Frame Relay

Maximizes Network Connectivity

Optimizes Network Performance

Improves Network Manageability

Provides Investment Protection

Frame Relay is a standard, connection-oriented protocol for use between data terminal equipment and data communications equipment. Representing the next generation of packet switching, Frame Relay is simpler and more efficient than its predecessor, X.25. Frame Relay frames contain Data Link Layer (OSI Layer 2) addresses known as Data Link Connection Identifiers (DLCIs). Switching X.25 packets, by contrast, requires more time and resource-intensive processing of X.25's Layer 3 Logical Channel Numbers. Frame Relay is also more efficient because it does not perform overhead-intensive error checking that degrades performance in X.25. Frame Relay is one of the important transport services supported by Bay Networks Switched Internetworking Services (BaySIS™). BaySIS, an open internetwork architecture based on standards, supports today's internetworks and their evolution to switched internetworking.

Bay Networks Frame Relay interface, which supports multiprotocol routing and bridging, complies fully with all packet format, addressing, and network management standards. Bay Networks extended the multivendor orientation of its Frame Relay by implementing Internet Engineering Task Force (IETF) Request for Comments (RFCs) that specify methods of multiprotocol encapsulation, a simplified configuration process, and an addition to the Simple Network Management Protocol (SNMP) MIB. The interface provides a range of configuration, access, and addressing options for maximum flexibility in designing a Frame Relay network.

Frame Relay is further enhanced by Data Compression, Dial Backup, Multiline Circuits, Uniform Traffic Filters, and Traffic Prioritization. These features optimize bandwidth, further enhance traffic control, and protect against network failures. Frame Relay is easily configured, monitored, and controlled on all Bay Networks routers via Bay Networks Optivity® family of network management products.

Frame Relay is a component of Bay Networks Routing Services (BayRS™), which supports all major network, bridging, and WAN protocols. BayRS WAN support also includes Switched Multimegabit Data Service (SMDS), Point-to-Point Protocol (PPP), X.25, and ATM.

Benefits

Maximizes Network Connectivity

Bay Networks Frame Relay supports the complete set of Bay Networks network protocols and major bridging standards. Bay Networks builds upon this functionality with support for Multiprotocol Interconnect over Frame Relay Networks, an RFC that specifies a method of multiprotocol encapsulation between multiple vendors' equipment. Because Bay Networks Frame Relay is certified and/or in use by the major Frame Relay service suppliers, public network interoperability is ensured. Bay Networks Frame Relay provides different addressing options to simplify communications in large Frame Relay networks. It also provides configuration flexibility because Frame Relay is supported by all of Bay Networks serial interfaces. Service records enhance the virtual circuit configuration process for routing and bridging in fully and partially meshed networks.

Optimizes Network Performance

The speeds available with Frame Relay facilitate the growing number of LAN-based electronic imaging and CAD/CAE applications. Bay Networks Frame Relay supports speeds up to 45 Mbps, overcoming the typical 64 Kbps bandwidth limitations of X.25. Network performance is further enhanced by Bay Networks Congestion Control feature, which enables the router to control the flow of traffic to a circuit.

Improves Network Manageability

Bay Networks Frame Relay offers three primary methods for managing Frame Relay interfaces — American National Standards Institute Annex D (ANSI T1.617), ANSI Link Management Interface (LMI), and International Telecommunications Union — Telecommunication Standard Sector (ITU-T, formerly CCITT) Q.933 Annex A. Bay Networks support of the Frame Relay MIB, RFC 1315, allows traffic and performance statistics to be retrieved from a central management SNMP station. Support for Inverse ARP, RFC 1293, which specifies a method of discovering the protocol addresses of remote DLCIs, minimizes bandwidth use. Dynamic configuration eliminates the need for static configuration of new DLCIs and protocol addresses.

Provides Investment Protection

Support for ANSI and ITU-T standards, as well as relevant RFCs, protects users' investment in Bay Networks Frame Relay. The investment already made in any of Bay Networks LAN/WAN modules with serial interfaces is easily enhanced with a Frame Relay software upgrade.

Features

Multiprotocol Support

Bay Networks Frame Relay adheres to RFC 1490, Multiprotocol Interconnect Over Frame Relay Networks, which defines a method of encapsulating multiprotocol routed or bridged LAN traffic for multivendor interoperability over a Frame Relay network. RFC 1490 support increases a Bay Networks router's connectivity and flexibility by making it fully interoperable with a variety of routers, and Frame Relay switches.

This standards-based interface also supports BayRS, which supports all major network and bridging protocols, to provide maximum interoperability for attached networks (see Table 1). The broad range of protocols supported by BayRS maximizes connectivity and provides support for a diverse group of applications.

Permanent Virtual Circuit Service

Bay Networks Frame Relay supports permanent virtual circuits (PVCs), which establish the transmission path through the Frame Relay network. PVCs are identified by the DLCIs, or destination addresses, present in each Frame Relay header. Frame Relay PVCs are configured through Bay Networks Optivity Internetworks' Site Manager for each router interface.

Table 1 | **BayRS Protocols Supported**

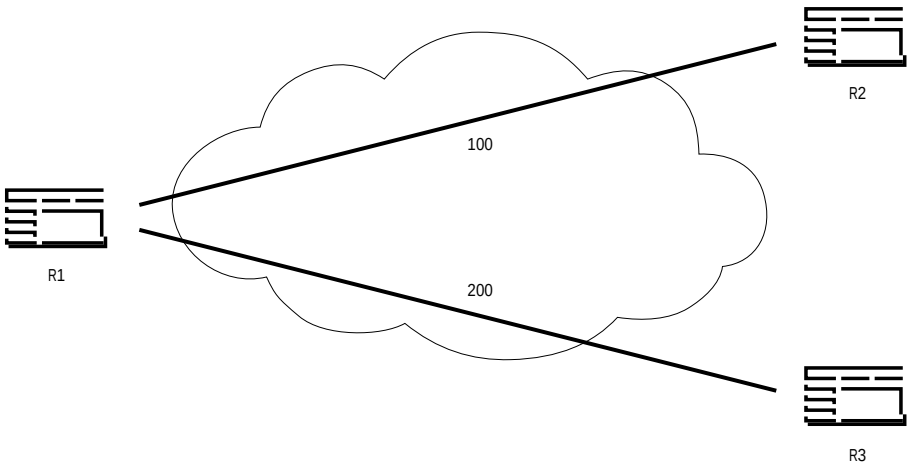
Routing	IP with OSPF, RIP, EGP, BGP
	OSI with ES-IS and IS-IS
	DECnet Phase IV
	Novell IPX
	Banyan VINES
	AppleTalk Phase 2
	Xerox XNS
IBM Integration	Source Route Bridge — Token Ring and FDDI
	Data Link Switching (DLSw)
	Binary Synchronous Communications Pass-Through
	Transparent Synchronous Pass-Through
	APPN Network Node
	LAN Network Manager Agent
Bridging	Transparent Bridge — Ethernet and FDDI
	Translation Bridge — Ethernet-to-Token Ring and Ethernet-to-FDDI
	Token Ring - FDDI
	Native Mode LAN (NML)
Wide Area Networking	HDLC Encapsulation
	Point-to-Point Protocol (PPP)
	Switched Multimegabit Data Service (SMDS)
	Frame Relay
	X.25
	ATM
	Dial Backup
	Bandwidth-on-Demand
	Dial-on-Demand

Users configure PVCs with service records. Service records increase configuration flexibility, simplify network addressing, conserve resources, and lower customer costs by creating multiple broadcast domains. A service record is a data structure that allows flexible grouping and characterization of PVCs. Service records can be comprised of a single PVC or multiple PVCs. The grouping of PVCs depends on the desired behavior of the routing or bridging protocol. If the user groups multiple PVCs in one service record, only a single network address needs to be assigned. This is useful for fully meshed network topologies with dynamically learned virtual circuits. By grouping multiple PVCs into one service record, the configuration process is simplified, network address space is conserved, and a central multicast facility is supported.

Bay Networks Configurable Split Horizons can be used to provide complete IP, IPX, and AppleTalk Phase 2 routing updates over a partially meshed Frame Relay topology. Split Horizons prevents a router from propagating routing information learned from a particular interface out that same interface. By disabling Split Horizons, routing information learned over a PVC within a particular service record is rebroadcast over the other PVCs in the same Frame Relay service record. This provides all the routers in a partially meshed network with an accurate view.

For example, in Figure 1, router R1's Frame Relay interface is configured with multiple PVCs in a service record. With Split Horizons enabled, a routing update learned from router R2 over DLCI 100 will not be propagated back out over DCLI

Figure 1 | **Partially Meshed Frame Relay**



200 to router R3. The result is that devices attached to routers R2 and R3 cannot communicate with one another. By disabling Split Horizons, the same routing update will be propagated over DLCI 200, enabling devices on R2 and R3 to communicate.

ANSI and ITU-T Frame Format

Bay Networks supports both the ANSI T1S1.2 and ITU-T I.122 Frame Relay standards for maximum multivendor interoperability and investment protection. The standard 2-byte and extended 3- and 4-byte frame formats are supported, as defined in ANSI T1.618 Section 2 and ITU-T Q.922 (see Figure 2).

Bay Networks routers use the Frame Relay Extended Address (EA) bit to determine whether to interpret the next byte as part of the address. Use of the Command/ Response (C/R) bit has not been defined by ANSI or ITU-T. The 3- and 4-byte extended addresses add a single-bit control indicator (D/C) in the least significant byte. The D/C bit determines whether there is additional DLCI information in the last byte or whether the information in the low-order DLCI field should be interpreted as DL-CORE control information. The use of this field for control information also has not yet been defined.

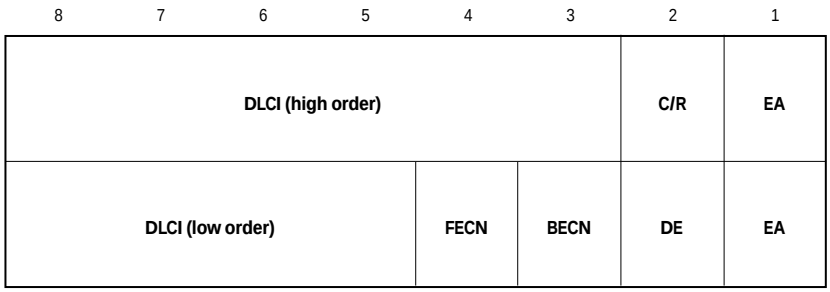
Congestion Management and Control

Bay Networks guards against the degradation of Frame Relay network performance with the ability to recognize and respond to the Forward and Backward Explicit Congestion Notification (FECN and BECN) bits and by supporting the setting of the frame's Discard Eligibility (DE) bit.

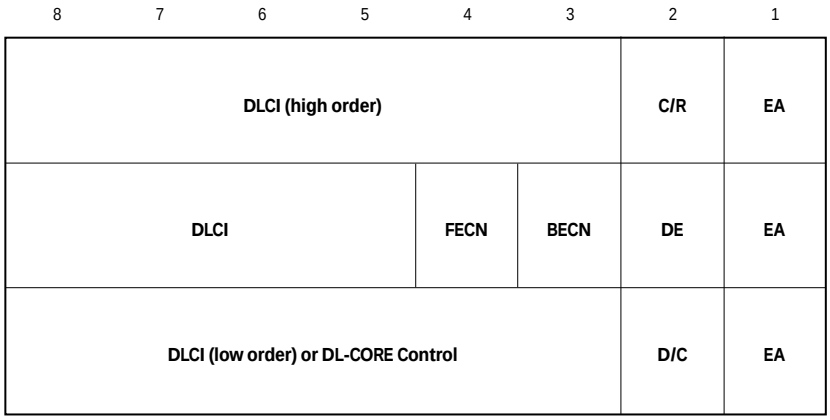
FECN / BECN Bay Networks Frame Relay counts FECN and BECN bits, which signal network congestion. The majority of data traffic carried over Frame Relay networks originates on a LAN and is converted to Frame Relay format by routers. If a Frame Relay DCE node detects congestion, it alerts downstream nodes and devices by changing the FECN bit on frames headed downstream from 0 to 1, and it alerts upstream nodes by changing the BECN bit on frames headed upstream from 0 to 1. The Frame Relay MIB requires the router to count these bits because a large number of them signals congestion and a possible need for more bandwidth.

Bay Networks Frame Relay provides a Congestion Control feature that enables a router to control the flow of traffic to a PVC based on the number of FECN or BECN frames received. Using operator-definable parameters, an interface stops transmitting to that PVC packet after it receives a specified number of FECN or BECN frames during a specified time. The interface resumes transmitting packets to the PVC when it receives no FECN or BECN frames during the specified time. This protects against performance degradation by ensuring that a node and/or a network only receives manageable amounts of data.

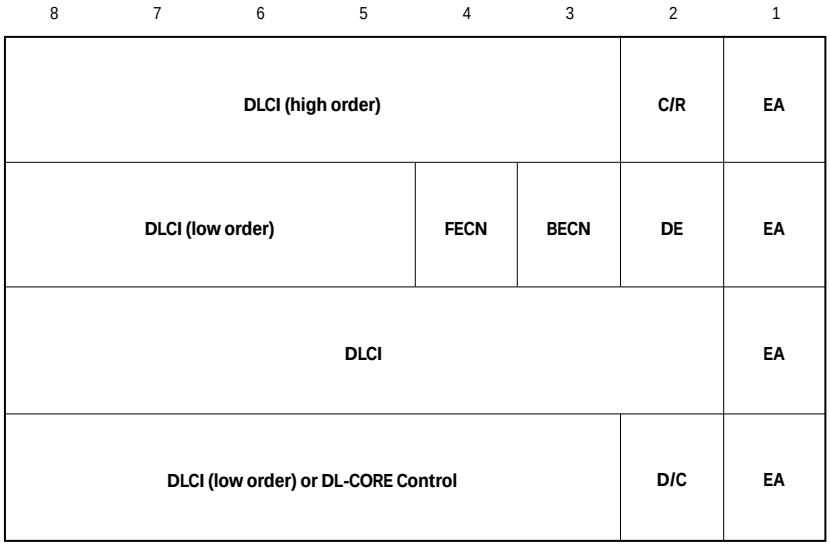
Figure 2 | **Frame Relay Frame Formats**



2-Byte Format



3-Byte Format



4-Byte Format

Discard Eligibility (DE) Bay Networks Frame Relay includes the ability to set the Discard Eligibility (DE) bit. This bit allows packets to be dropped by the switch network to alleviate congestion. Bay Networks Frame Relay can set the DE bit through Bay Networks Traffic Prioritization feature. This enables the router to mark frames as low priority (discard eligible) based on their protocol, source network, destination network, and packet type, as well as other fields that are identifiable by an offset in a packet.

Standard, Multicast, Global Addressing

Bay Networks Frame Relay supports 10-bit DLCIs with optional extended addressing, as well as multicast and global addressing, to provide the widest range of addressing options.

Standard Standard Frame Relay addressing consists of 10-bit DLCIs, as described previously. Bay Networks users can employ 3- or 4-byte extended addressing as a configuration option.

Multicast Bay Networks Frame Relay supports multicasting to allow routers to take advantage of multicast functionality offered (or anticipated to be offered) by some Frame Relay service providers. Under multicasting, the Frame Relay network maps multiple addresses (an address group) to a single DLCI and delivers copies of a single Frame Relay packet to each member of the group. As the packet passes through the Frame Relay network, the DLCI is manipulated so that the packet recipient receives a DLCI indicating the actual packet source (not the multicast DLCI).

Multicasting is beneficial in applications that require delivery of identical information to multiple recipients. For example, in a bridging environment, if the bridge does not know where the recipient address resides, it broadcasts information over all the interfaces. To configure multicast addresses, the Frame Relay providers' switch must also support multicasting.

Global Bay Networks allows network addresses to have global significance, so that a given DLCI is used only once throughout the network. This simplifies assignment and maintenance of addresses.

Inverse ARP

Bay Networks Frame Relay implements RFC 1293, Inverse ARP, which allows a Frame Relay interface that received a newly advertised DLCI through management signaling to automatically send out packets to discover the DLCI's protocol address, such as an IP address. The IP address is added to the routing table and used to establish communications. Inverse ARP minimizes bandwidth use by broadcasting an address discovery packet to only newly advertised DLCIs instead of all DLCIs.

Dynamic Configuration

By eliminating static DLCI configuration, Bay Networks implementation of RFC 1293 simplifies network configuration. The dynamic configuration feature lets network managers configure only the address entries for each node. DCLI paths and remote IP addresses are learned and configured dynamically (not statically), greatly reducing the effort required to configure the network.

Link Management

Bay Networks Frame Relay complies with the ANSI Annex D, ITU-T Q.933 Annex A, and LMI Frame Relay management specifications, enabling Bay Networks equipment to interoperate with Frame Relay switches supporting these specifications. Additionally, Bay Networks supports Frame Relay switch Data Link Control Management Interface (DLCMI) Status-Enquiry messages, providing a useful network debugging feature.

Frame Relay MIB

Bay Networks also implements the instrumentation described in RFC 1315, Frame Relay MIB, an addition to the SNMP MIB. The Frame Relay MIB allows retrieval of statistics concerning traffic and performance over the Frame Relay interface from a central SNMP management station. This brings Frame Relay under the scope of SNMP and increases the level of management integration. Frame Relay MIB defines a number of Frame Relay "objects" or variables to be monitored.

Public Network Interoperability

Bay Networks Frame Relay is supported on all Bay Networks multiprotocol routers and bridges, as well as on its multiservice switches. Additionally, Bay Networks Frame Relay interface is certified and/or in use by a number of Frame Relay service and product suppliers.

Serial Interface Support

The Frame Relay interface can operate at speeds up to 45 Mbps. Depending on the physical interface type chosen, Bay Networks Frame Relay supports a wide range of options that provide the bandwidth for high-performance LAN interconnection. Frame Relay is supported on Synchronous, High-Speed Serial Interface (HSSI), and Multichannel T1 (MCT1/MCE1) serial interfaces. The Synchronous interfaces operate from 1,200 bps to 2 Mbps, full-duplex, and support V.35, RS-232, RS-449/RS-422 balanced, and X.21 physical connections, as well as internal or external clocking. Additionally, all Bay Networks interface cards that combine LAN and Synchronous ports on the same card support a maximum frame size of 1,600 bytes, except those with Token Ring, which support a maximum 4,500-byte frame. Bay Networks HSSI supports serial bit rates from 300 Kbps to 52 Mbps, full-duplex, providing support for high-speed signals. The MCT1 interface is a 1.544 Mbps interface that supports a connection to a digital access and crossconnect service (DACS). MCE1 interface is a 2.048 Mbps interface.

Any existing Synchronous, HSSI, and MCT1/MCE1 interfaces can be configured to support Frame Relay with a simple software upgrade.

Bay Networks Routing Services (BayRS)

Bay Networks BayRS maximizes remote office connectivity in multivendor, multiprotocol environments by supporting all major network, bridging, and wide area protocols. Industry-standard IBM transport is also supported via the Bay Networks Source Route Bridge, Binary Synchronous Communications Pass-Through (BSC Pass-Through) Data Link Switching (DLSw), and APPN support to maintain remote office availability. Bay Networks Frame Relay also supports Dial Backup services to maintain remote office availability. This allows Bay Networks routers to provide fully featured router functionality to meet a wide range of remote office requirements.

Comprehensive traffic management is also provided via BayRS's Data Compression, Traffic Prioritization, Uniform Traffic Filters, and Multiline Circuits capabilities.

Data Compression Based on a Lempel-Ziv algorithm, Bay Networks software- and hardware-based Data Compression features maximize internetwork performance by reducing the amount of bandwidth required to transport data over the wide area. Configurable on a per-circuit or link basis, Data Compression provides features that enhance performance, reduce WAN costs, increase error control, and maximize efficiency.

Bay Networks software-based Data Compression feature is supported by all Bay Networks routers. Currently supported over Dial-up lines, including ISDN, and leased lines using PPP, Frame Relay, and X.25, Bay Networks software-based payload compression mechanism provides a compressed throughput of up to 1.2 Mbps, full-duplex, over a 512 Kbps link.

Supporting Frame Relay and PPP, Bay Networks Hardware-based Data Compression Coprocessor option for the Octal Sync link module for the Bay Networks Backbone Node routers delivers an aggregate compressed throughput of up to 16 Mbps, which is equal to 4 Mbps full-duplex over two 2 Mbps links. The Hardware-based Data Compression Coprocessor Net Modules for the Bay Networks Access Stack Node (ASN™) and System 5000™ router modules support ISDN, PPP, and Frame Relay, and deliver an aggregate compressed throughput of up to 16 Mbps, effectively transmitting up to 4 Mbps worth of compressed data for up to two full-duplex E1 lines.

The Octal Sync link module and the Data Compression Coprocessor Net Modules are available in configurations supporting 32 or 128 contexts that use 8 KB dictionaries. Additionally, each Octal Sync link module and Data Compression Coprocessor Net Module features user-configurable dictionary support of hardware and software data compression with a combined total exceeding 200 dictionaries.

The hardware- and software-based Data Compression use Bay Networks compression protocol — WAN Compression Protocol (WCP) — to enable compression over WAN connections.

Support is provided for Continuous Packet Compression (CPC) mode and Packet-by-Packet Compression (PPC) mode. CPC mode maintains a compression history across packet boundaries and requires that the histories at each end of the link be synchronized through a reliable data link protocol. CPC yields a higher compression rate and is used for maximum throughput. PPC mode resets the history for each packet and does not require a reliable data link protocol.

Traffic Prioritization Traffic Prioritization filters can assign a high priority to time-sensitive and/or mission-critical traffic, reducing the occurrence of session time-outs and improving application response times. Priority filters can be configured that place packets into one of three priority queues — high, normal, or low — for transmission through an outbound serial interface of a Bay Networks router. Priority filters can be applied to all network and bridging protocols supported by Bay Networks routers.

Priorities can be assigned to packets based on their protocol, source network, destination network, packet type, and other protocol-specific fields, as well as other fields that are identifiable by an offset in a packet. The number of priority filters defined for a protocol on an interface is user definable.

Traffic Prioritization can be configured to use either a strict dequeuing algorithm or a bandwidth allocation dequeuing algorithm to transmit packets across a serial line. Bay Networks strict dequeuing algorithm transmits all packets from the high-priority queue before transmitting packets from the normal and low-priority queues. The bandwidth allocation dequeuing algorithm allows packets from the normal and low-priority queues to be transmitted when the high-priority queue still contains packets, based on user-assigned bandwidth allocation percentages for each queue. This ensures that packets assigned lower priorities are given some level of attention based on the user's needs.

Uniform Traffic Filters Uniform Traffic Filters enables inbound and outbound traffic filters to be easily established for all network and bridge protocol traffic. Uniform Traffic Filters provides an efficient method for developing an effective and comprehensive network security strategy. In addition, Uniform Traffic Filters preserves WAN bandwidth and can increase performance by reducing network congestion.

Inbound traffic filters can be configured to accept or drop incoming packets from any local area or serial network interface in a Bay Networks router. Outbound traffic filters can be configured to drop outgoing packets destined for any Bay Networks router serial interface. Additionally, Uniform Traffic Filters can be configured to execute a log action when a datagram's fields match the values defined in the filter.

Filters can be created using predefined protocol-specific fields or user-defined fields. An unlimited amount of inbound filters and outbound filters, including Traffic Prioritization filters, can be defined for each protocol on every supported network interface. Filter precedence can be configured on an interface, reducing filter definition complexity. All filters are configured via Bay Networks router management application, Optivity Internetwork.™

Multiline Circuits Multiline Circuits allows a single circuit to be composed of up to 16 individual serial network data paths, ensuring circuit availability in the event of a single data path failure. Multiline Circuits also increases bandwidth between two sites without the circuit management complexities associated with multiple circuits. Following initial configuration, the use of multiple data paths to form a single circuit is completely transparent.

Multiline Circuits provides two methods for transmitting traffic over its data paths — address-based selection and random selection. Address-based selection determines the path a packet takes based on its source and destination addresses, ensuring the sequentiality of packets. Random selection determines the path each packet takes based on a randomly assigned number, which corresponds to a particular data path in the circuit. This provides for even distribution across the circuit.

Dial Backup Support Dial Backup of Frame Relay PVCs using ISDN, Raise DTR, and V.25bis dial signaling is also supported by Bay Networks routers. Supported over integral ISDN BRI and ISDN PRI, V.35, and RS-232 interfaces, Bay Networks routers can initiate, monitor, and terminate Dial Backup connections based on an "A" bit notification from the Frame Relay network, loss of Frame Relay DLCMI signaling on the Frame Relay UNI, or loss of heartbeat on the primary synchronous line. This feature increases enterprise-wide network availability and connectivity.

The Bay Networks Dial Backup capability allows the user to back up individual PVCs or the entire Frame Relay interface. Using ISDN or switched services, individual PVCs can be backed up using one backup port for each PVC that needs to be backed up. Optionally, some Frame Relay service providers offer switched access to the Frame Relay service. In this case, the Bay Networks router can back up the entire Frame Relay interface.

Upon failure of the A bit (Active bit used to give status on the Frame Relay link), the router will initiate an ISDN or switched services connection to a predetermined Frame Relay switch port. The Frame Relay carrier will have preprovisioned the backup PVCs. The user now has switched access to the Frame Relay service. Upon recovery of the Primary, indicated by the A bit, the traffic will resume over the Primary Frame Relay connection and the switched connection is torn down. The user has the option to use the same configuration as the primary, called "shared config," or a different configuration, called "secondary config." If users choose secondary config, they can have different protocols, filters, or priorities active on the backup circuit. This gives users the maximum flexibility in a backup environment.

Network Management

Bay Networks offers a complete SNMP-based enterprise management solution for any environment. As members of Bay Networks Optivity family of network management products, UNIX-based Optivity Internetwork and EZ Internetwork™ are powerful tools for providing comprehensive node configuration, monitoring, and control.

Optivity Internetwork A component of Bay Networks UNIX-based Optivity Enterprise™ application suite, Optivity Internetwork provides a sophisticated, yet easy-to-use management solution for complex router-based internetworks. Optivity Internetwork simplifies and improves management of complex router internetworks by integrating ControlCenter,™ the revision control system for Bay Networks routers; Site Manager, the node management application for Bay Networks routers; RouterMan,™ an intuitive router monitoring application; and PathMan,™ a graphical network diagnostic tool.

Optivity Internetwork operates with the leading SNMP platforms — HP OpenView, Tivoli NetView for AIX, and Sun Microsystem's Solstice Domain Manager for additional capabilities.

EZ Internetwork A component of the DOS/Windows-based Optivity Workgroup™ application suite, EZ Internetwork provides a comprehensive set of network management capabilities accessible through a point-and-click, Windows-based user interface for the Bay Networks Access Stack Node (ASN), BayStack Access Remote Node (ARN™), BayStack Access Node (AN®), and Access Node Hub (ANH™) routers. EZ Internetwork integrates Quick2Config,™ Bay Networks application that allows Bay Networks router configuration files to be quickly and easily created or modified, with a Windows-based version of RouterMan (see the "Optivity Internetwork" section). With Quick2Config, the most novice network administrator can have the router configured and operational in minutes. Quick2Config is fully compatible with Bay Networks Site Manager application.

Standards

The Frame Relay implementation described in this data sheet supports major internetworking standards (see Table 2).

Table 2 **Frame Relay Standards Support**

American National Standards Institute (ANSI)
T1S1 Standards-Based Frame Relay Specification with Common Enhancements
T1.618 Integrated Services Digital Network (ISDN) Core Aspects of Frame Relay Protocol with Frame Relay Bearer Service
T1.617 Annex D Additional Procedures for Permanent Virtual Connections (PVCs) Using Unnumbered Information Frames
International Telecommunications Union - Telecommunication Standard Sector (ITU-T)
Q.933, Access Signaling Annex A
Internet Engineering Task Force (IETF)
RFC 1490, Multiprotocol Interconnect over Frame Relay
RFC 1293, Inverse Address Resolution Protocol (ARP)
Vendor Consortium
Link Management Interface (LMI) R1.0

System Requirements

Bay Networks Frame Relay described in this data sheet is supported in software Version 11.0 or later for Bay Networks System 5000 router modules, BayStack Access Node (AN), Access Stack Node (ASN), BayStack Advanced Remote Node (ARN), BayStack Access Node Hub (ANH), Link Node (LN®), Concentrator Node (CN®), Backbone Link Node (BLN®), and Backbone Concentrator Node (BCN®).

Bay Networks recommends that users of the Dual Ethernet/Dual Synchronous link module with T1 links for performance-sensitive applications employ Bay Networks Ethernet high-speed filter option to satisfy their performance requirements.

Ordering Information

Frame Relay is available in a variety of BayRS software suites for the System 5000 router modules, Bay Networks BayStack AN, BayStack ANH, ARN, ASN, BLN, BCN, LN, and CN (see Table 3).

Table 3 **Frame Relay Ordering Information**

Model Number	Description
AD0008011	WAN Suite for System 5000 router modules (includes Frame Relay) 8 MB Flash
AD0008012	Corporate software suite for System 5000 router modules (includes all v11.0 software) 8 MB Flash
AE0008032	IP Access Suite for AN/ANH (includes Frame Relay) 4 MB Flash
AE0008034	Corporate software suite for AN/ANH (includes all v11.0 software) 4 MB Flash
AE0008036	IP Access Suite for AN/ANH (includes Frame Relay) 8 MB Flash
AE0008030	Corporate software suite for AN/ANH (includes all v11.0 software) 8 MB Flash
CV0008001	IP Access Suite for ARN (includes Frame Relay) 4 MB Flash
CV0008003	Corporate software suite for ARN (includes all v11.0 software) 4 MB Flash
CV0008004	IP Access Suite for ARN (includes Frame Relay) 8 MB Flash
CV0008006	Corporate software suite for ARN (includes all v11.0 software) 8 MB Flash
AF0008019	WAN Suite for ASN (includes Frame Relay) 8 MB Flash
AF0008020	Corporate software suite for ASN (includes all v11.0 software) 8 MB Flash
AG0008019	WAN Suite for BN (includes Frame Relay) 8 MB Flash
AG0008020	Corporate software suite for BN (includes all v11.0 software) 8 MB Flash
42020V110	LN/CN Version 11.0 Corporate Suite

For more sales and product information, please call **1-800-8-BAYNET**.

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