for an optical signal boost if the distance between nodes exceeds the transmission loss parameters (link loss specific). Engineering considerations may dictate the need for more than one optical amplifier on a circuit route. These additions may be service affecting. Optical amplifiers may be located at a Customer Premise node, a Central Office Node, or at a serving wire center.

Port - Provides the channel interface at any Node location for each unprotected or protected channel.

Regenerator - Provides for re-timing, re-shaping and regeneration of signals if degradation exceeds the dispersion or optical amplifier noise limits. Provided on a per shelf basis for up to 2.5 Gigabit Ethernet service. Provided on a per circuit, per each location the circuit is regenerated basis, for up to 10 Gigabit Ethernet service.

Sub-Rate System - Allows for multiple ports, also called riding circuits, on a single wavelength.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

C. Regulations (cont'd)

2. Provision of Service

a. MON Ring Service is only available under a Term Payment Plan with a thirty-six month or sixty-month minimum service period for which rates and charges are applicable. When a service is discontinued prior to the expiration of the minimum period, termination charges are applicable for the remaining portion of the minimum period, whether the service is used or not, and will be based on the rates in effect for the service at the time of discontinuance. (See F. following).

b. The customer-provided equipment must deliver the data signals for the MON Ring Service transport within the industry specification for the subscribed data services.

c. MON Ring Service provides physical layer transport only. The Company assumes no responsibility for the signals generated by the customer, for the quality of or defects in such signals, for the reception of signals by the customer, or address signaling to the extent addressing is performed by the customer. Error detection and correction of data generated by the customer is the customer's responsibility.

d. The service is considered interrupted when the customer reports a service disruption to the Company and the Company confirms that continuity of its service has been lost.

e. MON Ring Service may have distance limitations based on the services carried and may require routing through wire centers (central offices) based on loss limits between nodes. Services with facility length limitations may not be available on some MON rings, or may not be available between some nodes on certain MON rings.

f. Optical Amplifiers and/or Regenerators may have to be added to a MON Ring Service subsequent to the initial installation.

g. When additional services are added, such installation may cause a service interruption to existing unprotected channels, or a protection switch on protected channels.

h. Where conditions, equipment, and facilities permit, MON Ring Service will be offered in two configurations. Customers can purchase MON Ring with growth capacity up to 16 wavelengths or up to 32 wavelengths. The 32 wavelength system may, at the discretion of the Company, be built as two 16 wavelength systems sharing common fiber and some common equipment. Depending upon the configuration, conversion from a 16 wavelength MON Ring Service to a 32 wavelength MON Ring Service may not be available.

i. MON Ring Service is provided at the option of the Company where facilities permit. If appropriate facilities are not available, Special Construction charges, as set forth in paragraph D.4 in Part 15, Section 1 of this Guidebook, may apply.

j. Floor space for subsequent shelf growth at a Central Office Node beyond the initial installation will be provided where available, but cannot be guaranteed for subsequent shelf growth beyond the initial installation.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

C. Regulations (cont'd)

2. Provision of Service (cont'd)

   k. Prior to confirming an order for service, the Company will provide a proposed route diagram to the customer.

   l. Installation of service will not begin until the customer has accepted the proposed routing by the Company.

   m. Services with time-delay sensitive protocols have facility length limitations and may affect the design/availability of MON Ring Service. (e.g., CPU to CPU communications have a maximum distance limitation of 60 km). The Company will work cooperatively with the customer to determine if the desired services can operate between the customer's designated premises.

   n. Channel protection may not be available for all interface types.

   o. Conversion from MON (point-to-point) Service to MON Ring Service is not available.

   p. Conversions from any other lower speed services to MON Ring Service are not available.

   q. Where conditions, equipment, and facilities apply, the customer must first order the MON Ring Transport System followed by the MON Ring Channels. When ordering riding services, the customer must first order the MON Ring Transport System, followed by the MON Ring Sub-Rate System over which these riding services will be assigned. When riding services are ordered on a Sub-Rate System, they are represented by different rate elements than those services ordered directly on the MON Ring.

   r. Neither electrical interfaces nor optical add/drop multiplexing are available with this service.

   s. OC-12/OC-12c, Gigabit Ethernet, Fibre Channel (1.0625 Gbps) and FICON™ (1.0625 Gbps) can be ordered directly on MON Ring, or as a riding service on a Sub-Rate System. Fibre Channel (2.125 Gbps) and FICON™ (2.125 Gbps) can only be ordered directly on MON Ring, and cannot be ordered on a Sub-Rate System. OC-12, Gigabit Ethernet, Fibre Channel (1.0625 Gbps) and FICON™ (1.0625 Gbps) when ordered on a Sub-Rate System, are represented by different rate elements than those ordered directly on the MON Ring.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

C. Regulations (cont'd)

3. Allowance for Interruption

   a. A credit allowance will be given for interruptions of service. An interruption of service will start when an inoperative service is reported to the Company and end when the service is operative.

   b. Any protected service interruption of greater than 2 consecutive seconds as a result of a failure on the protected portion of the circuit will result in a credit equal to one month's bill for the individual port-to-port connections involved.

   c. If the interruption occurs on an unprotected portion of the circuit, normal terms and conditions for Credit Allowances as stated in paragraph D.8 in Part 15, Section 1 of this Guidebook will apply.

   d. In any month, as a result of an interruption, the total credit per rate element of the interrupted service may not exceed 100 percent of the monthly charge for that particular rate element.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

C. Regulations (cont'd)

4. Route Diversity

   a. MON Ring Service is configured with diversely routed fiber whenever possible. MON Ring Service will be available for protected channels 99.999% of the time and protected channels will switch within 50 milliseconds (not to exceed 2 seconds). Equipment interfaces towards the customer are not protected. Unprotected channels will be lost in the event of a fiber path failure on which the circuit is assigned.

   b. Routing of fiber may be diversified from the customer's property line to their serving wire center or alternate serving wire center as determined by the Company, and where facilities are available, to ensure that loop fibers follow separate paths to the serving wire center or alternate serving wire center. Interoffice facility (IOF) fiber paths may be diversely routed between serving wire centers or alternate serving wire centers. In addition, IOF fiber (if applicable) paths may be diversified to ensure that with any serving wire center Central Office Node, the fibers do not egress and ingress at the same point. In cases, where the serving wire center does not have multiple entrance fiber facilities, the section of the fiber from the closest manhole (to the serving wire center) will be routed within the same duct structure.

   c. At the customer's request, additional protection to the Customer Premises Nodes can be provided via dual entrance facilities. This special request may cause the customer to incur special construction cost. Without this special request, diverse fiber is provided to the closest manhole to the customer location property line. The customer or building owner is responsible for providing conduit designed to meet industry standards and local fire and safety codes from the property line to the building to within the premises. The customer determines route and method of protection inside the premises.

   d. In the case where dual entrance facilities are not established at the customer premises, facilities routed within the same duct structure from the property line to the building equipment location are not diverse.

D. Standard Configuration

1. MON Ring Service is available in different ring configurations utilizing Central Office Nodes and Customer Premises Nodes. The total number of circuits and total usable bandwidth to the customer depends upon the mix of services ordered and the specific traffic patterns of the customer. The Company will determine the appropriate wavelength assignment and the design of the MON Ring.

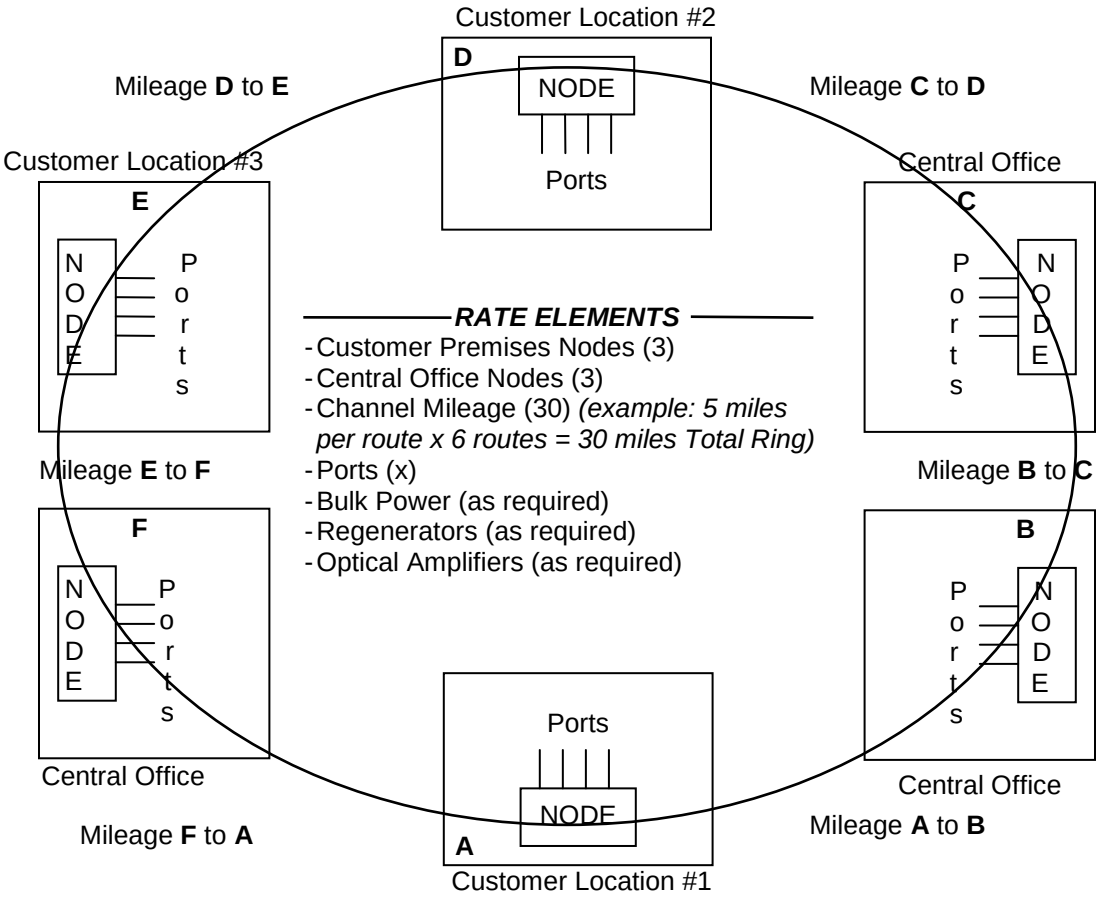
   The minimum configuration would be two customer nodes either at a serving wire center or a customer premise site. If the customer nodes are not in a serving wire center, a central office management site for monitoring is required. An optical amplifier located at a serving wire center can be used as a monitoring site.

   A combination of these configurations may be used in a network design depending on the customer's traffic pattern.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

D. Standard Configuration (cont'd)

2. Diagram of MON Ring



MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

E. Technical Specifications

The customer interfaces to MON Ring Service are as specified in:

Subject	Technical Reference
Ameritech LAN Interconnect Service - Token Ring Interface Specifications	AM TR-NIS-000100
Ameritech LAN Interconnect Service - CSMA/CD Interface Specifications	AM TR-NIS-000104
Ameritech OC-3, OC-12 and OC-48 Service Interface Specifications	AM-TR-NIS-000111
Ameritech Digital Service Transmission Parameters	AM-TR-TMO-000101
Ameritech Service's Network Channel and Network Channel Interface Codes	AM-TR-TMO-000080
Ameritech Technical Interface Specifications	AM-TR-NIS-000096
Ameritech Technical Interface Specifications (ESCON™)	AM-TR-NIS-000107
IBM Documentation (ESCON™)	IBM SA22-7202-XX IBM SA23-0394-XX
Fibre Channel (also includes FICON™ and ISC™)	ANSI X3.T9.3 ANSI/IEEE 802.3
Fast Ethernet	IEEE 802.3x and z
GigaBit Ethernet	IEEE 802.3ae
D1 Video	ANSI/SMPTE 259M

The Technical References can be obtained from:

AT&T at
www.sbc.com/public_affairs/regulatory_documents/tariffs /1,5932,448,00.html?pid=240

The Telcordia Technologies Research Publication(s) can be obtained from:

Telcordia Technologies
8 Corporate Place
Piscataway, New Jersey 08854

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

F. Rate Element Description

There are eight basic rate elements which may apply to MON Ring Service:

- Customer Premises Node
- Central Office Node
- Channel Mileage
- Optical Amplifier
- Regenerators
- Bulk Power
- Ports
- Nonrecurring Charges

1. Customer Premises Node – provides for the termination of service at the customer's premises and presents the various selected ports to the customer. Applies per customer-designated premises, per first shelf and subsequent shelves.

2. Central Office Node - provides for the termination of service at a Company serving wire center. Applies per first shelf and subsequent shelves.

3. Channel Mileage - provides for the transmission facilities between the serving wire centers of each node involved on the MON Ring. The mileage measurement is developed utilizing the V&H coordinate method as set forth in the National Exchange Carrier Association, Inc. (NECA) Wire Center Information Tariff, FCC 4. A one-mile minimum will be billed between nodes. A two-node ring configuration has a two-mile minimum, one mile from the Central Office Node to the Customer Premises Node, and one mile from the Customer Premises Node to the Central Office Node.

4. Optical Amplifier - provides for an optical signal boost if the distance between nodes exceeds the transmission loss parameters (link loss specific). Additional optical amplifiers may be required per location with certain circuit configurations. Optical Amplifiers may be located at a Customer Premises Node, Central Office Node, or at a Serving Wire Center.

5. Regenerator - provides for re-timing, re-shaping and regeneration of the signal level for up to 2.5 Gbps service (on a per shelf basis), or 10 Gbps Ethernet service (on a per circuit, per each location the circuit is regenerated basis), if degradation exceeds the dispersion and/or Optical Amplifier noise limits.

6. Bulk Power - provides for customer premises node power which will be required if the customer's power source is AC. Applies once per each four shelves, with the first shelf and fifth subsequent shelf at each applicable Customer Premises Node.

7. Port - provides for the channel interface at any node location for each unprotected or protected channel. Applies per port/per circuit terminating location.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

F. Rate Element Description (cont'd)

8. Nonrecurring Charges

a. General

Nonrecurring charges are one-time charges that apply for specific work activities (i.e., installation of new service, moves and rearrangements of installed services). There are three different nonrecurring charges: Administrative Charge, Design and Central Office Connection Charge and Customer Connection Charge. They are applied as follows:

The *Administrative Charge* applies any time a customer initiates an order for service. This charge applies once per service order.

The *Design and Central Office Connection Charge* applies to each service installed. This charge is applied once per each riding circuit.

The *Customer Connection Charge* applies to establish the MON Ring Network, and is charged per node. Subsequent installation charges apply to each subsequent shelf installed after the MON Ring network is established.

b. Service Rearrangements

Service rearrangements are changes to existing (installed) services, which do not result in either a change in the minimum period requirements as set forth in C. 2.a. preceding or a change in the physical location of the point of termination at a customer premises.

Service rearrangements will be charged as follows:

1. If changing the customer of record, the Administrative Charge will apply. For the change of customer of record to be treated as a service rearrangement, the new customer must assume liability for both current and prior charges of the service.

2. For all other changes not requiring physical work at the central office, or customer premises, including a change in the customer assigned circuit identification or billing account number (when initiated by the customer); the Administrative Charge will apply.

3. For all other service rearrangements requiring physical work to be performed, the Administrative Charge will apply. Additionally, one Design and Central Office Connection Charge and/or one Customer Connection Charge will apply.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

F. Rate Element Description (cont'd)

8. Nonrecurring Charges (cont'd)

c. Cancellation of Application for Service

When an applicant cancels an order for service, other than those provided by Special Construction;

1. Prior to the issuance of an order, no charges apply.

2. After the issuance of an order, nonrecurring charges apply as follows:

- Canceled before the Record Issue Date (RID), the Administrative Charge applies.
- Canceled on or after the RID, but before the Plant Test Date (PTD), the Administrative Charge and the Design and Central Office Connection Charge apply.
- Canceled on or after the PTD, the Administrative Charge, Design and Central Office Connection Charge and Customer Connection Charge apply.

When an applicant cancels an order for service involving Special Construction;

1. Prior to the issuance of an order, no charges apply.

2. After the issuance of an order, but prior to the start of construction, all nonrecurring charges associated with the design of the special construction and the Administrative Charge will apply.

3. After construction has begun:

- If there is another requirement for the specially constructed facilities, the Administrative Charge, Design and Central Office Connection Charge, and the Customer Connection Charge will apply.
- If there is no other use for the specially constructed facilities, a charge equal to all the costs incurred in the special construction (including overheads), less net salvage, applies in addition to the Administrative Charge, Design and Central Office Connection Charge, and the Customer Connection Charge.

Note: Installation or special construction of facilities for a customer starts when the Company incurs any expense in connection therewith which would not otherwise have been incurred and the customer has advised the Company to proceed with the installation or special construction.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges

MON Ring Transport System	USOC	Monthly Rates 3 Year	Monthly Rates 5 Year	Monthly Extension
1. Customer Premises Node				
- (includes first shelf)	F2ND1	$ 7,800.00	$ 6,240.00	$10,920.00
- per subsequent shelf	F2NDS	5,850.00	4,680.00	8,190.00
2. Central Office Node				
- (includes first shelf)	F2NC1	7,800.00	6,240.00	10,920.00
- per subsequent shelf	F2NCS	5,850.00	4,680.00	8,190.00
3. Channel Mileage				
- per V-H mile or fraction thereof	1L5XX	325.00	260.00	455.00
4. Optical Amplifier (as required)				
- C band (per location)	67QXX	5,400.00	3,600.00	7,600.00
- L band (per location)/1/	67QSX	5,400.00	3,600.00	7,600.00
5. Regenerator (as required)				
- up to 2.5 Gbps, per shelf)	V8RXX	7,500.00	5,000.00	10,500.00
- up to 10 Gbps (per circuit, per location)	V8R2C	15,000.00	10,000.00	21,000.00
6. Bulk Power (as required)				
- per first shelf (shelves 1-4)	CBVDX	2,000.00	1,600.00	2,600.00
- per 5th subsequent shelf (shelves 5-8)	CBVDS	1,600.00	1,300.00	2,100.00

/1/ Available where facilities and equipment permit.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

MON Ring Channels	USOC	Monthly Rates 3 Year	Monthly Rates 5 Year	Monthly Extension
7. Ports				
- per port/per circuit terminating location				
ETR/CLO™				
- unprotected channel	POYKW	$975.00	$750.00	$1,400.00
FICON™ (1.0625 Gbps)				
- unprotected channel	POYMW	975.00	750.00	1,400.00
- protected channel	POYMP	1,950.00	1,500.00	2,800.00
FICON™ (2.125 Gbps)				
- unprotected channel	POYWW	1,700.00	1,300.00	2,400.00
- protected channel	POYWP	3,400.00	2,600.00	4,800.00
ISC-1™				
- unprotected channel	POYJW	3,250.00	1,250.00	4,600.00
- protected channel	POYJP	3,600.00	2,500.00	5,000.00
ISC-3™				
- unprotected channel	POY9W	3,750.00	2,500.00	5,000.00
- protected channel	POY9P	7,500.00	5,000.00	10,000.00
Fibre Channel (1.0625 Gbps)				
- unprotected channel	POYNW	1,200.00	900.00	1,700.00
- protected channel	POYNP	2,400.00	1,800.00	3,400.00
Fibre Channel (2.125 Gbps)				
- unprotected channel	POYYW	1,700.00	1,300.00	2,400.00
- protected channel	POYYP	3,400.00	2,600.00	4,800.00
Gigabit Ethernet				
- unprotected channel	POYLW	1,200.00	900.00	1,700.00
- protected channel	POYLP	2,400.00	1,800.00	3,400.00

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

MON Ring Channels	USOC	Monthly Rates 3 Year	Monthly Rates 5 Year	Monthly Extension
7. Ports (cont'd)				
- per port/per circuit terminating location				
10 Gigabit Ethernet (WAN PHY)				
- unprotected channel	POYTW	$15,000.00	$12,500.00	$21,000.00
- protected channel	POYTP	20,000.00	16,700.00	28,000.00
10 Gigabit Ethernet (LAN-PHY)				
- unprotected channel	POYUW	15,375.00	12,815.00	21,525.00
- protected channel	POYUP	20,500.00	17,120.00	28,700.00
SONET OC-12/OC-12c				
- unprotected channel	POYFW	1,300.00	1,000.00	1,900.00
- protected channel	POYFP	2,600.00	2,000.00	3,700.00
SONET OC-48/OC-48c/1/				
- unprotected channel	POYGW	4,400.00	3,700.00	6,000.00
- protected channel	POYGP	6,600.00	5,560.00	9,000.00
SONET OC-192/OC-192c				
- unprotected channel	POYOW	15,000.00	12,500.00	21,000.00
- protected channel	POYOP	20,000.00	16,700.00	28,000.00

/1/ Available where facilities and equipment permit.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

MON Ring Channels	USOC	Monthly Rates 3 Year	Monthly Rates 5 Year	Monthly Extension
7. Ports (cont'd)				
- per port/per circuit terminating location				
GigE/FC/FICON™ Sub-Rate System				
- unprotected channel	POY1W	$ 875.00	$ 700.00	$1,140.00
- protected channel	POY1P	1,750.00	1,400.00	2,280.00
GigE Riding Circuit/1/				
- unprotected channel	POY4W	500.00	400.00	650.00
- protected channel	POY4P	1,000.00	800.00	1,300.00
Fibre Channel Riding Circuit (1.0625 Gbps)/1/				
- unprotected channel	POY6W	500.00	400.00	650.00
- protected channel	POY6P	1,000.00	800.00	1,300.00
FICON™ Riding Circuit (1.0625 Gbps)/1/				
- unprotected channel	POY7W	400.00	320.00	480.00
- protected channel	POY7P	800.00	640.00	960.00

/1/ Available only when ordered with GigE/FC/FICON™ Sub-Rate System.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

MON Ring Channels	USOC	Monthly Rates 3 Year	Monthly Rates 5 Year	Monthly Extension
7. Ports (cont'd)				
- per port/per circuit terminating location				
ESCON™/1/				
- unprotected channel	PWY1W	$1,300.00	$1,000.00	$1,900.00
- protected channel	PWY1P	2,600.00	2,000.00	3,700.00
Fast Ethernet/1/				
- unprotected channel	PWY2W	1,300.00	1,000.00	1,900.00
- protected channel	PWY2P	2,600.00	2,000.00	3,700.00
D1 Video/1/				
- unprotected channel	PWY3W	1,300.00	1,000.00	1,900.00
- protected channel	PWY3P	2,600.00	2,000.00	3,700.00
DVB-ASI Video/1/				
- unprotected channel	POY8W	2,100.00	1,650.00	3,075.00
- protected channel	POY8P	4,200.00	3,300.00	5,775.00
SONET OC-3/OC-3c/1/				
- unprotected channel	PWY4W	1,300.00	1,000.00	1,900.00
- protected channel	PWY4P	2,600.00	2,000.00	3,700.00
SONET OC-48 Sub-Rate System/1/				
- unprotected channel	POYRW	3,500.00	2,750.00	4,250.00
- protected channel	POYRP	7,000.00	5,500.00	8,500.00
SONET OC-48/OC-48c Riding Circuit/1/,/2/				
- unprotected channel	POYZW	1,900.00	1,200.00	2,800.00
- protected channel	POYZP	3,800.00	2,400.00	5,600.00

/1/ Available where facilities and equipment permit beginning November 30, 2005.
/2/ Available only when ordered with OC-48 Sub-Rate System beginning November 30, 2005.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

MON Ring Channels	USOC	Monthly Rates 3 Year	Monthly Rates 5 Year	Monthly Extension
7. Ports (cont'd)				
- per port/per circuit terminating location				
Sub-Rate System/1/				
- unprotected channel	POYSW	$1,300.00	$1,000.00	$1,900.00
- protected channel	POYSP	2,600.00	2,000.00	3,700.00
ESCON™ Riding Circuit/1/,/2/,/3/				
- unprotected channel	POYHW	100.00	100.00	150.00
- protected channel	POYHP	100.00	100.00	150.00
Fast Ethernet Riding Circuit/1/,/2/				
- unprotected channel	POYCW	325.00	250.00	400.00
- protected channel	POYCP	500.00	400.00	650.00
D1 Video Riding Circuit/1/,/2/				
- unprotected channel	POYVW	100.00	100.00	150.00
- protected channel	POYVP	100.00	100.00	150.00
DVB-ASI Video Riding Circuit/1/,/2/				
- unprotected channel	PWY5W	100.00	100.00	100.00
- protected channel	PWY5P	100.00	100.00	100.00
SONET OC-3/OC-3c Riding Circuit/1/,/2/,/4/				
- unprotected channel	POYEW	100.00	100.00	150.00
- protected channel	POYEP	100.00	100.00	150.00

/1/ Available where facilities and equipment permit.
/2/ Available only when ordered with Sub-Rate System.
/3/ Also available with ESCON™ Sub-Rate System.
/4/ Also available with SONET OC-3/OC-12 Sub-Rate System.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

MON Ring Channels	USOC	Monthly Rates 3 Year	Monthly Rates 5 Year	Monthly Extension
7. Ports (cont'd)				
- per port/per circuit terminating location				
ESCON™ Sub-Rate System/1/				
- unprotected channel	POY2W	$1,500.00	$1,125.00	$1,950.00
- protected channel	POY2P	3,000.00	2,250.00	3,900.00
OC-3/OC-12 Sub-Rate System/1/				
- unprotected channel	POY3W	1,000.00	750.00	1,300.00
- protected channel	POY3P	2,000.00	1,500.00	2,600.00
OC-12/OC-12c Riding Circuit/1/,/2/				
- unprotected channel	POY5W	500.00	375.00	700.00
- protected channel	POY5P	1,000.00	750.00	1,400.00

/1/ Available where facilities and equipment permit.
/2/ Available only when ordered with OC-3/OC-12 Sub-Rate System.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

Nonrecurring Charges	USOC	Nonrecurring Charge
8. Nonrecurring Charges		
a. Administrative Charge		
- per service order	ORCMX	$125.00
b. Design and Central Office Connection Charge		
- per circuit	NRBCL	600.00
c. Customer Connection Charge		
1. Service Establishment		
- per node	NRBBL	7,500.00
2. Subsequent Installation		
- per subsequent shelf	NHCNL	1,000.00

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

9. Term Pricing Plan

a. MON Ring Service Term Pricing Plan (TPP) provides the customer with discounted rates. The TPP provides for three or five year rates. During the length of the selected TPP, monthly prices for service ordered under the plan would automatically change (increase or decrease) as Company-initiated price changes become effective. However, under no circumstances will any price change cause the monthly price for the service to exceed the price that was in effect at the beginning of the selected TPP term. The Company will notify customers participating in a TPP when monthly rates are decreased.

b. The customer may choose to terminate an existing TPP before the end of the three or five year period and negotiate a new TPP. The new TPP will be based upon the rates that are currently in effect and available to all customers, and must be of equal or greater duration than the existing TPP.

c. If during the duration of the TPP, the customer wishes to rearrange or move a Customer Premises Node, a termination charge will apply.

d. If the customer elects not to renew the TPP, or does not notify the Company of the customer's intent to renew the TPP, the customer's service will automatically be billed under the monthly extension rates in effect at the time the TPP expires.

e. If a customer cancels a Service Order or terminates service before the completion of the term for any reason whatsoever other than as a result of a re-negotiation, the customer agrees to pay the Company termination liability charges, which are defined below. These charges shall become due and owing as of the effective date of the cancellation or termination and be payable within the period set forth in 'Rules and Regulations Applying to All Customers' Contracts' in Part 2, Section 2. Payment of the termination charge does not release the customer from other previous amounts owed to the Company.

f. After the expiration of 25 months of a 3 year TPP term or 42 months of a 5 year TPP term, any MON Ring components added to the existing service configuration provided under that TPP will be billed under the monthly extension rates.

g. Customer termination liability for cancellation of a MON Ring Service shall be equal to:

- Any unpaid Special Construction or nonrecurring charges (excluding any waived charges); plus

- Fifty (50) percent of all recurring charges for the remaining months of the customer's term.

For purposes of applying termination charges, all rate elements making up a MON Ring service are subject to termination charges.

MULTI-SERVICE OPTICAL NETWORK RING SERVICE (cont'd)

G. Rates and Charges (cont'd)

10. Customer Specific Pricing (CSP)

CSP is available to customers who subscribe to a 3 year or greater service contract. Each contract may contain rates and charges, and terms and conditions specific to that customer's needs. However, the discounted rates and charges shall be set above the Long Run Incremental Cost (LRIC) floor and the price ceiling for the service.

The rates and charges established will apply for the duration of the contract period. All MON Ring Services covered by the contract must be in-service within 3 months of the order date. An existing MON Ring Service customer may elect to transfer their existing MON Ring Service service(s) to a CSP contract established upon ordering a new MON Ring Service for a term equal to or greater than 3 years. Such a transfer will not incur termination liability; however, the CSP contract must be for a term of equal or greater duration to the number of months remaining on the original Term Pricing Plan (TPP).

Once the customer has notified the Company of their intent to renew their CSP contract, the Company will negotiate a new CSP contract with the customer. If the customer elects not to renew the CSP contract, or does not notify the Company of the customer's intent to renew the CSP contract, the service will automatically be billed under the monthly extension rates in effect at the time the CSP contract expires.

During the term of the CSP contract, additional service elements may be added to the contract, and the contract will specify the terms and conditions or such additions.

VOICE GRADE SERVICE - SERIES 300 AND 400

A. Special Bridging Service/1/

1. Split Band Bridging Arrangement

a. Description of Service

This service provides for a four wire frequency split common port and two wire multiple port bridging arrangement intended for application in multi-point voice frequency, data or tone signaling networks.

b. Application

Regulations applicable to Split Band Bridging Arrangements, except as otherwise specified below, are in addition to the regulations contained in other sections of this Guidebook.

c. Regulations

1. Split Band Bridging Arrangements are provided on voice grade service with a transmission rate normally suitable for 75 baud, but can be utilized with equipment operating at rates up to a maximum of 400 baud.

2. A maximum of three serving offices each equipped with a Split Band Bridge is permitted on a multi-point network.

3. A maximum of 144 remote stations is permitted on a multi-point network.

4. Remote stations connected to a Split Band Bridge shall be in the same serving office area or contiguous serving office area of the same exchange in which the Split Band Bridge is located.

5. Access from the Master Station to the Split Band Bridge is obtained through a Master Station Channel as provided in A.1.d.2, following. Interoffice and/or interexchange channels and channel terminals are required when appropriate between Split Bank Bridges and Between the Master Station serving office and the Split Bank Bridge as provided in A.1.d.2, following.

6. A voice grade bridging charge (BQ7) applies per Split Band Bridge and Master Station, when more than one Split Band Bridge is provided.

/1/ Obsolete – applicable to existing installations at existing locations for existing customers until March 1, 2004 when Special Bridging Service will be completely withdrawn. The Company will waive all nonrecurring charges associated with any new Series 400 Service for customers who order and install a conversion from the current Special Bridging Service to Series 400 Service.

VOICE GRADE SERVICE - SERIES 300 AND 400 (cont'd)

A. Special Bridging Service[/1/] (cont'd)

1. Split Band Bridging Arrangement (cont'd)

c. Regulations (cont'd)

7. Transmission parameters and specifications for Split Band Bridging are:

(a) This service will be designed for an end-to-end net loss of 16 dB at 1004 Hz

(b) The 1004 Hz long-term variation from the design loss will be less than ± 5 dB

(c) The frequency response between 500 and 2800 Hz will be: -4 to +14 dB (relative to the 1004 Hz loss)

(d) These requirements are specified for the total channel service offering and do not include losses or gains present in customer-provided equipment

(e) Transmission parameters and specifications as specified in Part 15, Section 2, paragraph C. for Voice Grade Service – Series 300 and 400 Channels are not applicable

8. Additional points of termination are not provided with Special Bridging service.

d. Rates

	USOC	Monthly Rate	Nonrecurring Charge
1. Special bridge and common equipment for:[/2/]			
Maximum of 48 remote stations	BMC48	$45.00	---
Maximum of 95 remote stations	BMC95	67.50	---

/1/ Obsolete – applicable to existing installations at existing locations for existing customers until March 1, 2004 when Special Bridging Service will be completely withdrawn. The Company will waive all nonrecurring charges associated with any new Series 400 Service for customers who order and install a conversion from the current Special Bridging Service to Series 400 Service.
/2/ Customer must specify transmit and receive frequency of Master Station.

VOICE GRADE SERVICE - SERIES 300 AND 400 (cont'd)

A. Special Bridging Service[/1/] (cont'd)

1. Split Band Bridging Arrangement (cont'd)

d. Rates (cont'd)

	USOC	Monthly Rate Intraexchange	Monthly Rate Interexchange	Nonrecurring Charge
2. Access Lines				
Master Station				
Local Channel	1LM4Y	$29.25	---	$235.00
		---	$33.65	265.00
Interoffice Mileage, (per V-H mile)	1LMFS	11.50	16.60	---
Interoffice Channel Terminal	PMNNL	6.65	---	---
	PMNSS	---	4.60	---
Interexchange Channel Terminal	P1NY1	N/A	12.95	---
Remote Station				
Local Channel	1LM1Y	12.60	---	200.00
Interoffice Mileage, (per V-H mile)	1LM1S	5.00	---	---
Interoffice Channel Terminal	OXN1L	8.65	---	---

/1/ Obsolete – applicable to existing installations at existing locations for existing customers until March 1, 2004 when Special Bridging Service will be completely withdrawn. The Company will waive all nonrecurring charges associated with any new Series 400 Service for customers who order and install a conversion from the current Special Bridging Service to Series 400 Service.

VOICE GRADE SERVICE - SERIES 300 AND 400 (cont'd)

A. Special Bridging Service/1/ (cont'd)

2. Passive Bridging Arrangement

a. Description of Service

This service provides for a network of up to ten passive two-wire 10 port bridges. Each bridge is capable of connecting a combination of remote stations, interoffice channels or interbridge connections totaling nine to one master station, interconnect station, interoffice channel or interbridge connection. This service is intended for application in multi-point voice frequency, data or tone signaling networks.

b. Application

Regulations applicable to Passive Bridging Arrangements, except as otherwise specified below, are in addition to the regulations contained in other sections of this Guidebook.

c. Regulations

1. Passive Bridging Arrangements are provided on voice grade service with a transmission rate normally suitable for 75 baud, but can be utilized with equipment operating at rates up to a maximum of 400 baud.

2. A maximum of 10 serving offices each equipped with a Passive Bridge is permitted on a multi-point network.

3. A maximum of 90 remote stations is permitted on a multi-point network.

4. Remote stations connected to a Passive Bridge are limited to the same serving office area in which the Passive Bridge is located.

5. One Master or Interconnecting Station or an interoffice voice grade channel is required for each Passive Bridge except as provided for in 6. following.

(a) When an interoffice channel is used to connect Passive Bridges, voice grade interoffice and/or interexchange channels and channel terminals will apply.

(b) When an interoffice channel is used to connect Passive Bridges, mileage will be determined in the order that the Passive Bridges are connected.

6. When more than one passive bridge is provided on a multi-point service in the same serving office, an interbridge connection charge applies to each subsequent bridge provided. This arrangement cannot be provided if two-way transmission is required.

/1/ Obsolete – applicable to existing installations at existing locations for existing customers until March 1, 2004 when Special Bridging Service will be completely withdrawn. The Company will waive all nonrecurring charges associated with any new Series 400 Service for customers who order and install a conversion from the current Special Bridging Service to Series 400 Service.

VOICE GRADE SERVICE - SERIES 300 AND 400 (cont'd)

A. Special Bridging Service/1/ (cont'd)

2. Passive Bridging Arrangement (cont'd)

c. Regulations (cont'd)

7. All equipment located at a remote station required for connecting a Remote Station access line to an Interconnecting Station access line is to be provided by the customer.

8. Voice grade interoffice and/or interexchange channels and channel terminals are required, when appropriate, between the serving office of the Master Station and the Passive Bridge; and between the serving office of the Interconnecting station and the Passive Bridge, when appropriate.

9. Service can be provided under two circuit configurations as follows:

(a) Data collective system provides one-way transmission from Remote Stations to the Master Station and is designed to provide an end to end loss of 16 dB relative to 1000 Hz.

(b) Data polling system provides two-way transmission between the Master or Interconnecting Station and Remote Stations and is designed to provide an end to end loss of 38 dB relative to 1000 Hz.

10. Transmission Parameters and Specifications as specified in Part 15, Section 2, paragraph C. for Voice Grade Service – Series 300 and 400 Channels are not guaranteed for this service.

11. Additional points of termination are not provided with Special Bridging Service.

/1/ Obsolete – applicable to existing installations at existing locations for existing customers until March 1, 2004 when Special Bridging Service will be completely withdrawn. The Company will waive all nonrecurring charges associated with any new Series 400 Service for customers who order and install a conversion from the current Special Bridging Service to Series 400 Service.

VOICE GRADE SERVICE - SERIES 300 AND 400 (cont'd)

A. Special Bridging Service/1/ (cont'd)

2. Passive Bridging Arrangement (cont'd)

d. Rates

	USOC	Monthly Rate Intraexchange	Monthly Rate Interexchange	Nonrecurring Charge
1. Access Lines				
Master Station				
Local Channel	1LM3Y	$ 5.20	$16.50	$200.00
Interconnecting Station Local Channel	1LM2Y	5.20	16.50	200.00
Interoffice Mileage, (per V-H mile)	1LMFS	11.50	16.60	---
Interoffice Channel Terminal	PMNML	3.15	---	---
	PMNSS	---	4.60	---
Interexchange Mileage (per V-H mile)				
0-150 miles, each mile	1LH24	N/A	2.10	---
Over 150 miles, each	1LH24	N/A	1.40	---
Interexchange Channel Terminal	P1NZ1	N/A	12.95	---

/1/ Obsolete – applicable to existing installations at existing locations for existing customers until March 1, 2004 when Special Bridging Service will be completely withdrawn. The Company will waive all nonrecurring charges associated with any new Series 400 Service for customers who order and install a conversion from the current Special Bridging Service to Series 400 Service.

GIGAMAN® SERVICE /1/

Effective September 30, 2017, GigaMAN Service will no longer be available for purchase by new or existing customers. The Company will no longer accept orders for adds, moves, changes or new term plans for GigaMAN Service, and existing term plans may not be renewed, converted or extended. Following the expiration of a customer's existing GigaMAN term agreement, service will be provided on a month-to-month basis at the applicable monthly extension rates until the service is discontinued. (N) (N)

A. Description /1/

GigaMAN (Gigabit Metro Area Network) Service is an intraLATA dedicated high capacity service limited to the transport of data signals between customer stations. GigaMAN provides for the transmission of data at a discrete bit rate of 1 Gigabit per second (Gbps) in Ethernet format (Ethernet IEEE 802.3). GigaMAN is available in a point to point (node-to-node) configuration.

GigaMAN Service can be used to seamlessly extend customer local area networks to off-site locations such as data centers, storage locations or satellite office locations within the same metro area. Applications that could be used with GigaMAN Service include LAN-to-LAN connectivity, CAD/CAM file transfer, telemedicine and business continuity transport.

B. Regulations

In addition to the regulations contained in this Guidebook, the following regulations apply to GigaMAN.

1. This service is only available to customers in those LATAs served by and within the service territories of the Company.

2. The services provided for GigaMAN are primarily designed to meet the private line communications requirements of business customers, i.e., non-interexchange carriers.

3. A service is interrupted when it becomes unusable to the customer because of a failure of a facility component used to furnish service under this Guidebook or in the event that the protective controls applied by the Company result in the complete loss of service by the customer. An interruption period starts when an inoperative service is reported the Company and the Company confirms that continuity has been lost, and ends when the service is operative.

   In case of an interruption to service, allowance for the period of interruption, if not due to the negligence of the customer or the customer's end user, shall be as follows: no credit shall be allowed for an interruption of less than 10 seconds. The customer shall be credited for an interruption of 10 seconds or more as follows: the credit shall be at the rate of 10/8640 of the monthly charges for the service for each period of 5 minutes or major fraction thereof that the interruption continues. The credit allowance(s) for service interruptions shall not exceed 100% of the applicable monthly rates.

   The Company's failure to provide or maintain services under this Guidebook shall be excused by force majeure events such as, but not limited to, an earthquake, hurricane, flood, fire, storms, tornadoes, explosion, lightning, power surges or failure, fiber cuts, strikes or labor disputes, acts of war, civil disturbances, acts of civil or military authorities or public enemy, governmental orders, civil commotion, criminal actions taken against the Company, acts of God and other circumstances beyond the Company's reasonable control. /1/

GigaMAN is a registered trademark of AT&T Knowledge Ventures

/1/ Material formerly appeared in Part 15, Section 4, Sheet 1.

GIGAMAN® SERVICE (cont'd) /1/

B. Regulations (cont'd)

4. Protection Options

A Service Level Agreement (SLA) is offered with fully-protected GigaMAN Service, which provides the customer with a performance commitment that includes a service credit if the service does not perform as described. An SLA of 99.999% Service Availability performance is offered on a GigaMAN circuit with Protection (defined as Equipment Plus Fiber Path Protection for every segment of the circuit). Service Availability will be determined using unavailable seconds as defined in ANSI T1.503-2002 (see *Technical References* following).

- SLAs are applicable to customers who purchase Equipment Plus Fiber Path Protection with Alternate Wire Center Path Protection or Equipment Plus Fiber Path Protection with Local Channel Path Protection on both ends of a circuit (both local channels), as well as Inter-Wire Center Path Protection, when applicable.
- If this SLA is not met, or if there is any single event of unavailability of service of 10 seconds or more, the customer will be entitled to a credit equal to 100% of the monthly rate for the circuit. Only one such credit in a billing period will apply.
- In order to qualify for this credit, the event causing the unavailability must be determined by the Company to be in its network and the failure occurred in that part of the service with Protection.
- SLA adjustments are not available in the event of a cable cut in any unprotected portion of the GigaMAN Service fiber path or due to customer-requested modifications to the service that may require down time. Routine maintenance is not counted against unavailability.
- The customer is responsible for notifying the Company when the service parameter within the calendar month falls below the committed level.
- The customer must request a service credit within 25 calendar days after the unavailability event occurred. /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 2.

GIGAMAN® SERVICE (cont'd) /1/

C. Provision of Service

1. The customer-provided equipment must deliver the data signals for GigaMAN transport within the industry specification for the subscribed data service. Interface specifications are as specified in the Technical Specifications Packages listed in Paragraph E.

2. GigaMAN provides physical layer transport only. The Company assumes no responsibility for the through transmission of signals by CPE, for the quality of or defects in such transmission, for the reception of signals by CPE, or address signaling to the extent addressing is performed by CPE. Error detection and correction of data generated by CPE is the customer's responsibility.

3. GigaMAN is designed to provide connectivity at the discrete bit rate of 1 Gbps. The service is considered interrupted when the customer reports to the Company and the Company confirms that continuity has been lost.

4. The provision of GigaMAN Service is subject to the availability and operational limitations of the equipment and associated facilities. In the event that suitable facilities are not available, or modifications to existing facilities are required, Special Construction charges may be applicable as set forth in Part 15, Section 1.

5. Repeaters (circuit regenerators) will be located in Company wire centers as required. A monthly charge will be associated with each repeater network element, except for the first repeater in a circuit path (as the first repeater is also used for service alarming and monitoring purposes).

6. Additional repeaters (circuit regenerators) may be required on the diverse or alternately routed path when Protection options are ordered by the customer. The need for repeaters on the protected path will be determined by the Company. Additional charges will apply.

7. If Protection Options are added to an existing GigaMAN circuit that was installed after January 19, 2004, a temporary service interruption will result as the new protected circuit must be re-designed and re-installed. Termination Charges will not apply for the circuit redesign (see *Term Pricing Plan* following for requirements). This installation must occur during an agreed-upon maintenance window between a designated customer representative and the Company. The customer will be responsible for providing adequate floor space, as determined by the Company, to accommodate additional equipment bays and related power protection equipment (such as batteries). Protection Options are contingent on availability of equipment and fiber facilities from premise to premise. Other Special Construction charges, as necessary, may apply.

8. Interoffice Channel Mileage charges are applicable on both paths of the GigaMAN Service when any of the Protection Options are ordered. /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 3.

GIGAMAN® SERVICE (cont'd) /1/

D. Channel Types

1 Gbps GigaMAN channel: an intraLATA dedicated high capacity channel, limited to the transport of data signals between customer stations. GigaMAN provides for the transmission of data at a discrete bit rate of 1 Gigabit per second (Gbps) in Ethernet format (Ethernet IEEE 802.3).

E. Technical Specifications Packages

Technical specifications for GigaMAN Service are described in the following technical references:

Ethernet Standards for the SBC Local Exchange Companies	SBC-TP-76412-000
Network Performance Parameters for Dedicated Digital Services – Definitions and Measurements	ANSI T1.503-2002

The technical publication can be obtained from:

APEx Support Team
(734) 523-7348

The ANSI publication can be obtained from:

Alliance for Telecommunications Industry Solutions
1200 G. Street, NW Suite 500
Washington, DC 20005 /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 4.

GIGAMAN® SERVICE (cont'd) /1/

F. Service Components

There are five basic rate elements, which may apply to GigaMAN service:
- Local Distribution Channel
- Interoffice Channel Mileage
- Repeater
- Diversity Options
- Protection Options

Local Distribution Channel (LDC)
The local distribution channel is the channel between a customer's premises and the Company serving wire center office that normally provides service to that customer's premises.

Interoffice Channel Mileage (ICM)
Interoffice channel mileage is defined as the component of the service between two Company serving wire center offices. The serving wire center offices may be located in the same exchange area, as in a multi-office metropolitan exchange, or may be located in different exchange areas.

Interoffice channel mileage charges include a fixed charge, and a per mile charge, which is based on the vertical and horizontal (V-H) distance between serving wire center offices measured in whole miles. Fractional miles are rounded to the next whole mile.

V-H coordinates for serving wire centers can be found in the National Exchange Carrier Association, Inc. (NECA) Wire Center Information Tariff.

Repeater (RPTR)
A repeater (circuit regenerator) may be used to extend the transmission of GigaMAN service when necessary. In addition, the first repeater in any multi-repeater circuit will be used for service alarming and monitoring purposes.

Diversity Options
Diversity Options are available where facilities exist. If appropriate facilities do not exist, Special Construction charges may apply. End-to-end diversity can be achieved by coupling Alternative Wire Center Diversity with Inter-Wire Center Diversity. Diversity Options are only available to customers with service installed after January 19, 2004. Route diversity options are described in detail below under *Service Configurations*.

Protection Options
Protection Options are available where facilities exist. If appropriate facilities do not exist, Special Construction charges may apply. Protection Options are only available to customers with service installed after January 19, 2004. In addition to charges for the various Protection Options, normal charges for the Local Distribution Channel and Interoffice Channel Mileage will apply. Protection Options provide additional levels of reliability to GigaMAN Service. There are multiple options for Protection at each end of a two point circuit. The options at each end do not need to be the same, but both ends must include some form of Protection, for any to be offered. A GigaMAN circuit cannot include Protection at only one end (excluding Power Protection which can be at just one end, or both ends, of the circuit). /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 5.

GIGAMAN® SERVICE (cont'd) /1/

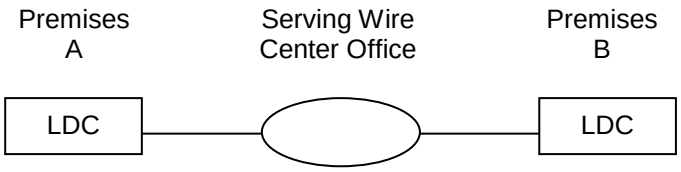
G. Service Configurations

All basic service configurations provide full duplex transmission. There is one basic type of GigaMAN Service configuration: Node-to-Node Service. GigaMAN services from a customer data hub location to multiple points, or multiple GigaMAN services between two customer data hub locations are merely aggregated node-to-node services.

Node-to-Node

A node-to-node configuration connects two customer designated premises either inter or intra wire center.

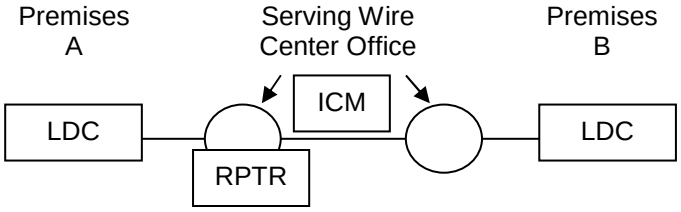
The following diagram depicts a node-to-node (intra-wire center) configuration connecting two customer-designated premises served from the same wire center office.



LDC - Local Distribution Channel

In this case, the applicable rate element is:
- Local Distribution Channels (two applicable)

The following diagram depicts a node-to-node (inter-wire center) configuration connecting two customer-designated premises with Serving Wire Center offices located "x" miles apart.



LDC - Local Distribution Channel
ICM - Interoffice Channel Mileage
RPTR - Repeater (where required)

In this case, applicable rate elements are:
- Local Distribution Channels (two applicable)
- Interoffice Channel Mileage Fixed (one applicable)
- Interoffice Channel Mileage Per Mile ("x" applicable)
- Repeater (where required) /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 6.

GIGAMAN® SERVICE (cont'd) /1/

G. Service Configurations (cont'd)

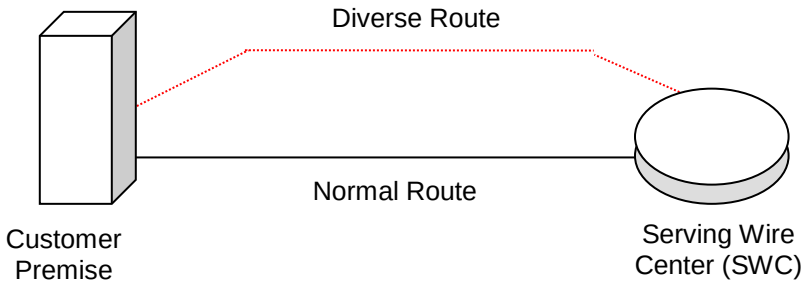
Diversity Options

Route diversity options are available where facilities exist. If appropriate facilities do not exist, Special Construction charges may apply.

GigaMAN offers three diversity options:

Local Channel Diversity (LCD)

Local Channel Diversity provides for a transmission path between a designated customer premise and the standard serving wire center (SWC) that is diverse from the normal/standard transmission path. Local Channel Diversity requires two eligible services purchased by (or for the benefit of) the same customer. The Company will determine which services are eligible based on technical or operational limitations. With this arrangement, one or more local distribution channels will be provisioned over the standard route and one or more local distribution channels will be provisioned over the diverse route. Local channel diversity does not provide for full diversity; it only allows for diversity from the splice point closest to the customer's property line to the SWC. If a customer desires full diversity, arrangements must be made for constructing dual entrance facilities into the customer's premise, at the customer's expense.



/1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 7.

GIGAMAN® SERVICE (cont'd) /1/

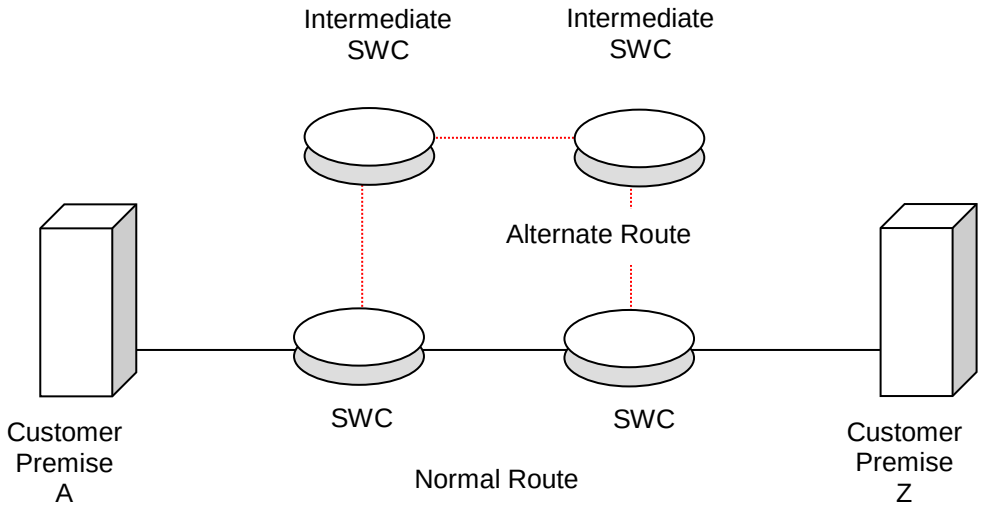
G. Service Configurations (cont'd)

Diversity Options (cont'd)

Inter-Wire Center Diversity (IWCD)

Inter-Wire Center Diversity arrangements presume that each end of a GigaMAN local distribution channel is served out of a different serving wire center (SWC). This arrangement provides a transmission path for GigaMAN local distribution channels between the customer's designated SWC and the serving wire center at the distant end of the circuit, over a transmission path that is separate from the standard transmission path between the two wire centers. Interoffice mileage will be calculated between the intermediate serving wire centers along the circuit path of the diversely routed GigaMAN Service. Inter-Wire Center Diversity requires two eligible services purchased by (or for the benefit of) the same customer. The Company will determine which services are eligible based on technical or operational limitations.

In this scenario, the customer may or may not already have a GigaMAN local distribution channel operating over the normal (or standard) inter-office route. Inter-wire center diversity does not provide for full diversity; it only offers interoffice diversity. If a customer desires full diversity, Alternate Wire Center Diversity must be implemented along with Inter-Wire Center Diversity. Additionally, arrangements must be made for constructing dual entrance facilities at the customer's premise, at the customer's expense.



/1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 8.

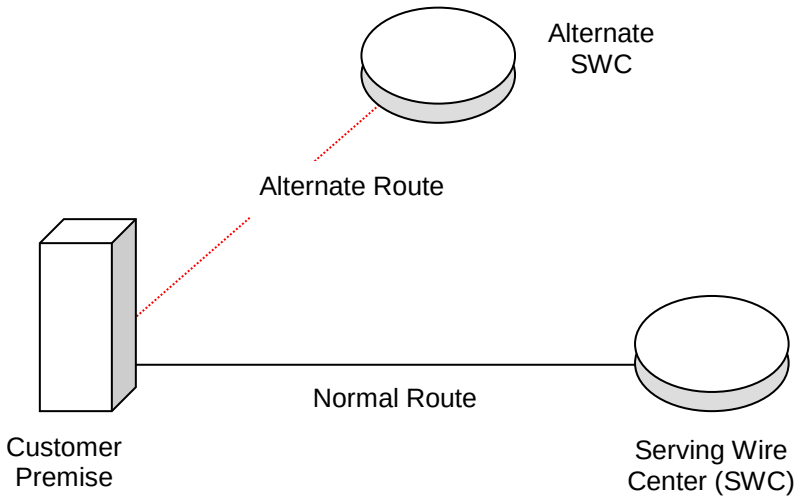
GIGAMAN® SERVICE (cont'd) /1/

G. Service Configurations (cont'd)

Diversity Options (cont'd)

Alternate Wire Center Diversity (AWCD)

Alternate Wire Center Diversity is for the local loop only. It provides a local channel transmission path for GigaMAN service between the customer's designated premises and a wire center that is not the normal (or standard) serving wire center. The Company will choose the alternate wire center closest to the customers designated premise that is capable of providing GigaMAN Service over the alternate route. Alternate Wire Center Diversity does not require the purchase of two GigaMAN Services by (or for the benefit of) the same customer, nor does it require the customer to have an existing GigaMAN circuit operating over the normal (or standard) route to the normal (or standard) serving wire center. With this arrangement, one or more local distribution channels will be provisioned over the alternate route. If a customer desires full diversity, arrangements must be made for constructing dual entrance facilities into the customer's premise, at the customer's expense.



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/1/ Material formerly appeared in Part 15, Section 4, Sheet 9.

GIGAMAN® SERVICE (cont'd) /1/

G. Service Configurations (cont'd)

Protection Options

Equipment Only Protection (EOP)

Equipment Only Protection offers a network design where one GigaMAN signal will be routed down two different fiber pairs that co-exist in the same cable and conduit structure, and terminate at the customer's premise in the same device (but into separate and distinct modules). Protection switching will occur between the two modules if necessary. Should one fiber pair or network element become defective, service will be maintained through 50 millisecond protection switching within the network terminating equipment (NTE) at the customer's demarcation point. If both fiber pairs are cut, an Out Of Service condition will result. This form of protection can only be ordered per loop (per end) for each circuit the customer wishes to protect.

Equipment Plus Fiber Path Protection

Equipment Plus Fiber Path Protection offers varying degrees of path protection for each terminating end of the circuit. For circuits that are served by different wire centers, Equipment Plus Fiber Path Protection may be combined with Inter-Wire Center Path Protection, to ensure a fully-protected circuit.

Equipment Plus Fiber Path Protection, with …

Alternate Wire Center Path Protection (AWCPP)
One GigaMAN (1 Gbps) signal will be routed over one fiber pair of the protected circuit from the customer's premise to the normal serving wire center, and a duplicate GigaMAN (1 Gbps) signal will be routed over a diversely routed fiber pair to the Alternate Wire Center selected by the Company. If any location between the fiber paths is closer than 10 feet, the location or locations will be disclosed to the customer. The customer will determine whether to accept the engineered path, or agree to pay Special Construction Charges to have a completely diverse route constructed in those instances where there is not a minimum separation of 10 feet between paths. The customer can also select Equipment Only Protection for an inter-office segment where facilities are not available. This option can be selected for one or both terminating ends. If an equipment failure or fiber cable cut occurs in a segment of the circuit that has this form of protection, the circuit will be switched to the alternate path in 50 milliseconds or less. If a customer desires full path diversity, arrangements must be made for constructing dual entrance facilities into the customer's premise, at the customer's expense. /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 10.

GIGAMAN® SERVICE (cont'd) /2/

G. Service Configurations (cont'd)

Protection Options (cont'd)

Equipment Plus Fiber Path Protection (cont'd)

Equipment Plus Fiber Path Protection, with … (cont'd)

Local Channel Path Protection (LCPP)
The two fiber pairs of the protected service will be routed diversely to the normal serving wire center. If any location between the fiber paths is closer than 10 feet, the location or locations will be disclosed to the customer. The customer will determine whether to accept the engineered path, or agree to pay Special Construction Charges to have a completely diverse route constructed. This option can be selected for one or both terminating ends. If an equipment failure or fiber cable cut occurs in a segment of the circuit that has this form of protection, the circuit will be switched to the alternate path in 50 milliseconds or less. If a customer desires full path diversity, arrangements must be made for constructing dual entrance facilities into the customer's premise, at the customer's expense.

Inter-Wire Center Path Protection (IWCPP) /1/

Each fiber pair is routed through different Central Offices between the two serving wire centers, or between the standard serving wire center and an alternate serving wire center. Inter-Wire Center Protection begins at the first manhole out of the Central Office. If only the two serving wire centers are involved, the two fiber pairs will be routed down two fiber paths that are separated by at least 10 feet. If any location between the fiber paths is closer than 10 feet, the location or locations will be disclosed to the customer. The customer will determine whether to accept the engineered path, or agree to pay Special Construction Charges to have a completely diverse route constructed. The customer will receive Equipment Only Protection for an inter-office segment where facilities are not available. If an equipment failure or fiber cable cut occurs on one of the inter-office routes, the circuit will be switched to the alternate path in 50 milliseconds or less. Interoffice mileage will be calculated between the intermediate serving wire centers along the circuit paths of both protected fiber pairs.

Power Protection (PP)

Power Protection provides customers with battery back-up for up to eight (8) hours to maintain GigaMAN equipment in case of a power failure. Power Protection is provided on a per rack or cabinet basis, and customers in a multi-tenant building will require separate equipment and bays dedicated to each customer. Power Protection is not available for installations using a wall mounted cabinet. Requests for Power Protection are subject to equipment availability and compatibility. Upon receipt of a customer request for Power Protection, the Company will determine the availability, design and engineering requirements for Power Protection, and the appropriate number of service element charges to apply. Negotiated down time will apply to add Power Protection to existing GigaMAN Service. /2/

/1/ Inter-Wire Center Path Protection must be ordered in conjunction with an Equipment Protection option at each end of the circuit. /2/ /2/
/2/ Material formerly appeared in Part 15, Section 4, Sheet 11.

GIGAMAN® SERVICE (cont'd) /3/

H. Rates and Charges

Nonrecurring Charges are one-time charges that apply for specific work activity related to the provisioning of GigaMAN Service.

Description /USOC/	Nonrecurring Charge
Installation Charge[/1/]	
- per Local Distribution Channel	$ 1,500.00
Protection Options	
Per terminating end	
- Equipment Only /CPAEX/	625.00
- Equipment Plus Fiber Path Protection, with …	
Alternate Wire Center Path Protection /CPAFX/, or	1,400.00
Local Channel Path Protection /CPAGX/	1,225.00
Per rack or cabinet	
- Power Protection /VBBGX/	475.00
Per circuit	
- Inter-Wire Center Path Protection[/2/] /CPAHX/	625.00 /3/

/1/ The Installation Charge will be waived for those customers selecting the 36 or 60 month Term Pricing Plan (TPP) period for new service. /3/
/2/ Inter-Wire Center Path Protection must be ordered in conjunction with an Equipment Protection option at each end of the circuit. /3/
/3/ Material formerly appeared in Part 15, Section 4, Sheet 12.

GIGAMAN® SERVICE (cont'd) /2/

H. Rates and Charges (cont'd)

Recurring Charges are flat recurring rates that apply each month or fraction thereof that the service is provided. Recurring rates may be applied only over a 12, 24, 36, or 60 month period under the terms and conditions of the Term Pricing Plan (TPP), described below. Upon completion of a TPP, a customer's service will automatically convert to the monthly rates unless the customer requests a new TPP. No customer shall purchase GigaMAN on a month-to-month basis prior to the completion of a TPP.

		Monthly Extension	Term Pricing Plan Monthly Contract Charge			
	USOC	Charge	12 Month	24 Month	36 Month	60 Month
LDC	3LN5S	$3,800.00	$3,300.00	$3,100.00	$2,850.00	$2,500.00
ICM	1DA8X					
Fixed		250.00	250.00	225.00	200.00	100.00
Per Mile		125.00	125.00	115.00	100.00	75.00
RPTR	VU4	2,500.00	2,400.00	1,700.00	1,150.00	850.00
Diversity						
LCD	CPALX	750.00	750.00	750.00	750.00	750.00
IWCD	CPATX	500.00	500.00	500.00	500.00	500.00
AWCD	CPAAX	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00
Protection						
EOP	CPAEX	1,500.00	1,375.00	1,225.00	1,050.00	900.00
EP with						
AWCPP	CPAFX	2,460.00	2,050.00	1,840.00	1,600.00	1,400.00
LCPP	CPAGX	2,190.00	1,825.00	1,650.00	1,425.00	1,225.00
IWCPP[/1/]	CPAHX	475.00	375.00	200.00	150.00	100.00
PP	VBBGX	700.00	625.00	525.00	480.00	435.00 /2/

/1/ Inter-Wire Center Path Protection must be ordered in conjunction with an Equipment Protection option at each end of the circuit. /2/ /2/

/2/ Material formerly appeared in Part 15, Section 4, Sheet 13.

GIGAMAN® SERVICE (cont'd) /1/

I. Term Pricing Plan

1. The Term Pricing Plan provides the customer with rate stabilization and discounted rates. The Term Pricing Plan provides for 12, 24, 36, or 60 months rate stabilization. Decreases in Term monthly recurring rates will be passed on to customers who participate in a Term Pricing Plan. The Company will notify customers participating in a Term Pricing Plan when Term monthly recurring rates are decreased.

   Should the Company increase its rates during the Term Pricing Plan period, the customer would continue to pay the rates in effect at the time the customer elected to establish service under the Term Pricing Plan.

2. The customer may choose to terminate an existing Term Pricing Plan before the end of the 12, 24, 36, or 60 months period and negotiate a new 12, 24, 36, or 60 months Term Pricing Plan. The new Term Pricing Plan must be based upon the rates that are currently in effect and available to all customers.

3. The customer must provide the Company with a written notice of intent to renew a Term Pricing Plan no later than 90 days prior to its expiration. If the customer's intent to renew the Term Pricing Plan, the service will automatically be billed under the monthly extension rates in effect at the time that Term Pricing Plan expires. Subsequently, customers under the monthly extension rates may convert their existing service to either a 12, 24, 36, or 60 months Term Pricing Plan. Nonrecurring charges will be waived at the time of conversion.

4. Any special construction charges incurred for services billed under a Term Pricing Plan will be applicable as provided for in Section 1 of this Guidebook.

5. If the customer terminates the Term Pricing Plan agreement prior to the expiration of the 12, 24, 36, or 60-month service term, the customer shall pay a termination charge. Payment of the termination charge does not release the customer from other previous amounts owed to the Company. The termination charge shall be:

   - All unpaid nonrecurring charges (excluding any waived charges); plus

   - Fifty percent (50%) of all recurring charges for the remaining months of the customer's term /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 14.

GIGAMAN® SERVICE (cont'd) /1/

I. Term Pricing Plan (cont'd)

6. Effective November 24, 2003, the Company migrated to a new equipment platform in support of GigaMAN Service. As of November 24, 2003, customers who request a conversion from the legacy GigaMAN platform to the new equipment platform will be allowed to do so under the following conditions:

   - The customer must issue a disconnect order for their legacy GigaMAN Service and place a service order for GigaMAN Service using the new equipment platform. Termination Charges for the legacy service will be waived. Standard nonrecurring charges to install GigaMAN Service using the new equipment platform will apply.

   - The term of the new contract must be equal to or greater than the remaining time left on the legacy GigaMAN contract.

   Migration is contingent on availability of fiber from premise to premise. Other Special Construction charges, as necessary, may apply.

7. For circuits installed prior to January 19, 2004, a customer may move one Local Distribution Channel of a GigaMAN Service during their TPP term to another location in the same LATA and keep the TPP in force (without assessment of Termination Charges), provided no lapse in service occurs. Nonrecurring charges, as appropriate, will apply.

8. For circuits installed after January 19, 2004, customers will be permitted to move one end of a GigaMAN Service to another location, without incurring Termination Charges, given the following conditions are met:

   - The customer must issue a disconnect order for the existing location and place a new service order for GigaMAN Service at the new location. Termination Charges for the existing location will be waived. Standard nonrecurring charges to install GigaMAN Service as a new circuit will apply.

   - Negotiated down time will apply, as the new circuit will need to be designed and installed.

   - The term of the new contract must be equal to or greater than the remaining time left on the existing GigaMAN contract.

   - The existing GigaMAN Service must have been in service for a minimum period of 12 months for a 2-year contract, 15 months for a 3-year contract or 18 months for a 5-year contract. Existing GigaMAN Service with 1-year contracts will not be eligible for this Moves option.

   Moves are contingent on availability of fiber from premise to premise. Other Special Construction charges, as necessary, may apply. /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 15.

GIGAMAN® SERVICE (cont'd) /1/

I. Term Pricing Plan (cont'd)

9. Customers will be permitted to add Protection Options to existing GigaMAN Service that was installed after January 19, 2004, without incurring Termination Charges, given the following conditions are met:

   - The customer must issue a disconnect order for the existing circuit and place a service order for the newly protected circuit. Termination Charges for the existing circuit will be waived. Standard nonrecurring charges to install the newly protected GigaMAN Service will apply. The conditions described here do not apply to Power Protection added to an existing GigaMAN circuit.

   - Negotiated down time will apply, as the new circuit will need to be designed and installed.

   - The term of the new contract must be equal to or greater than the remaining time left on the existing GigaMAN contract. The conditions described here do not apply to Power Protection added to an existing GigaMAN circuit.

   - The existing GigaMAN Service must have been in service for a minimum period of 12 months for a 2-year contract, 15 months for a 3-year contract or 18 months for a 5-year contract. Existing GigaMAN Service with 1-year contracts will not be eligible for this option. The conditions described here do not apply to Power Protection added to an existing GigaMAN circuit.

   Addition of Protection Options are contingent on availability of equipment and fiber facilities from premise to premise. Other Special Construction charges, as necessary, may apply.

10. Customers re-negotiating an existing term payment plan contract expiring after January 19, 2004 will be required to migrate to the new equipment platform. /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 16.

GIGAMAN® SERVICE (cont'd) /2/

I. Term Pricing Plan (cont'd)

11. Customers will be permitted to upgrade to a higher-speed service provided by the Company, without incurring Termination Charges, given the following conditions are met:

    - an upgrade is considered an increase in speed or capacity when comparing GigaMAN Service to the new service.
    - the customer must issue a disconnect order for the existing GigaMAN Service and place a service order for the new, higher-speed service, such that there is no more than 90 days overlap in service.
    - the same customer locations must be utilized for the new, higher-speed service.
    - the expiration date for the new, higher-speed service is beyond the end of the original TPP term associated with the existing GigaMAN Service.
    - the existing GigaMAN Service must have been in service for a minimum period of 12 months for a 24-month contract, 15 months for a 36-month contract or 18 months for a 60-month contract. Existing GigaMAN Service with 12-month contracts will not be eligible for this Upgrade option./1/

12. Migration to AT&T Dedicated Ethernet

    Customers subscribing to GigaMAN Service may migrate to AT&T Dedicated Ethernet provided by the Company without incurring Termination Charges, subject to the following conditions:

    - The new AT&T Dedicated Ethernet and the existing GigaMAN Service must be billed to the same customer of record at the same customer locations.
    - The customer's existing service must have been in place for at least 12 months.
    - The minimum term for the new service must be at least 12 months and must be equal to or greater than the number of months remaining in the customer's existing Term Payment Plan (TPP) term.
    - The speed (capacity/bandwidth) of the new service must be equal to or greater than that of the existing service.
    - The customer must issue a disconnect order for the replaced GigaMAN Service to be effective within 90 days after the AT&T Dedicated Ethernet installation date. The disconnect and new orders must be coordinated through the Company.
    - If overlapping service is required, the period will be limited to not more than 90 days and billing will apply to both services during the time both services are available. /2/

/1/ Minimum in-service periods required for Upgrades only apply for service installed after July 20, 2007. /2/
/2/ Material formerly appeared in Part 15, Section 4, Sheet 17.

GIGAMAN® SERVICE (cont'd) /1/

J. Customer Specific Pricing

Discounted volume pricing is available to customers who subscribe to GigaMAN Service. The established rates and charges for these services will apply for the duration of the contract. Each customer's contract may contain conditions, rates and charges specific to that customer's needs; however, the discounted rates and charges shall be set above the Long Run Incremental Cost (LRIC) floor.

In order to qualify for the discounted volume price, all GigaMAN Services must terminate at the same customer's premises and be covered by a single contract. When the customer meets these eligibility requirements, the customer may elect to transfer existing GigaMAN services to a new Customer Specific Pricing contract.

Customers who have existing TPPs and who qualify for the discounted volume price may at any time convert to a Customer Specific Pricing contract without incurring any termination charges. The Customer Specific Pricing contract must be for a term of equal or greater duration to the number of months remaining on the original TPP.

During the term of the Customer Specific Pricing contract, additional service elements may be added to the contract, and the contract will specify the terms and conditions of such additions. /1/

/1/ Material formerly appeared in Part 15, Section 4, Sheet 18.