
ACCESS SERVICE

8. Advanced Communications Services

8.1 SONET Special Access Service

8.1.1 Service Description

This section contains the rules and regulations pertaining to the provision of Synchronous Optical Network (SONET) service. SONET is the North American standard for the transmission of high capacity bandwidth over optical facilities. This synchronous transmission platform utilizes a modular multiplexing approach. Because of the large bandwidth, some of the payload is used to monitor, protect, manage, and improve the transmission of the signal.

SONET services are differentiated by bit rate of the backbone transmission path. The Telephone Company offers SONET services at the following transmission speeds:

- OC-3 Service provides transmission at the bit rate of 155.52 Mbps
- OC-12 Service provides transmission at the bit rate of 622.08 Mbps
- OC-48 Service provides transmission at the bit rate of 2488.32 Mbps

SONET service consists of nodes, ports, links, and interoffice mileage. Within point to point SONET service, the same payload content is maintained throughout the transmission path, i.e. if DS1s are mapped at one end they must also be mapped at the other end.

8.1.2 SONET Node

SONET Service provides connectivity to two or more customer-designated locations, or nodes. Nodes may be located in Telephone Company central offices or at customer premises. The Telephone Company reserves the right to limit the number of nodes on any SONET arrangement based on engineering considerations.

A SONET Node can function as an add/drop multiplexer for the underlying SONET transmission service, and can also function as the end point of a SONET transmission channel. To use the add/drop multiplexer function, the customer must also purchase the appropriate port(s) at the desired node.

Each SONET Node represents transmission capacity specific to the ordered SONET service. However, the Telephone Company does not guarantee the use of equipment specifically dedicated to any individual customer.

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8.1.3 SONET Link

A SONET Link is a fiber optic connection between a Telephone Company wire center and a customer premise. The SONET Link consists of two optical fibers connecting the customer premise and the Telephone Company wire center. The customer premise end of a SONET Link will be connected to a SONET Node at the customer premise. The central office end of a SONET Link may be connected to a SONET Node at the central office, or may be connected to one end of SONET Interoffice Mileage for the purpose of connecting to a SONET node at a different central office.

SONET Links are billed on a distance sensitive basis. The SONET Link rate is applied on the basis of the number of airline quarter miles from the customer premise to the central office. If the customer desires a four fiber connection to the SONET node at the customer premise (e.g., 1+1 protection), a second SONET Link may be ordered. If the customer requests diverse routing for the second SONET Link, special construction charges as specified in Section 12 of this tariff will apply. The Telephone Company will comply with the request for diverse routing if it is technically feasible and the customer agrees to the cost of the special construction. If the diverse SONET Link is provided from an alternate wire center, the airline miles for the diverse link will be measured from the alternate wire center to the customer premise. In addition, SONET interoffice mileage will be needed even if it would not be needed absent the route diversity.

8.1.4 SONET Interoffice Mileage

SONET Interoffice Mileage provides a data transmission path between two Telephone Company central offices. The data transmission path provided will support the transmission speed of the selected SONET service, but is not guaranteed to be provided over fiber dedicated to a specific customer.

The end of a segment of SONET Interoffice Mileage may be connected to a SONET Node located in the appropriate central office, or to a SONET Link for connection to a SONET Node at a customer premise.

The SONET Interoffice mileage rate element consists of a fixed and mileage sensitive portion. The fixed portion of the rate element is billed per segment of SONET Interoffice Mileage. The mileage sensitive portion is billed per mile, based on the airline distance between the two wire centers involved.

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8.1.5 SONET Port

A SONET Port is an industry standard interface of the designated type and capacity. SONET Ports are provided at SONET Nodes, and provide the capacity to connect all or a portion of the SONET service to customer owned equipment or other Telephone Company provided services. SONET Ports represent mapping of the designated amount and type of capacity within the SONET service. Because this mapping must define a complete path through the SONET service, each SONET Port must be associated with another SONET Port of the same type on a different node of the SONET service. This has the practical effect of requiring SONET Ports to be ordered in pairs.

A SONET Port may be connected to another service of the same type, e.g. a DS1 SONET Port may be connected to a DS1 service or a DS3 SONET Port may be connected to a DS3 service. A SONET Port may be connected to a SONET Port of the same type on a different SONET service. For example, an OC-3c SONET Port on an OC-12 SONET node may be connected to an OC-3c SONET Port on an OC-3 SONET Node in the same central office. A SONET Port may not be connected to another SONET Port on the same SONET Node. When the SONET Node is at the customer location, a SONET Port may be connected to customer owned equipment.

SONET Ports do not include redundant protection from equipment failure. A customer wishing to have redundant protection from equipment failure at the port level may order a second pair of SONET Ports to protect the primary service. The protect ports will be provisioned at the same SONET Nodes as the primary ports.

8.1.6 SONET Reconfiguration Charge

The SONET Reconfiguration Charge is a non-recurring charge that is applied when the customer requests changes to an existing SONET service. The changes requested may include installation of additional ports; removal of existing ports; reconfiguration of an existing port to be located at a different node; or any combination of the above. One SONET Reconfiguration charge will apply per change request regardless of how many new, discontinued, and reconfigured ports are requested. The SONET Reconfiguration Charge does not apply to the initial order for a SONET service.

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8. Advanced Communications Services (Cont'd)8.1 SONET Special Access Service (Cont'd)8.1.7 Rate Regulations

SONET service is offered only under term commitment periods, or term plans. The applicable commitment periods are 12 months, 24 months, 36 months, or 60 months. If the customer discontinues service prior to the expiration of the chosen period, the regulations in Section 7.4.8 of this tariff will apply.

Additional charges may be billed to the customer when the Company is levied charges for space and power required to place multiplexers on the Company's side of the network interface.

The customer is responsible for identifying what service configuration is to be provided when the SONET service is initially installed. This information is to be provided on the service order.

The removal or addition of a SONET Node will be considered the termination of one SONET Service and installation of a different SONET Service. Appropriate termination charges will apply in this case.

Monthly recurring charges apply for SONET Nodes, SONET Links, SONET Interoffice Mileage, and SONET Ports. A nonrecurring SONET Reconfiguration Charge applies when SONET Ports are added to, removed from, or reconfigured within an existing SONET service. A Maintenance of Service Charge will apply if the customer reports trouble, the Telephone Company dispatches a technician, and no trouble is found in the Telephone Company's service or equipment. Additional charges may apply if extraordinary costs are incurred to provision SONET service. These charges will be determined as specified in Section 12 of this tariff.

SONET service is available with transmission capacity defined by Optical Carrier (OC) Rates. The Optical Carrier Rates are in multiples of an OC-1, which is equivalent to an STS1 (synchronous transport signal) (54.84 Mbps), SONET's basic rate. The OC Rates offered by the Telephone Company are:

<u>OC Rate</u>	<u>Bandwidth Capacity</u>
OC-3	155.520 Mbps
OC-12	622.080 Mbps
OC-48	2.488 Gbps

Rates for SONET service are set forth in Section 16 following.

