

# **BellSouth® MultiLink Frame Relay Ordering Guides**

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## **1.0 MultiLink Frame Relay Service (MLFR) Introduction and Scope**

The information in this BellSouth Ordering Guide is intended to provide Product Descriptions and General Ordering Information that is “**unique and specific**” to the BellSouth’s MultiLink Frame Relay (MLFR) Service that’s is addressed within this guideline.

**Note: This is NOT a complete Ordering Guideline for MultiLink Frame Relay (MLFR) Service.**

For detailed information regarding specific BellSouth Access Service Request (ASR) entries, please consult the Access Service Ordering Guide (ASOG).

For questions on how to complete an ASR or to inquire about BellSouth ASR training classes, please contact your BellSouth Account Team Representative.

## **2.0 Tariff Reference Information**

**MultiLink Frame Relay (MLFR) Service** is offered subject to the terms and conditions of BellSouth Federal Communications Commission (FCC) No. 1 Tariff, Section 21. BellSouth tariffs are available online at:

<http://cpr.bellsouth.com>

## **3.0 Technical Reference Information**

The BellSouth Technical Reference (TR) 73587 provides additional detailed technical information on MLFR Service, which can be downloaded from BellSouth’s website by going to:

[http://interconnection.bellsouth.com/products/tech\\_ref.html](http://interconnection.bellsouth.com/products/tech_ref.html)

#### **4.0 Multilink Frame Relay General Service Description**

Customers that require speeds greater than a Digital Service Level One (DS1), but less than a Digital Service Level Three (DS3) may request MultiLink Frame Relay Service (MLFR) service. MLFR is provisioned by using multiple DS1 facilities bonded together by the Central Office (CO) equipment used in providing MLFR and the appropriate compatible equipment provided by the customer at their premises. The number of DS1 facilities required to provision MLFR is determined by the speed of service requested. MLFR service is available at transmission speeds of 3 Mbps, 6 Mbps, 9 Mbps and 12 Mbps as User to Network Interfaces (UNI) or as Network-to-Network Interfaces (NNI). The table below provides the available speeds and the number of DS1 facilities provisioned in association with each speed:

<b>MultiLink Network Interface</b>	<b>Quantity of DS1 Facilities Required</b>
3.072 Mbps	2
6.144 Mbps	4
9.216 Mbps	6
12.280 Mbps	8

#### **Mbps = Megabits per Second**

In the Managed Shared product set, the Managed Shared Connection will include the appropriate number of DS1s to reach the necessary speed. For the Exchange Access product, the customer will have to purchase the individual DS1s from Section 7 of the FCC Tariff #1. The Exchange Access MultiLink Frame Relay service will only cover a MultiLink capable port.

In order for Carriers to take advantage of the MultiLink service, they must ensure that end users have a MultiLink capable router at their location.

#### **5.0 Minimum Billing Period**

The minimum billing period for MLFR service is **one (1) month**.

## 6.0 Availability

MLFR service is available for:

- Exchange Access Frame Relay Service (XAFRS)
- Managed Shared Frame Relay Service (MSFRS)

## 7.0 Restrictions

- MSFRS MultiLink Frame Relay Service **MAY NOT** ride Carrier Facility Assignment (CFA)
- MSFRS and XAFRS MultiLink Frame Relay service **MAY NOT** be ordered as a Primary or Back Up Port
- All orders require a service inquiry, except for speed change orders where the speed of the circuit is decreasing
- Always Percent Interstate Usage (PIU) of 100

## 8.0 Optional Features

XAFRS and MSFRS MultiLink Frame Relay Service allows for the transfer of variable length frames called packets. Frames are relayed by virtual connections and travel a fixed path through the network although bandwidth is not dedicated to each virtual connection. These virtual connections are referred to as Permanent Virtual Circuits (PVCs) . PVC is a logical channel from one Frame Relay Service connection to another. The PVCs are end-to-end, bi-directional channels that are established via the service provisioning process. The connections on each end of the PVC are referred to as a Data Link Connection Identifier (DLCI) .

When ordering DLCI's, the Number of Virtual Connections (NVC) field of the ASR must be populated with the number of DLCI's requested per ASR. **For example, if the Customer wanted to request 3 DLCI's, the NVC field would be populated with '03'**. The number in the NVC field of the ASR also determines the number of Interconnection Virtual Connection Form (ICVCF) screens provided. Each ICVCF screen is mechanically assigned a number in the Virtual Connection Number (VCNUM) field. These screens allow the customer to provide additional information necessary for provisioning a virtual connection. Each of these screens has a Virtual Connection Activity (VCACT) field.

## 8.1 MultiLink Frame Relay Optional Feature Activity Types

Listed below are the different optional feature activity types:

- **N** = Customer requesting a NEW DLCI to be installed
- **C** = Customer is requesting a change to an existing DLCI
- **D** = Customer is requesting to disconnect an existing DLCI

### 8.1.1 MultiLink Frame Relay Types of Optional Features

When the Activity type is a **C**, listed below are the types of optional features that are available with MLFR Service:

<b>Types of Optional Features</b>
<b>CIR</b> – The Committed Information Rate (CIR) may be changed on any DLCI at any time. The CIR feature enables the customer to select a sustained throughput under normal conditions. A CIR must be selected for each DLCI, other than Multicast PVCs
<b>DLCI</b> – The DLCI number is assigned by the customer and may be changed at any time.
<b>RDLCI</b> – The RDLCI is the Related DLCI that transmits and receives data from the DLCI.
<b>RCID</b> – The RCID is the Related CKT ID that is associated with the RDLCI.
<b>BCX</b> – The Committed Burst Size may be changed at anytime at the customer’s request.
<b>BEX</b> – The Excess Burst Size may be changed at anytime at the customer’s request.

## **9.0 Type of Multilink Frame Relay Data Link Connection Identifiers (DLCI)**

There are several types of Data Link Connection Identifiers (DLCI's) available to Customers to work with MultiLink Frame Relay service. Listed below are the types of DLCI's, explanation and/or definition of each type:

- **Standard DLCI, per UNI or NNI** – This feature provides for the assignment of the DLCI's per User Network Interface (UNI) or Network-to Network Interface (NNI). When two (2) DLCI's are mapped together, a PVC is created.
- **Priority DLCI, UNI or NNI** – Priority PVC capability allows customers to specify the importance of a PVC based on the importance of the data transmitted, as compared to other PVCs.
- **Intelligent PVC (IPVC)** – Intelligent PVC (IPVC) is a Frame Relay service offering allowing the customer to automatically reroute data on a per PVC basis. Establishing PVC with three (3) endpoints creates an IPVC arrangement. These endpoints are referred to as:
  - Pivot
  - Primary
  - Secondary

Each of these endpoints consists of a port termination in the Fast Packet Switch and a DLCI for transmission of data between endpoints. All three (3) endpoints with the IPVC arrangement must be the same type of DLCI. The PVC endpoints are mapped together in the following manner:

- Pivot to Primary
- Pivot to Secondary

- **Multicast PVCs** – Multicast PVC is a Frame Relay service offering allowing the customers to broadcast data simultaneously to multiple DLCI's.
- **Frame Relay Forum 5 (FRF.5)** – This feature is considered Frame Relay to ATM **"Network Interworking"** and will allow the customer to connect a Frame Relay PVC to an Asynchronous Transfer Mode (ATM) PVC.
- **Frame Relay Forum (FRF.8)** – The FRF.8 feature provides for **"Service Interworking"** which receives data as Frame Relay packets and delivers the data as ATM cell. Interworking enables carriers to aggregate traffic from their Frame Relay End Users onto high capacity ATM backbone facilities via NNI or UNI. Also, FRF.8 allows a Frame End User to send data from a premise location with UNI or NNI to another premise with an ATM service UNI or vice versa. The overall concept of this feature is to enable Frame Relay and ATM customers to transparently transmit data between each other.
- **Inter-Service Area Link (ISAL)** – In Local Access and Transport Area (LATAs) where there are multiple MSFRS Service Areas, the customer may utilize a MSFRS ISAL to have connectivity on a per PVC basis between MSFRS Connections in each service Area. **This optional feature is only available with MSFRS.**

## 10.0 Speed Changes/Circuit Level

Customers may increase or decrease the speed of an existing circuit by changing the 4<sup>th</sup> character of the Network Channel (NC) code.

**Speed Changes may be submitted on one (1) ASR in the following manner:**

**ACT – This field on the ASR should be populated with a "C"**

**Note: All other ordering information applies.**

## **11.0 Access Service Request (ASR) Ordering**

**MultiLink Frame Relay (MLFR) Service** is ordered from BellSouth through the use of an ASR. Various software vendors provide electronic interface solutions for ASRs and your BellSouth Account Team Representative can assist the Carrier with information on how to obtain access to the Common Access Front End (CAFE) interface, which is BellSouth's on-line ASR interface.

Most fields on an ASR involve information of a general nature (e.g., customer address, contact information). For more information regarding those fields, as well as detailed information on the various forms that make the ASR, refer to the ASOG.

### **11.1 Access Service Request (ASR) Forms Overview**

A complete ASR request involves several forms. The instructions given below assume the reader is familiar with ASR preparation, and focus only on the details and forms that are unique to XAFRS. It is beyond the scope of this user guide to detail all the possible field entries and combinations. For more detailed information, please refer to the ASOG published by OBF. Your BellSouth representative can also assist you in obtaining ASR training.

The four (4) main forms used are listed below and will be described in detail in this section of the MultiLink Frame Relay Ordering Guides:

- Access Service Request Form
- Transport Request Form
- End User Special Access Request Form
- Virtual Connection Form

In addition, the BellSouth Interexchange Carrier Service Center (ICSC) will use certain forms to communicate order status back to the Customer:

- Clarification Request
- Confirmation Notice Form
- Confirmation Notice Form for Virtual Connections

## 12.0 Interconnection Access Service Request Form (ICASR)

### 12.1 REQ TYP (Requisition Type) (2 Alpha Characters) (Required Field)

This field identifies the type of service being requested and the status of the request.

The entry in the Request Type (REQ TYP) or requisition type field is what differentiates a "broadband" service type.

The **1<sup>st</sup> character** in the REQ TYP field denotes a broadband service and whether it is terminating at an End User's Premises or an Access Customer Terminating Location (ACTL).

REQ TYP – 1 <sup>st</sup> Character
<b>X</b> = Broadband End User Service – End User Premises to Frame Relay Switch <b>(Requires End User Special Access Request Form)</b>
<b>V</b> = Broadband Services – Carrier ACTL to Frame Relay Switch <b>(Requires a Transport Request Form)</b>

The **2<sup>nd</sup> Character** of the REQ TYP field is used to indicate whether the ASR is an Inquiry (the ASOG refers to this as a Service Request) or a Firm Order. For Firm Orders the choice of characters also indicates an Inquiry had previously been processed (same Purchase Order Number or PON). For additional details, consult the ASOG but typical entries are listed below:

REQ TYP – 2 <sup>nd</sup> Character
<b>A</b> = Mechanized
<b>C</b> = Manual
<b>D</b> = Firm Order

**This is a Required Field.**

## **12.2 PIU (Percent Interstate Usage) (3 Numeric Characters) (Required Field)**

This field identifies the expected Interstate Usage for the Access Service on the request from the Customer.

This field is always populated with **100**.

**This is a Required Field.**

## **12.3 SPEC (Service and Product Enhancement Code) (5-7 Alphanumeric Characters)**

This field identifies a specific product or service offering.

A SPEC code is **NOT** required when ordering XAFRS MultiLink Frame Relay, unless the customer is also ordering "Multicast PVCs.

If Multicast PVCs are being ordered at the same time as XAFRS MultiLink Frame Relay, the Customer will populate the SPEC field on the ASR with **FRSMPX**.

## **12.4 REMARKS (Remarks) (124 Alpha/Numeric Characters)**

This field identifies a free flowing field which can be used to expand upon and clarify other data.

## **13.0 Interconnection Administration Form Screen (ICADM)**

The ICADM fields involve general administrative information. For more information regarding these fields, the Carrier may refer to the ASOG.

## 14.0 End User Special Access (EUSA) Request Form

### 14.1 NC (Network Channel) Code (4 Alpha/Numeric Characters) (Required Field)

This field identifies the Network Channel Code for the circuit(s) involved. The Network Channel Code describes the channel provided by the Provider.

The **1<sup>st</sup> two (2) characters** of the NC code must be **"YH"**. The 3<sup>rd</sup> position of the NC code determines what type of interface is being requested. Valid entries are listed in table below:

<b>F</b> = NNI Interface
<b>G</b> = UNI Interface

The last character of the NC code determines the speed of service being requested and the number of DS1 facilities necessary to provision the service at the requested speed. Valid entries are listed in table below:

<b>A</b> = Indicates 3 Mbps and requires 2 DS1 facilities
<b>C</b> = Indicates 6 Mbps and requires 4 DS1 facilities
<b>E</b> = Indicates 9 Mbps and requires 8 DS1 facilities
<b>G</b> = Indicates 12 Mbps and requires 8 DS1 facilities

**This is a Required Field.**

### 14.2 NCI (Network Channel Interface) Code (5 to 7 Alpha/Numeric Characters) (Required Field)

This field identifies the electrical conditions on the circuit at the Access Customer Terminal Location (ACTL)/Primary location.

**This is a Required Field.**

### 14.3 SECNCI (Secondary Network Channel Interface) (5 to 7 Alpha/Numeric Characters) (Required Field)

This field identifies the electrical on the circuit at the Access Customer Terminal Location (ACTL)/Primary location.

**This is a Required Field.**

### 14.4.1 MultiLink Frame Relay NC Codes -Network-to-Network Interfaces (NNI's)

1 <sup>ST</sup> 2 Characters	3rd Character	4 <sup>th</sup> Character	Description
YH	F	A	MLFR NNI 3 Mbps with 2 DS1's
YH	F	C	MLFR NNI 6 Mbps with 4 DS1's
YH	F	E	MLFR NNI 9 Mbps with 6 DS1's
YH	F	G	MLFR NNI 12 Mbps with 8 DS1's

### 14.4.2 MultiLink Frame Relay NC Code - User-to-Network Interfaces (UNI's)

1 <sup>ST</sup> 2 Characters	3rd Character	4 <sup>th</sup> Character	Description
YH	G	A	MLFR UNI 3 Mbps with 2 DS1's
YH	G	C	MLFR UNI 6 Mbps with 4 DS1's
YH	G	E	MLFR UNI 9 Mbps with 6 DS1's
YH	G	G	MLFR UNI 12 Mbps with 8 DS1's

**This is a Required Field.**

### 14.5 MultiLink Frame Relay NCI Codes

For MultiLink Frame relay Service, the NCI code must be one of the codes listed in the table below based on the information populated in the REQ TYP field:

04DU9.1SN should be used when the REQ TYP begins with "X"
04DS9.15 should be used when the REQ TYP begins with "V"

**This is a Required Field.**

## **14.6 MultiLink Frame Relay SECNCI Code**

For MultiLink Frame Relay service, the SECNCI code **MUST** always be **04CX6.ML3**. The .ML3 distinguishes MultiLink Frame Relay Service from Sub-Rate T3 at the same speeds.

**This is a Required Field.**

## **14.7 CFA (Connecting Facility Assignment) (42 Alpha/Numeric Characters) (Required Field)**

This field identifies the provider carrier system and channel to be used from a Wideband Analog, High Capacity or Optical Network facility when the Customer has assignment control.

Customer **MUST** provide CFA when ordering XAFRS MultiLink Frame Relay Service.

**This is a Required Field.**

## **14.8 SECLOC (Secondary Location) (12 Alpha/Numeric Characters) (Required Field)**

This field identifies the terminating end of a circuit, a provider end office or the first point of switching for the circuit being provided.

The Customer **MUST** provide the first 8 characters of the BellSouth Fast Packet Switch Common Language Location Identifier (CLLI) Code.

**This is a Required Field.**

## 15.0 Multilink Frame Relay Circuit ID Format - NNI

Each DS1 facility required to provision the requested speed will be the same Circuit ID, with a unique segment number for each of the DS1 facilities.

Description	MLFR Circuit ID Format
3 Mbps NNI	XX. <b>YHFA</b> .XXXXXX.SB.001
	XX. <b>YHFA</b> .XXXXXX.SB.002
6 Mbps NNI	XX. <b>YHFC</b> .XXXXXX.SB.001
	XX. <b>YHFC</b> .XXXXXX.SB.002
	XX. <b>YHFC</b> .XXXXXX.SB.003
	XX. <b>YHFC</b> .XXXXXX.SB.004
9 Mbps NNI	XX. <b>YHFE</b> .XXXXXX.SB.001
	XX. <b>YHFE</b> .XXXXXX.SB.002
	XX. <b>YHFE</b> .XXXXXX.SB.003
	XX. <b>YHFE</b> .XXXXXX.SB.004
	XX. <b>YHFE</b> .XXXXXX.SB.005
	XX. <b>YHFE</b> .XXXXXX.SB.006
12 Mbps NNI	XX. <b>YHFG</b> .XXXXXX.SB.001
	XX. <b>YHFG</b> .XXXXXX.SB.002
	XX. <b>YHFG</b> .XXXXXX.SB.003
	XX. <b>YHFG</b> .XXXXXX.SB.004
	XX. <b>YHFG</b> .XXXXXX.SB.005
	XX. <b>YHFG</b> .XXXXXX.SB.006
	XX. <b>YHFG</b> .XXXXXX.SB.007
	XX. <b>YHFG</b> .XXXXXX.SB.008

## 16.0 Multilink Frame Relay UNI Circuit ID Format - UNI

Each DS1 facility required to provision the requested speed will be the same Circuit ID, with a unique segment number for each of the DS1 facilities.

Description	MLFR Circuit ID Format
3 Mbps UNI	XX. <b>YHGA</b> .XXXXXX.SB.001
	XX. <b>YHGA</b> .XXXXXX.SB.002
6 Mbps UNI	XX. <b>YHGC</b> .XXXXXX.SB.001
	XX. <b>YHGC</b> .XXXXXX.SB.002
	XX. <b>YHGC</b> .XXXXXX.SB.003
	XX. <b>YHGC</b> .XXXXXX.SB.004
9 Mbps UNI	XX. <b>YHGE</b> .XXXXXX.SB.001
	XX. <b>YHGE</b> .XXXXXX.SB.002
	XX. <b>YHGE</b> .XXXXXX.SB.003
	XX. <b>YHGE</b> .XXXXXX.SB.004
	XX. <b>YHGE</b> .XXXXXX.SB.005
	XX. <b>YHGE</b> .XXXXXX.SB.006
12 Mbps UNI	XX. <b>YHGG</b> .XXXXXX.SB.001
	XX. <b>YHGG</b> .XXXXXX.SB.002
	XX. <b>YHGG</b> .XXXXXX.SB.003
	XX. <b>YHGG</b> .XXXXXX.SB.004
	XX. <b>YHGG</b> .XXXXXX.SB.005
	XX. <b>YHGG</b> .XXXXXX.SB.006
	XX. <b>YHGG</b> .XXXXXX.SB.007
	XX. <b>YHGG</b> .XXXXXX.SB.008

**17.0 MultiLink Frame Relay NC, NCI and SECNCI Codes – UNI  
With REQ TYP of X**

<b>Speed of Service</b>	<b>REQ TYP</b>	<b>NC Code</b>	<b>NCI Code</b>	<b>SECNCI Code</b>
3 Mbps	X	YHGA	04DU9.1SN	04CX6.ML3
6 Mbps	X	YHGC	04DU9.1SN	04CX6.ML3
9 Mbps	X	YHGE	04DU9.1SN	04CX6.ML3
12 Mbps	X	YHGG	04DU9.1SN	04CX6.ML3

**18.0 MultiLink Frame Relay NC, NCI and SECNCI Codes – UNI  
With REQ TYP of V**

<b>Speed of Service</b>	<b>REQ TYP</b>	<b>NC Code</b>	<b>NCI Code</b>	<b>SECNCI Code</b>
3 Mbps	V	YHGA	04DS9.15	04CX6.ML3
6 Mbps	V	YHGC	04DS9.15	04CX6.ML3
9 Mbps	V	YHGE	04DS9.15	04CX6.ML3
12 Mbps	V	YHGG	04DS9.15	04CX6.ML3

**19.0 MultiLink Frame Relay NC, NCI and SECNCI Codes – NNI  
With REQ TYP of X**

Speed of Service	REQ TYP	NC Code	NCI Code	SECNCI Code
3 Mbps	X	YHFA	04DU9.1SN	04CX6.ML3
6 Mbps	X	YHFC	04DU9.1SN	04CX6.ML3
9 Mbps	X	YHFE	04DU9.1SN	04CX6.ML3
12 Mbps	X	YHFG	04DU9.1SN	04CX6.ML3

**20.0 MultiLink Frame Relay NC, NCI and SECNCI Codes – NNI  
With REQ TYP of V**

Speed of Service	REQ TYP	NC Code	NCI Code	SECNCI Code
3 Mbps	V	YHFA	04DS9.15	04CX6.ML3
6 Mbps	V	YHFC	04DS9.15	04CX6.ML3
9 Mbps	V	YHFE	04DS9.15	04CX6.ML3
12 Mbps	V	YHFG	04DS9.15	04CX6.ML3

**21.0 Exchange Access Frame Relay MultiLink - UNI  
Basic Class of Service and Interface USOC's**

<b>Speed of Service</b>	<b>Basic Class of Service</b>	<b>XAFRS Interface USOC</b>	<b>Type of Interface</b>
3 Mbps	XAFXT	XAFUP	UNI
6 Mbps	XAFXT	XAFUQ	UNI
9 Mbps	XAFXT	XAFUR	UNI
12 Mbps	XAFXT	XAFUS	UNI

**22.0 Exchange Access Frame Relay MultiLink - NNI  
Basic Class of Service and Interface USOC's**

<b>Speed of Service</b>	<b>Basic Class of Service</b>	<b>XAFRS Interface USOC</b>	<b>Type of Interface</b>
3 Mbps	XAFXT	XAFNP	NNI
6 Mbps	XAFXT	XAFNQ	NNI
9 Mbps	XAFXT	XAFNR	NNI
12 Mbps	XAFXT	XAFNS	NNI

## 23.0 Managed Shared Frame Relay Service (MSFRS)

### 23.1 3 Mbps MultiLink Frame Relay

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS Connection	MS9XT	MS9EP	MS9NP	Y	Y
MSFRS Extended Connection <b>(1)</b>	MS9XT	MS9EP	MS9OP	Y	Y
MSFRS Extended Connection <b>(2)</b>	MS9XT	MS9EP	MS9OP	Y	Y
MSFRS Extended Connection <b>(3)</b>	MS9XT	MS9EP	MS9OP	Y	Y
MSFRS Extended Connection <b>(4)</b>	MS9XT	MS9EP	MS9OP	Y	Y
MSFRS Extended Connection <b>(5)</b>	MS9XT	MS9EP	MS9OP	Y	Y
MSFRS Extended Connection <b>(6)</b>	MS9XT	MS9EP	MS9OP	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

### 23.2 6 Mbps MultiLink Frame Relay

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS Connection	MS9XT	MS9UQ	MS9NQ	Y	Y
MSFRS Extended Connection (1)	MS9XT	MS9EQ	MS9OQ	Y	Y
MSFRS Extended Connection (2)	MS9XT	MS9EQ	MS9OQ	Y	Y
MSFRS Extended Connection (3)	MS9XT	MS9EQ	MS9OQ	Y	Y
MSFRS Extended Connection (4)	MS9XT	MS9EQ	MS9OQ	Y	Y
MSFRS Extended Connection (5)	MS9XT	MS9EQ	MS9OQ	Y	Y
MSFRS Extended Connection (6)	MS9XT	MS9EQ	MS9OQ	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

### 23.3 9 Mbps MultiLink Frame Relay

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS Connection	MS9XT	MS9UR	MS9NR	Y	Y
MSFRS Extended Connection (1)	MS9XT	MS9ER	MS9OR	Y	Y
MSFRS Extended Connection (2)	MS9XT	MS9ER	MS9OR	Y	Y
MSFRS Extended Connection (3)	MS9XT	MS9ER	MS9OR	Y	Y
MSFRS Extended Connection (4)	MS9XT	MS9ER	MS9OR	Y	Y
MSFRS Extended Connection (5)	MS9XT	MS9ER	MS9OR	Y	Y
MSFRS Extended Connection (6)	MS9XT	MS9ER	MS9OR	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

### 23.4 12 Mbps MultiLink Frame Relay

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS Connection	MS9XT	MS9US	MS9NS	Y	Y
MSFRS Extended Connection (1)	MS9XT	MS9ES	MS9OS	Y	Y
MSFRS Extended Connection (2)	MS9XT	MS9ES	MS9OS	Y	Y
MSFRS Extended Connection (3)	MS9XT	MS9ES	MS9OS	Y	Y
MSFRS Extended Connection (4)	MS9XT	MS9ES	MS9OS	Y	Y
MSFRS Extended Connection (5)	MS9XT	MS9ES	MS9OS	Y	Y
MSFRS Extended Connection (6)	MS9XT	MS9ES	MS9OS	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

**24.0 Managed Shared Frame Relay Service (MSFRS)  
MeetPoint Extended Connections**

**24.1 3 Mbps MultiLink Frame Relay**

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS MeetPoint Extended Connection	MS9XT	MS9MP	MS9PP	Y	Y
MSFRS MeetPoint Extended Connection <b>(1)</b>	MS9XT	MS9MP	MS9PP	Y	Y
MSFRS MeetPoint Extended Connection <b>(2)</b>	MS9XT	MS9MP	MS9PP	Y	Y
MSFRS MeetPoint Extended Connection <b>(3)</b>	MS9XT	MS9MP	MS9PP	Y	Y
MSFRS MeetPoint Extended Connection <b>(4)</b>	MS9XT	MS9MP	MS9PP	Y	Y
MSFRS MeetPoint Extended Connection <b>(5)</b>	MS9XT	MS9MP	MS9PP	Y	Y
MSFRS MeetPoint Extended Connection <b>(6)</b>	MS9XT	MS9MP	MS9PP	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

## 24.2 6 Mbps MultiLink Frame Relay

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS MeetPoint Extended Connection	MS9XT	MS9MQ	MS9PQ	Y	Y
MSFRS MeetPoint Extended Connection <b>(1)</b>	MS9XT	MS9MQ	MS9PQ	Y	Y
MSFRS MeetPoint Extended Connection <b>(2)</b>	MS9XT	MS9MQ	MS9PQ	Y	Y
MSFRS MeetPoint Extended Connection <b>(3)</b>	MS9XT	MS9MQ	MS9PQ	Y	Y
MSFRS MeetPoint Extended Connection <b>(4)</b>	MS9XT	MS9MQ	MS9PQ	Y	Y
MSFRS MeetPoint Extended Connection <b>(5)</b>	MS9XT	MS9MQ	MS9PQ	Y	Y
MSFRS MeetPoint Extended Connection <b>(6)</b>	MS9XT	MS9MQ	MS9PQ	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

### 24.3 9 Mbps MultiLink Frame Relay

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS MeetPoint Extended Connection	MS9XT	MS9MR	MS9PR	Y	Y
MSFRS MeetPoint Extended Connection <b>(1)</b>	MS9XT	MS9MR	MS9PR	Y	Y
MSFRS MeetPoint Extended Connection <b>(2)</b>	MS9XT	MS9MR	MS9PR	Y	Y
MSFRS MeetPoint Extended Connection <b>(3)</b>	MS9XT	MS9MR	MS9PR	Y	Y
MSFRS MeetPoint Extended Connection <b>(4)</b>	MS9XT	MS9MR	MS9PR	Y	Y
MSFRS MeetPoint Extended Connection <b>(5)</b>	MS9XT	MS9MR	MS9PR	Y	Y
MSFRS MeetPoint Extended Connection <b>(6)</b>	MS9XT	MS9MR	MS9PR	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

## 24.4 12 Mbps MultiLink Frame Relay

Product	BCS	USOC (UNI)	USOC (NNI)	Monthly Charges	Nonrecurring Charges
MSFRS MeetPoint Extended Connection	MS9XT	MS9MS	MS9PS	Y	Y
MSFRS MeetPoint Extended Connection <b>(1)</b>	MS9XT	MS9MR	MS9PS	Y	Y
MSFRS MeetPoint Extended Connection <b>(2)</b>	MS9XT	MS9MS	MS9PS	Y	Y
MSFRS MeetPoint Extended Connection <b>(3)</b>	MS9XT	MS9MS	MS9PS	Y	Y
MSFRS MeetPoint Extended Connection <b>(4)</b>	MS9XT	MS9MS	MS9PS	Y	Y
MSFRS MeetPoint Extended Connection <b>(5)</b>	MS9XT	MS9MS	MS9PS	Y	Y
MSFRS MeetPoint Extended Connection <b>(6)</b>	MS9XT	MS9MS	MS9PS	Y	Y

**Note 1** – Customer Premises Serving Wire center (SWC) is over 0 to 20 miles outside Service Area.

**Note 2** – Customer Premises Serving Wire center (SWC) is over 20 to 50 miles outside Service Area.

**Note 3** – Customer Premises Serving Wire center (SWC) is over 50 to 75 miles outside Service Area.

**Note 4** – Customer Premises Serving Wire center (SWC) is over 75 to 100 miles outside Service Area.

**Note 5** – Customer Premises Serving Wire center (SWC) is over 100 to 125 miles outside Service Area.

**Note 6** – Customer Premises Serving Wire center (SWC) is over 125 miles outside Service Area.

## 25.0 Feature Change USOC's and Charges

Type of Change	USOC	Monthly Charge	Nonrecurring Charge
Per Occurrence, Per Feature	XAFFC	N	Y
Transfer of Service, Per Billing Account Number	XAFTF	N	Y
Fast Speed Change Charge <b>(Note 1)</b>		N	Y
112 Kbps thru 1152 Kbps	MS9F1		
3 Mbps thru 33 Mbps	MS9F3		
Primary MSFRS Connection, Enablement/Change Charge	MS5EC	N	Y
MultiLink Speed Change Charge, speed Downgrade Charge, Per Connection Request <b>(Note 2)</b>	MS9SC	N	Y
Speed Upgrade Charge, Per Connection			
2 DS1 Speed Upgrade	MS9S2	N	Y
4 DS1 Speed Upgrade	MS9S4	N	Y
6 DS1 Speed Upgrade	MS9S6	N	Y

**Note 1:** This nonrecurring charge applies per connection changed to either:  
 (1) Another speed as defined above or  
 (2) A 44.210 Mbps connection  
 Accordingly, the Fast Speed Change Charge applies in lieu of the Nonrecurring Charges specified in the MSFRS Connections and MSFRS Meet point Extended Connections section of the FCC # 1 Tariff.

**Note 2:** This nonrecurring charge applies per MSFRS MultiLink Connection requested to be changed to another speed MSFRS MultiLink Connection. Accordingly, the MultiLink Speed Change Charge applies in lieu of the Nonrecurring Charge specified in the MSFRS connections and MSFRS Meet point Connections section of the FCC # 1 Tariff.

## 26.0 ACRONYMS

Acronym	Description
ACT	Activity
ASOG	Access Service Ordering Guide
ASR	Access Service Request
ATM	Asynchronous Transfer Mode
BCS	Basic Class of Service
BCX	Committed Burst Size
BEX	Excess Burst Size
CFA	Carrier Facility Assignment
CIR	Committed Information Rate
CO	Central Office
DS1	Digital Service Level One
DS3	Digital Service Level Three
DLCI	Data Link Connection Identifier
FCC	Federal Communications Commission
FRF.5	Frame Relay Forum 5
FRF.8	Frame Relay Forum 8
ICVCF	Interconnection Virtual Connection Form
IPVC	Intelligent Permanent Virtual Circuit
ISAL	Inter-Service Area Link
LATA	Local Access and Transport Area
Mbps	Megabits per Second
MLFR	MultiLink Frame Relay
MSATMS	Managed Shared Asynchronous Mode Service
MSFRS	Managed Shared Frame Relay Service
NC	Network Channel
NCI	Network Channel Interface
NNI	Network-to-Network Interface
NVC	Number of Virtual Connections
PVC	Permanent Virtual Circuit
RCID	Related Circuit Identification
RDLCI	Related Data Link Connection Identifier
REQTYP	Requisition Type

