

TELEPHONE EXCHANGE CARRIERS OF ALASKA

ACCESS SERVICES

**12. Public Packet Data Network**

(N)

Public Packet Data Networks utilize separate data networks, comprised of switching and transmission facilities. The networks provide for the transfer of data provided by a customer in a frame format. The data is separated into discrete segments for transmission through the public packet data network.

**12.1 Frame Relay Access Service**

**12.1.1 General**

Frame Relay Access Service (FRAS) is a medium-speed, connection-oriented packet-switched data service that allows for the interconnection of Local Area Networks (LANs) or other compatible end user customer premises equipment for the purpose of connecting to an access customer's intrastate network. The terminal equipment accumulates the customer data and puts it into a frame relay format suitable for transmission over the FRAS network. This terminal equipment must conform to American National Standards Institute and Committee Consultant de International Telegraphique et Telephonique (CCITT) standards.

FRAS permits customers to share network bandwidth for data transmissions.

Rates and charges for FRAS are set forth in 13.4.1 following. The application of rates for FRAS is described in 12.1.2 following.

In addition to the regulations and charges specified in this section, the general regulations and charges specified in other sections of this tariff apply as appropriate.

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By: Ruth A. Steele

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12. Public Packet Data Network (Cont'd)

(N)

12.1 Frame Relay Access Service (Cont'd)

12.1.1 General (Cont'd)

B. Service Description

FRAS is a transport service that facilitates the exchange of variable length information units (frames) between customer connections. Frames travel a fixed path through the network with an address that specifies the permanent virtual connection. Addresses are read by the network processor and the frames are relayed to the preassigned destination.

The service includes: the End User Port connection, the Access Customer Port connection, and Permanent Virtual Connections (PVC) which have associated Committed Information Rates (CIRs). A special access facility (ordered out of Section 7 preceding) is used to connect to the frame relay switch.

The End User Port connection permits FRAS compatible end user customer premises equipment (CPE) to originate or terminate an intrastate access service. Connections between end user customer premises equipment and the telephone company frame relay switch are available at speeds of 56.0 kbps, 64.0 kbps, or 1.544 Mbps. Each End User Port connection requires the identification of a corresponding terminating port connection(s).

The Access Customer Port connection connects the telephone company frame relay switch and the access customer's network. The facility connecting an access customer network to the telephone company frame relay switch is offered only at 1.544 Mbps.

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**12. Public Packet Data Network (Cont'd) (N)**

(N)

**12.1 Frame Relay Access Service (Cont'd)**

**12.1.1 General (Cont'd)**

**B. Service Description (Cont'd)**

Connections are provided via Channel Terminations (see Section 7 Special Access Digital Data and High Capacity Services preceding). All regulations, rates and charges as specified in Section 7 will apply in addition to the rates and charges associated with FRAS.

All End User Port Connections must be in conformance with American National Standards Institute (ANSI) standards T1.606-1990, T1.606 Addendum 1-1991, T1.606a-1992, T1.617, Annex D-1992. All Access Customer Port connections must be in conformance with ANSI standards T1.606b-1993 and Bellcore Technical Reference TR-TSV-001370, Issued: May 1993.

PVCs are software defined, end-to-end, bi-directional communications paths that are established and dis-established via the access service order process. While no physical circuits are dedicated, the two network addresses (one from each port connection) are connected electronically to form a PVC.

There are two types of PVCs available. The standard PVC establishes a communications path between two ports on the same frame relay switch. The extended PVC establishes a communications path between two ports on two interconnected telephone company frame relay switches.

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**12. Public Packet Data Network (Cont'd)**

(N)

**12.1 Frame Relay Access Service (Cont'd)****12.1.1 General (Cont'd)****B. Service Description (Cont'd)**

At the time service is ordered the number of PVCs will be identified along with their Committed Information Rates. CIR is the bit rate at which the FRAS network commits to transfer data. Committed Information Rates provide for frame relay switch throughput at designated speeds. (See 12.1.2 (A)(3) following.) This information is required for network routing purposes.

**C. Ordering Options and Conditions**

Frame Relay Access Service is ordered under the Access Order provisions set forth in Section 5 preceding. Also included in that section are other charges which may be associated with ordering FRAS (e.g., Service Date Change Charges, Cancellation Charges, etc.)

A minimum of two FRAS port connections are required for data to be transported between customer designated premises.

When placing an order for FRAS the customer must specify:

- the number of Permanent Virtual Connections (PVCs) required;
- the location of the ports for each PVC;
- the Committed Information Rates (CIRs) that will be associated with each PVC;
- that the traffic consists of less than ten percent interstate traffic and more than ten percent intrastate traffic.

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**12. Public Packet Data Network (Cont'd)**

(N)

**12.1 Frame Relay Access Service (Cont'd)****12.1.1 General (Cont'd)****C. Ordering Options and Conditions (Cont'd)**

The port connecting the special access facility to the telephone company frame relay switch must be ordered and provided at the same speed as the special access facility.

When connecting to the port of another customer, the ordering customer must obtain authorization from the other customer.

When an extended PVC is ordered, the customer is responsible for placing the order with all telephone companies involved.

**D. Acceptance Testing**

At no additional charge, the Telephone Company will, at the customer's request, cooperatively test at the time of installation.

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12. Public Packet Data Network (Cont'd)

(N)

12.1 Frame Relay Access Service (Cont'd)

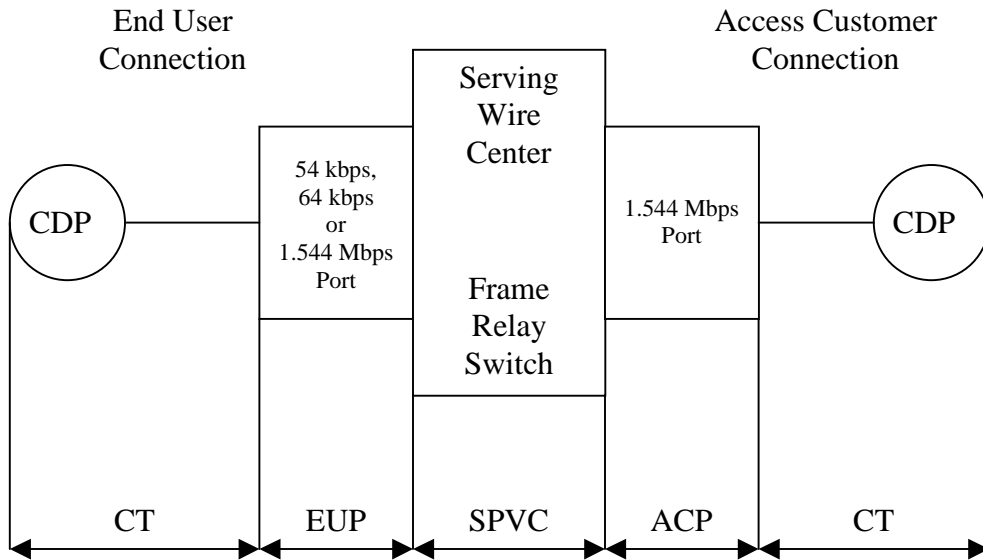
12.1.2 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Frame Relay Access Service.

A. Rate Categories

The following diagrams depict a generic view of the components of FRAS and the manner in which the components are combined to provide Frame Relay Access Service and Interconnected Frame Relay Access Service.

Frame Relay Access Service



- CDP - Customer Designated Premises
- CD - Channel Termination
- EUP - End User Port
- SPVC - Standard Permanent Virtual Connection
- ACP - Access Customer Port

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12. Public Packet Data Network (Cont'd)

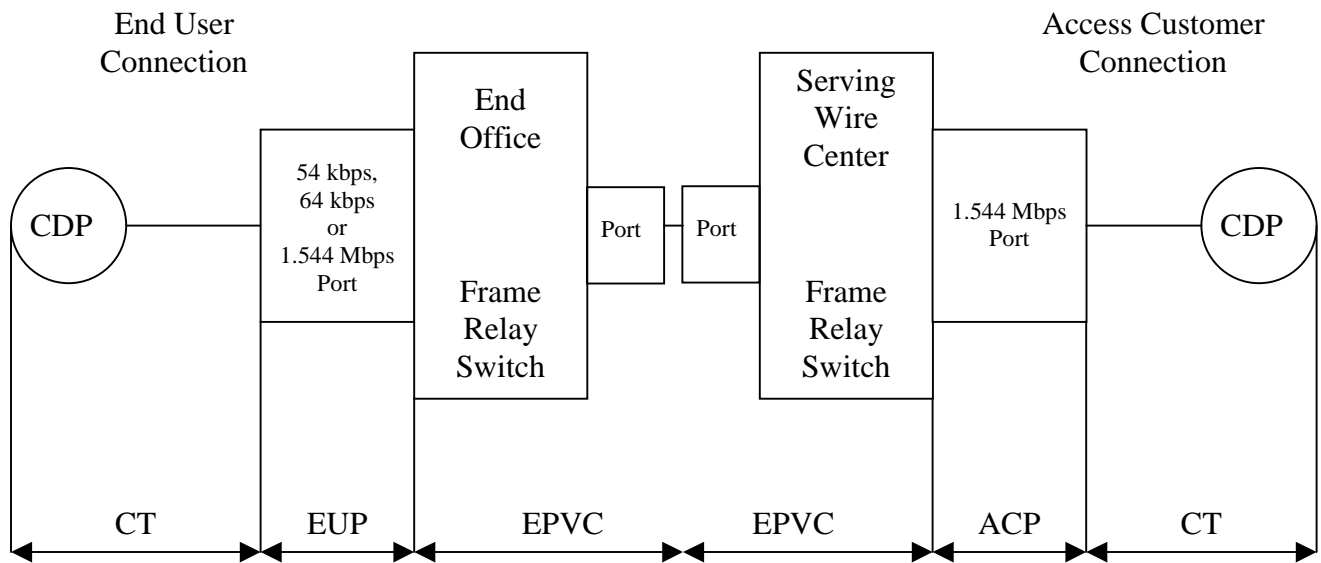
(N)

12.1 Frame Relay Access Service (Cont'd)

12.1.2 Rate Regulations (Cont'd)

A. Rate Categories (Cont'd)

Frame Relay Access Service



CDP - Customer Designated Premises  
 CD - Channel Termination  
 EUP - End User Port  
 EPVC - Extended Permanent Virtual Connection

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**12. Public Packet Data Network (Cont'd)**

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**12.1 Frame Relay Access Service (Cont'd)****12.1.2 Rate Regulations (Cont'd)****A. Rate Categories (Cont'd)****1. End User Port**

The End User Port is the physical location in the telephone company switching office where the special access facility of the customer connects to the FRAS Network. It receives the data frame from the end user customer's Local Area Network or other compatible CPE device and verifies that the end user connection and the corresponding access customer connection are valid before re-laying the frame to the destination end point.

The End User Port consists of either a 56.0 kbps, 64.0 kbps, or a 1.544 Mbps port interface connection. The port connecting the special access facility to the telephone company frame relay switch must be ordered and provided at the same speed as the special access facility.

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**12. Public Packet Data Network (Cont'd)**

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**12.1 Frame Relay Access Service (Cont'd)****12.1.2 Rate Regulations (Cont'd)****A. Rate Categories (Cont'd)****2. Access Customer Port**

The Access Customer Port is the physical location in the telephone company switching offices where the access customer's special access facility connects to the telephone company's FRAS network. It specifies how a frame relay switch sends and receives data from a frame relay access customer's network. The Access Customer Port is offered at a speed of 1.544 Mbps. The port connecting the special access facility to the telephone company frame relay switch must be ordered and provided at the same speed as the special access facility.

**3. Permanent Virtual Connection (PVC)**

A PVC is a software defined communications path between two port connections within the FRAS network.

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12. Public Packet Data Network (Cont'd)

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12.1 Frame Relay Access Service (Cont'd)

12.1.2 Rate Regulations (Cont'd)

A. Rate Categories (Cont'd)

3. Permanent Virtual Connection (PVC) (Cont'd)

Each PVC is provisioned with a customer selected Committed Information Rate. The CIR is a transmission speed specified by the customer. CIRs range from 8 kbps to 768 kbps. The telephone company will provide switch capacity to permit the customer to transmit information with guaranteed delivery at the specified CIR. The telephone company will permit customers to attempt to transmit at speeds up to two times the CIR with no guarantee of completion. Attempted transmissions at above two times the CIR will not be permitted.

Customers will be permitted to order multiple PVCs on a given port subject to switch limitations. Customers anticipating non-simultaneous transmission may order CIRs assigned to these multiple PVCs, the sum of which may theoretically exceed the actual throughput of the port. However, when simultaneous transmission of multiple PVCs occurs, the total of the transmission rate (CIRs) may not exceed the actual throughput of the port.

There are two types of PVCs available. The standard PVC establishes a communications path between the End User Port and the Access Customer Port on the same frame relay switch. The extended PVC establishes a communications path between the End User Port on a frame relay switch and an Access Customer Port on another interconnected frame relay switch. The EPVC establishes a communications path between the end user port on a frame relay switch and an access customer port on another interconnected frame relay switch within the same local service calling area.

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**12. Public Packet Data Network (Cont'd)**

(N)

**12.1 Frame Relay Access Service (Cont'd)****12.1.2 Rate Regulations (Cont'd)****B. Types of Rates and Charges**

There are two types of rates and charges. They are monthly rates and nonrecurring charges. The rates and charges are described as follows:

**1. Monthly Rates**

Monthly rates are recurring rates that apply each month or fraction thereof that a FRAS is provided. For billing purposes, each month is considered to have 30 days.

**2. Nonrecurring Charges**

Nonrecurring charges are one-time charges that apply for specific work activity (i.e., installation or change to an existing service). The types of nonrecurring charges that apply for FRAS are: installation of service and service rearrangements. These charges are in addition to the Access Order Charge as specified in Section 13 following:

**a. Installation of Service**

Nonrecurring charges apply for the installation of PVCs.

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**12.1 Frame Relay Access Service (Cont'd)****12.1.2 Rate Regulations (Cont'd)****B. Types of Rates and Charges (Cont'd)****2. Nonrecurring Charges (Cont'd)****b. Service Rearrangements**

Service Rearrangements are changes to existing (installed) services.

A PVC Rearrangement Charge will be applied whenever a change is made to the CIR of an existing PVC after initial port installation and/or a change is made to the terminating port destination of the PVC.

Administrative changes will be made without charge(s) to the customer. Administrative changes are as follows:

- Change of customer name,
- Change of customer or customer's end user premises address when the change of address is not a result of physical relocation of equipment, Change in billing data (name, address, or contact name or telephone number), Change of agency authorization, Change of customer circuit identification,
- Change of billing account number,
- Change of customer or customer's end user contact name or telephone number, and
- Change of jurisdiction.

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**12. Public Packet Data Network (Cont'd)**

(N)

**12.1 Frame Relay Access Service (Cont'd)**

**12.1.2 Rate Regulations (Cont'd)**

C. Minimum Period

The minimum period for FRAS is one month and the full monthly rate will apply to the first month. Adjustments for quantities of services established or discontinued in any billing period beyond the minimum period are as set forth in 2.4.2. The minimum period for the Frame Relay Service 1.544 Mbps port are as set forth in 2.4.2(A).

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12.

**Reserved For Future Use**

Pursuant to Orders No. 6 & 7 in Docket U-90-26

Tariff Advice No. 1

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