

LAN Advantage Frame Relay Service

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17.1 Service Description

LAN Advantage Frame Relay Service known as Frame Relay is a packet network that permits the transmission of data at speeds of 56 Kbps, 64 Kbps, 112 Kbps, 128 Kbps, 384 Kbps, 768 Kbps and 1.536 Mbps using Permanent Virtual Connections (PVCs).

PVCs refers to as a permanent, software defined communication path established through a frame or packet network. The connection is analogous to a dedicated wire route. Frames or packets are routed through the connections.

When in operation, customer premises equipment (CPE), such as routers, encapsulate arriving data into variable length frames. These frames contain information identifying which PVC in the network should be used to forward the frame to the proper destination. The CPE then sends the frame into the Frame Relay network. The Frame Relay Switch reads identifying the information routes the frame to the proper destination based on a pre-established PVC.

Frame Relay Service conforms to Consultative Committee for International Telegraph and Telephone (CCITT) and American National Standards Institute (ANSI) publications T1.602, T1.606, T1.617, and T1.618.

17.2 Service Provisioning

LAN Advantage Frame Relay Service known as Frame Relay is a transport service that facilitates the exchange of variable length information units (frames) between end customer connections by way of assigned Permanent Virtual connections (PVCs).

Frame Relay also ensures network efficiency by means of the Committed Information Rate (CIR). Frame Relay is offered at CIR using 0% to 100% of the physical interface speed. The CIR specifies the percentage of the physical rate that is guaranteed to go through the network. CIR at 100% means that all traffic sent to the network is guaranteed to go through the network. The other is marked as Discard Eligible and will be sent through the network as space is available. CIR at 0% means that all data transmitted to the network is relying on the extra space available in the network. Because of the nature of data traffic, space will generally become available, but it may take some retransmission over the network

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17. LAN Advantage Frame Relay Service (Cont'd)

17.2 Service Provisioning (Cont'd)

Variable frame length capability is useful in communications between synchronous (N)

Local Area Networks (LAN) and for transport of synchronous data traffic. Frame Relay is capable of handling the requirements of bursty data sources because of the ability of the service to allocate additional bandwidth when not in use by other sources.

CBT does not undertake to originate data, but offers the use of its service components, where available, to customers for the purpose of transporting customer originated data.

Frame Relay is provided to the customer in the form of the Frame Relay User-to-Network Interface (UNI) Port with Access Line, or Frame Relay UNI Port Only, Frame Relay Network-to-Network (NNI) Port only, and Permanent Virtual Connections. The Frame Relay Access Line forms the component which provides the customer access to the Customer's serving wire center and interoffice transport from the customer's serving wire center to the Frame Relay Switch. The Frame Relay Access line is provided for use only with Frame Relay Service. The Frame Relay UNI and NNI Port Only are provided for Digital and High Capacity connections to the network supporting Frame Relay Service. The Digital and High Capacity connections are available from Section 7.

PVCs are provisioned on either 56 Kbps, 64 Kbps, 112 Kbps, 128 Kbps, 384 Kbps, 768 Kbps and 1.536 Mbps ports, depending upon the customer's networking requirements. The actual throughput of aggregated PVC bandwidths in use at the same time on the same port cannot exceed the port speed. Since all PVCs need not be in use at the same time, it is possible for the total bandwidth of all PVCs associated with one Frame Relay Access Line to exceed the bandwidth of that Frame Relay Access Line. This relationship is referred to as over-subscription and when this occurs, there can be no guarantee that the bandwidth defined for that PVC will be available at any point in time. Bandwidth refers to the sum of Committed Information Rate (CIR) and Excess Information Rate (EIR). The CIR is ordered and billed. EIR equals the bit rate of the access line minus the CIR, except when connecting to an NNI, where the EIR is specified by the customer.

No PVC can have a greater bit rate than the bit rate of the associated access line

17. LAN Advantage Frame Relay Service (Cont'd)

17.2 Service Provisioning (Cont'd)

A customer subscribing to a Frame Relay port or port with access line will be referred to as the Controller of the Frame Relay Port. A customer may request data transmission capability to another customer. Both customers must have a Frame Relay Access Line and Frame Relay Port. The Controller of each Frame Relay Access Line that says 'ordering PVC's' must have written permission from the Controller(s) of each of the Frame Relay Access Lines to which a PVC is requested.

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Frame Relay Port and PVC may be ordered independently and can have different customers as Controllers.

Frame Relay Service is available only where facilities and conditions permit.

17.3 Undertaking of the Telephone Company

In addition to the general regulations described in Section 2, when a customer orders a PVC which is relayed to other Local Exchange Carriers, Interexchange Carriers or other Frame Relay networks, the Telephone Company will provide assistance in establishing this PVC.

CBT has the service responsibility up to and including the demarcation point.

17.4 Obligations of the Customer

In addition to the general regulations described in Section 2, the following regulation will also apply.

The customer shall be responsible for obtaining permission for CBT employees to enter the premises of the customer at any reasonable hour for the purpose of installing, inspecting, repairing or upon termination of the service, removing the components of CBT.

The customer, upon request, shall furnish such information as may be required to permit CBT to design and maintain the Frame Relay Service it offers and to assure that the service arrangement is in compliance with the regulations contained herein.

It shall be the responsibility of the customer to ensure the continuing compatibility of the customer provided equipment that is used in conjunction with the Frame Relay Service.

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17. LAN Advantage Frame Relays" Service (Cont'd)

17.5 Rate Regulations

Regulations in this section are applicable to Frame Relay Service and are in addition to regulations in other sections of the tariff.

Frame Relay Service optional payment plan (OPP) and minimum period charge is specified in 7.4.9.

When PVCs and CIRs per Kilobit are added to existing Frame Relay Service, the minimum period for the added PVCs is coterminous to the payment plan.

Frame Relay will be available 24 hours per day, 7 days per week, except for preventive maintenance, enhancements, and/or repair. CBT reserves the right to perform these tasks as needed, on off peak hours, generally on Sundays from 2:00 a.m. to 6:00 a.m.

Frame Relay Service consist of the following Rate Elements:

(A) Frame Relay UNI Port and Access Line

A monthly rate based on the speed of the port connection (i.e., 56 Kbps, 64 Kbps, 112 Kbps, 128 Kbps, 384 Kbps, 768 Kbps. or 1.536 Mbps), apply per port for each physical connection to the network supporting Frame Relay Service.

(B) Frame Relay UNI or NNI Port only

A monthly rate based on the speed of the port connection (i.e. 56 Kbps. 64 Kbps. or 1.536 Mbps). apply per port for each Frame Relay Access Line to the network supporting Frame Relay Service.

(C) Frame Relay PVC and CIR

A monthly rate apply for each PVC and for each CIR/Kilobit.

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17.5 Rate Regulations (Cont'd)

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Frame Relay Service rate application is as follows:

- (A) A customer may access Frame Relay Service via a Frame Relay Access Line or via Telephone Company provided digital access facilities offered under Section 7. If a customer utilizes a special access line to access Frame Relay Service, the associated regulations, rates and charges for such facilities shall apply in addition to the rates and charges associated with the Frame Relay Service rate elements.
- (B) A customer utilizing special access facilities to access Frame Relay Service would incur the monthly rate associated with the Frame Relay UNI or NNI Port Only charge set forth under 17.6.B or 17.6.C respectively for standard arrangements. The UNI Port provides for a user to carrier connection; the NNI Port provides for a carrier-to-carrier connection.
- (C) The Frame Relay Access Line and PVC may be ordered and billed independently and can have different Controllers, as discussed under 17.2. A request by one customer to discontinue a PVC does not result in the disconnection of the Frame Relay Access Line may authorize a disconnect of that line.

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ACCESS SERVICE TARIFF
PSCK No. 2

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17. LAN Advantage Frame Relay Service (Cont'd)

17.6 Rates and Charges

(A) Frame Relay UNI Port and Access Line, each

	USOC	Month-to- Month	36 Month	60 Month
56 Kbps	FEZFY	\$115.00	\$110.00	\$105.00
64 Kbps	FEZAZ	\$115.00	\$110.00	\$105.00
112 Kbps	FEZGZ	\$150.00	\$140.00	\$130.00
128 Kbps	FEZBZ	\$150.00	\$140.00	\$130.00
384 Kbps	FEZCZ	\$485.00	\$475.00	\$465.00
768 Kbps	FEZDZ	\$515.00	\$505.00	\$495.00
1.536 Mbps	FEZEZ	\$545.00	\$535.00	\$525.00

CIR/Kilobit

56 Kbps	FEZFC	\$.50	\$.50	\$.50
64 Kbps	FEZAC	.50	.50	.50
112 Kbps	FEZGC	.35	.35	.35
128 Kbps	FEZBC	.35	.35	.15
384 kbps	FEZ	.15	.15	.15
768 Kbps	FEZDC	.10	.10	.10
1.536 Mbps	FEZEC	.05	.05	.05
Each PVC	PVKXZ	\$ 1.25	\$ 1.25	\$ 1.25

(B) Frame Relay UNI Port Only, each

56 Kbps	FSZFY	\$ 60.00	\$ 50.00	\$ 40.00
64 Kbps	FSZAZ	\$ 60.00	\$ 50.00	\$ 40.00
1.536 Mbps	FSZEZ	\$450.00	\$440.00	\$430.00

CIR/Kilobit

56 Kbps	FSZFC	\$.50	\$.50	\$.50
64 Kbps	FSZAC	.50	.50	.50
1.536 Mbps	FSZEC	.05	.05	.05
Each PVC	PVKXZ	\$ 1.25	\$ 1.25	\$ 1.25 (C)

(C) Frame Relay NNI Port Only, each

56 Kbps	NN7FY	\$ 60.00	\$50.00	\$40.00
64 k-p6s	NN7AZ	60.00	50.00	40.00
1.536 Mbps	PVKXZ	450.00	440.00	430.00
Each PVC		\$ 1.25\$	1.25	\$ 1.25 (C)