DOIT MASTER AGREEMENT NUMBER: B-03-006	DOIT APPROVAL DATE: 6/5/2007

VENDOR NAME: SBC SNET	FEIN: 06-054-26-46

SERVICE/PRODUCT NAME: ATM and Frame Relay Service - Frame Relay Service

SERVICE/PRODUCT DESCRIPTION:

Frame Relay Architecture

Frame relay uses high quality, digital transmission facilities and advanced packet switching technology to provide a connection oriented high-speed service. Connection oriented simply means that data transmissions (frames or segments of end user data) sent through the frame relay network always follow the same pre-defined path with the data arriving in the order it was sent. This type of service allows for the transfer of variable length frames across a wide geographical area.

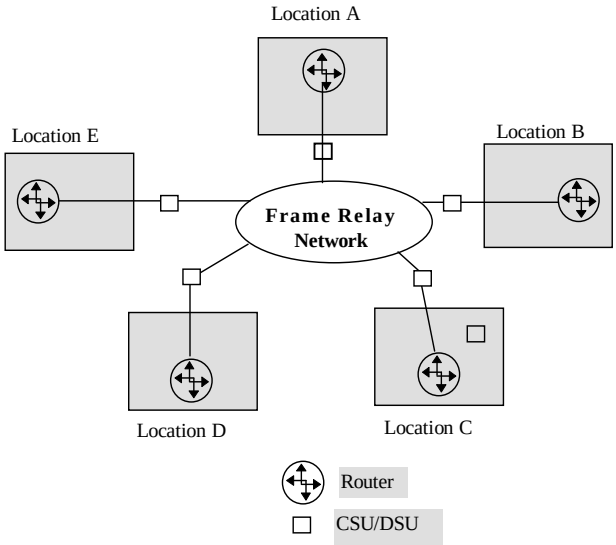
An access link to the Frame Relay Service is provided through digital access facilities between a customer's premise and a frame relay node (switch port). A virtual connection or logical link between customer-selected access links is established within the frame relay switch through a software defined logical connection (PVC). Data Link Circuit Identifiers (DLCIs) are numerical address assignments for the end-points. The combination of an access link, logical link, and DLCIs allows real time dynamic allocation of switch capacity.

With frame relay, customers can cost-effectively provide a high level of direct connectivity between remote locations. Once a single physical connection into the network is established, additional logical connections can be added at a relatively low cost. By providing a greater level of direct connectivity between locations, nearly all network users benefit. Network congestion is reduced at the primary location and network response times are reduced.

The intelligence inherent in a frame relay network results in the ability to automatically route PVCs around a network failure. Depending upon current network architecture and the amount of redundancy already built into the network, this capability can help to increase overall network availability.
Because many logical connections share the same physical interface into the frame relay network, the number of local loops needed is often reduced significantly.

Frame Relay service allows the customer to exploit the intermittent characteristic of data by oversubscribing the port connection. Oversubscription means that the customer can actually assign more PVCs and total Committed Information Rate (CIR) to a port than the port connection speed.

Frame to ATM Interworking provides a smooth and seamless migration from frame relay to ATM on a per site basis as the connectivity needs of an individual site change and grow. One or two network sites can be upgraded to ATM without affecting the rest of the network. The network provides the protocol conversion.



INTRASTATE AND INTRALATA FRAME RELAY SERVICE

SBC SNET Product Offerings

Access Links (Physical circuit connection from the customer location to the serving Frame Relay Switch)

- DS0-56 kbps
- DS0-64 kbps
- 128 kbps
- 256 kbps
- 384 kbps
- 1.544 Mbps.

Permanent virtual circuits (PVCs)

- PVCs are provisioned in increments of 4 kbps with a minimum setting of 4 kbps
- The maximum allowable committed information rate (CIR) setting for any single PVC is 50% of the port speed: 56, 64, 128, 256, 384 kbps and 1.544 Mbps
- 300% oversubscription is allowed

INTERSTATE AND INTERLATA FRAME RELAY SERVICE

SBC PremierSERV Frame Relay provided by SBC Long Distance, Inc. (SBC LD)

SBC PremierSERV Frame Relay Service is a nationwide data service provided by SBC Long Distance, Inc. (d/b/a SBC Long Distance). SBC LD provides service to Interstate and InterLATA locations. SBC PremierSERV Frame Relay Service provides the performance of leased lines with the flexibility and connectivity of local area networks anywhere in the United States. SBC also offers International Frame Relay service to 70 countries. Greenwich Connecticut is considered an InterLATA location and may be connected through SBC LD Frame Relay Service.

Port and Access

Available interfaces and speeds include DS0 at 56k or 64k; Fractional DS1 at 128k, 256k, 384k, 512k, and 768k; DS1 at 1.5M; and DS3 at 40M.

Permanent Virtual Connections (PVCs)

Long Distance PVCs provide logical connections between two ports that allow data to be sent from one location to another. The following PVC options are available:

- Standard PVCs are two-way and interconnect either frame relay-to-frame relay ports or frame relay-to-ATM ports
- Disaster Recovery PVCs provide secondary connections between remote locations and a disaster recovery site activated with a quick phone call
- Alternate Routing PVCs provide an active PVC between a remote location and an alternative host site, building redundancy into your frame relay network
- Priority PVCs provide priority connections for delay-sensitive applications such as SNA

National Security Emergency Preparedness (NS/EP) Telecommunications Service Priority (TSP) System

In 1988, the Federal Communications Commission revised the Restoration Priority System with the National Security Emergency Preparedness (NSEP) TSP System. This system ensures priority treatment of restoration to telecommunication services following natural or technical disasters.

TSP assigned telecommunication services are provisioned and restored before non-TSP services. Any Federal, State and local government, private industry or foreign government with telecommunications services supporting a national security or emergency preparedness mission qualifies for TSP.

Provisioning

If SBC receives an Emergency (E) provisioning priority it must take immediate action to provide the service at the earliest possible date, including dispatching service personnel outside of normal business hours. The FCC order requires that service vendors provision Emergency (designated by an E) TSP services before any Essential (designated by a 1, 2, 3, 4, or 5) TSP service or non-TSP services. The order processing is escalated up through management as far as necessary to complete the order. Service vendors receiving service requests with an Essential provisioning priority must make their best effort to provide the TSP services by the service user's requested due date.

Restoration

When a trouble report is received, or SBC otherwise recognizes that the TSP circuit is out or unusable, it must allocate available resources to restore the service as quickly as possible. TSP services assigned restoration priorities of 1, 2, or 3 require dispatch outside normal business hours. Vendors must dispatch service personnel outside normal business hours to restore TSP service assigned a 4 or 5 priority only when the next business day is more than 24 hours away.

Sponsorship

The FCC designated the Executive Office of the President (EOP) as administrator of the TSP Program. The EOP delegated its responsibilities to the Manager of the National Communications System (NCS), which, in turn, assigned the administration and execution of the TSP Program to the Office of Priority Telecommunications (OPT) located at the NCS. The primary roles of a Federal sponsor are to:

- Review and determine whether to approve foreign, State, and local government and private industry requests for priority actions.
- Affirm that the requested priority level assignment is appropriate.

Sponsorship for TSP may be obtained from the National Communications System through the TSP Web Site at http:\\tsp.ncs.gov.

SERVICE LEVELS:

Installation Intervals (Intrastate and IntraLATA only)

Less than 10 circuits (includes port and access link) = 20 business days
10 or more circuits = Individual Case Basis
PVC only = 5 business days
PVC or CIR change = 3 business days

SBC LD Installation Intervals (Interstate and InterLATA only)

DS0 and DS1 = 24 business day minimum
DS3 = 40 business day minimum
PVC add or change = 9 business days

Routine Repair Intervals

Response time = Less than 1 hour
Repair Resolution time = 4 hours or less

Repair Service Level Definitions:

Repair Response is the time elapsed between when SNET receives a report of a problem or otherwise becomes aware of a problem, and the time that SNET responds to the end user or other designated contact to verify the problem.

Repair Resolution Time means the elapsed time between when the State notifies SNET of a problem, and the time that SNET restores service and such service is acceptable to the State.

SERVICE AVAILABILITY/LIMITATIONS:

SERVICE AVAILABILITY

See Service Availability spreadsheet

PROVISIONING PARAMETERS

FRAME RELAY TO FRAME RELAY				
Port Speed	**CIR**	**Policing Graceful Discard OFF**	**Bc (Kbps)**	**Be(Kbps)**
56K	28Kbps	enabled	28	28
64K	32Kbps	enabled	32	32
128K	64Kbps	enabled	64	64
256K	128Kbps	enabled	128	128
384K	192Kbps	enabled	192	192
1536K (T-1)	128Kbps	enabled	128	1408
1536K (T-1)	256Kbps	enabled	256	1280
1536K (T-1)	384Kbps	enabled	384	1152
1536K (T-1)	512Kbps	enabled	512	1024
1536K (T-1)	768Kbps	enabled	768	768

Notes:

- Policing will apply on a per PVC basis.
- The policing option will be enabled on new PVCs and any moves, adds or changes to the PVC or circuit. This includes repointing a PVC or changing the speed of the circuit.
- Policing will remain disabled (Graceful Discard ON) on PVCs in place today that are unchanged.
- Be = Line Rate – CIR
  (Burst excess will be set to the lowest line rate minus the CIR)
- 300% oversubscription is allowed.

RESTRICTION

The 2% credit does not apply to the SBC PremierSERV Frame Relay provided by SBC Long Distance, Inc.

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SERVICE NAME:	**ATM and Frame Relay Service - Frame Relay Service**		

A 2% credit will be issued monthly against the items ordered from this Product Schedule per the SBC SNET Master Agreement *

Activity (Add, Delete, Change)	Date of Vendor Request	Date Approved By DOIT	Item	Item Code	Description of Service/Equipment	Unit	Non-Recurring Unit Cost	Recurring Monthly Cost	
					SBC SNET INTRASTATE AND INTRALATA FRAME RELAY SERVICE				
Add	10/08/03	10/10/03	1	NLXN3	FRAME RELAY Port and Access Link DS0	port + acc link	$0.00	$117.00	
Add	10/08/03	10/10/03	2	NLXO3	FRAME RELAY Port and Access Link 128k	port + acc link	$0.00	$300.00	
Add	10/08/03	10/10/03	3	NLXP3	FRAME RELAY Port and Access Link 256k	port + acc link	$0.00	$360.00	
Add	10/08/03	10/10/03	4	NLXW3	FRAME RELAY Port and Access Link 384k	port + acc link	$0.00	$405.00	
Add	10/08/03	10/10/03	5	NLXY3	FRAME RELAY Port and Access Link DS1	port + acc link	$0.00	$415.00	
Add	10/08/03	10/10/03	6	L7G83	FRAME RELAY PVC Ordered with Port	pvc w port	$0.00	$6.00	
Add	10/08/03	10/10/03	7	L7G93	FRAME RELAY PVC Ordered without Port	pvc w/o port	$0.00	$6.00	
Add	10/08/03	10/10/03	8	N/A	FRAME RELAY Change Access Link Speed	link	$0.00	$0.00	
Add	04/05/04	05/06/04	9	NLXO1	Woodbury Area- Frame Relay Port and Access Link 128k (note 1)	port + acc link	$800.00	$336.00	
Add	04/05/04	05/06/04	10	NNTRX	Woodbury Area- 64k Frame Relay PVC	pvc	$0.00	$9.00	
Add	02/17/05	3/11/05	11	NLXP1	Woodbury Area- Frame Relay Port and Access Link 256k	port + acc link	$800.00	$390.00	
Add	02/17/05	3/11/05	12	NNTSX	Woodbury Area- 128k Frame to ATM PVC	pvc	$60.00	$10.00	
Add	02/17/05	3/11/05	13	NLXY1	Woodbury Area- Frame Relay Port and Access Link DS1	port + acc link	$850.00	$590.00	
Add	02/17/05	3/11/05	14	NNT3X	Woodbury Area- 768k Frame to ATM PVC	pvc	$60.00	$30.00	
					SBC SNET INTERSTATE AND INTERLATA FRAME RELAY SERVICE **SBC PremierSERV Frame Relay provided by SBC Long Distance, Inc. (SBC LD) ***				
Add	06/01/05	06/14/05	15	FPNA3	SBC LD FRAME RELAY Link 56/64k	port + acc link	$0.00	$142.00	
Add	06/01/05	06/14/05	16	FPNB3	SBC LD FRAME RELAY Link 128k	port + acc link	$0.00	$323.00	
Add	06/01/05	06/14/05	17	FPNJ3	SBC LD FRAME RELAY Link DS1	port + acc link	$0.00	$274.00	
Add	06/01/05	06/14/05	18	FVHDX	SBC LD 32k-Frame PVC	pvc	$0.00	$83.00	
Add	06/01/05	06/14/05	19	FVHFX	SBC LD 64k-Frame PVC	pvc	$0.00	$127.00	
Add	07/11/05	07/14/05	19a	FVHJX	SBC LD 256k- Frame PVC	pvc	$0.00	$164.75	

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Add	06/01/05	06/14/05	20	FVHNX	SBC LD 512k-Frame PVC	pvc	$0.00	$226.12	
Add	06/01/05	06/14/05	21	FVHRX	SBC LD 768k-Frame PVC	pvc	$0.00	$330.00	
					Telecommunications Service Priority (TSP)				
Add	06/01/05	06/14/05	22	P1APX	TSP Priority Installation	circ	$113.59	$0.00	
Add	06/01/05	06/14/05	23	PR5PX	TSP Priority Restoration	circ	$101.82	$0.00	
Add	06/01/05	06/14/05	24	PR8PX	TSP Priority Restoration change level	circ	$6.47	$0.00	
Add	06/01/05	06/14/05	25	PR9PX	TSP Priority Restoration maintenance	circ	$0.00	$8.82	
Add	05/25/07	06/05/07	26		Circuit Extension at Installation (note 3)	circ	$250.00	$0.00	
Add	05/25/07	06/05/07	27		Circuit Extension after Installation (subsequent visit)	1st hr	$85.00	$0.00	
add	05/25/07	06/05/07	28		Circuit Extension after Installation (subsequent visit)	ea addl 15 min	$30.00	$0.00	
Notes:									

1."Woodbury Area" consists of Woodbury, Bethlehem, and Southbury (203) 262, 263, 264, 266.

2. SBC LD applies to Interstate and InterLATA Frame Relay Service-2% credit does not apply to these services (items 15-21)

3. The $250 rate is applied if the technician is able to extend the circuit at the same time as the circuit installation. If a second visit is required due to unknown termination location or access problems, the labor rate will apply and the $250 will not be charged.

NOTE: Grey highlighted items are no longer available. They have been either deleted, changed, and/or no longer apply.