Verizon
600 Hidden Ridge
Irving, TX 75038-3897

Short Term Public Notice of Network Change Under Rule 51.333(a)

Verizon Internet Protocol-Virtual Private Network (IP-VPN) Service

July 3, 2003

Section 1: Packet Over SONET (POS) Interface:

Type of Change:

Verizon (Bell Atlantic) previously disclosed network interface specifications for SONET based transport services in January 1994. Verizon will introduce a new transport interface via Packet Over SONET (POS) at a bandwidth of OC-12c and OC-48c.

The POS interface provides a Multi-Protocol Label Switching (MPLS) transport function via the use of Transport Control Protocol/Internet Protocol (TCP/IP) with Intermediate System-to-Intermediate System (IS-IS) routing. MPLS related signaling is achieved through Label Distribution Protocol (LDP) and/or Resource Reservation Protocol (RSVP).

The OC-12c Packet Over SONET line rate is 622.08 Mbps. The OC-12c POS line is supported via a pair of single-mode fibers between the two networks. The optical fiber interface shall be the Ultra SC.

The OC-48c Packet Over SONET line rate is 2488.32 Mbps. The OC-48c POS line is supported via a pair of single-mode fibers between the two networks. The optical fiber interface shall be the Ultra SC.

Technical References:
The following technical references (and/or subsequent versions) will apply:

POS:

- ANSI T1.105, *Synchronous Optical Network (SONET) Basic Description Including Multiplex Structures, Rates, and Formats*

- ANSI T1.105.02, *Synchronous Optical Network (SONET) Payload Mappings*

- ANSI T1.105.06, *SONET: Physical Layer Specifications*

- GR-253-CORE, *SONET Transport Systems: Common Generic Criteria*

- GR-499-CORE, *Transport System Generic Requirements (TSGR): Common Requirements*

Point-to-Point (PPP)

- RFC 1661, *The Point-to-Point Protocol (PPP)*

- RFC 1662, *PPP in High-Level Data Link Control (HDLC)-like Framing*

- RFC 2615, *PPP over SONET/SDH*

TCP/IP v4

- RFC 768, *User Datagram Protocol*

- RFC 791, *Internet Protocol*

- RFC 792, *Internet Control Message Protocol*

- RFC 793, *Transmission Control Protocol*

- RFC 1332, *The PPP Internet Protocol Control Protocol (IPCP)*

- RFC 1519, *Classless Inter-Domain Routing (CIDR): An Address Assignment and Aggregation Strategy*

IS-IS

- ISO/IEC 10589, *Information technology, Telecommunications and information exchange between systems, Intermediate system to intermediate system intradomain routing information exchange protocol for use in conjunction with the protocol for providing the connectionless-mode network service (ISO 8473)*

- RFC 1195, *Use of OSI IS-IS for Routing in TCP/IP and Dual Environments*

- RFC 1377, *The PPP OSI Network Layer Control Protocol (OSINLCP)*

- RFC 2763, *Dynamic Hostname Exchange Mechanism for IS-IS*

- draft-ietf-isis-wg-snp-checksum-02.txt, *Optional Checksums for IS-IS*

- draft-ietf-isis-hmac-04.txt, *IS-IS Cryptographic Authentication*

- draft-ietf-isis-traffic-05.txt, *IS-IS extensions for traffic engineering*

MPLS

- RFC 3032, *MPLS Label Stack Encoding*

- RFC 3036, *LDP Specification*

- RFC 3209, *RSVP-TE: Extensions to RSVP for LSP Tunnels*

- RFC 2747, *RSVP Cryptographic Authentication*

- *Fast Reroute Extensions to RSVP-TE for LSP Tunnels*, Internet draft draft-ietf-mpls-rsvp-lsp-fastreroute-01.txt

- RFC 2961, *RSVP Refresh Overhead Reduction Extensions*

- draft-ietf-tewg-diff-te-reqts-07.txt, *Requirements for support of Diff-Serv-aware MPLS Traffic Engineering*

To obtain IETF documents, visit the following web site:
http://ietf.org/home.html

To obtain Telcordia documents contact:
Telcordia Customer Service
8 Corporate Place, Room 3A184
Piscataway, N.J. 08854-4156
1-800-521-CORE (USA and Canada) 908-699-5800(all others)

For American National Standard Institute (ANSI) documentation, write or call:
American National Standard Institute Customer Service
11 West 42nd Street
New York, NY 10036
(212) 642-4900

Date changes are to occur:
This service will be offered in limited trial deployments starting in July 2003. The generally available service is scheduled to be available in 4Q03 where facilities are available. To confirm availability at your location, contact the Product Manager listed below.

Location changes are to occur:
The interface will be offered in focused geographies across Verizon footprint where suitable facilities are available.

Reasonable foreseeable impact of change:
The new transport is intended for carriers who are interested in connecting to the Verizon MPLS network via POS OC-12c or OC-48c interface. Carriers must meet the interface requirements in order to take advantage of this new offered service. All other existing interfaces will remain available.

Verizon Contact:
For specific information regarding geographic availability, pricing or additional technical information, please contact:

> **Robert S. Prather (Rob)**
> Senior Product Manager
> Phone: 972-718-5064
> Fax: 972-719-7137
> Address: Po Box 152092
>   Irving, TX 75015
> Email   robert.prather@verizon.com

Section 2: Customer Interface:

Type of Change:

Verizon Internet Protocol-Virtual Private Network (IP-VPN) Service is a network-based service that uses Multi-Protocol Label Switching (MPLS) to provide VPN solutions with common network-based equipment and operations support. The service will be offered at various speeds ranging from 56Kbps to 1Gbps throughout Verizon where facilities are available.

The Verizon IP-VPN network consists of Provider Edge routers (PE), and Core devices. The PE and Core devices will run MPLS protocol to logically segregate the traffic among different VPNs. Verizon IP-VPN Service will support different link layer access technology such as Asynchronous Transfer Mode (ATM), Frame Relay, and Transparent LAN Service (TLS). Customers interface to Verizon using Internet Protocol (IP) at the network protocol layer. This disclosure addresses the protocols and standard interfaces required to connect customer equipment to the Verizon IP-VPN Service. The customer can select one of the following protocols for connection: BGP, OSPF, RIPv2, or EIGRP. Alternatively customer can select to use static routing.

Technical References:
The following technical references (and/or subsequent versions) will apply:

TCP/IP v4

- RFC 768, *User Datagram Protocol*

- RFC 791, *Internet Protocol*

- RFC 792, *Internet Control Message Protocol*

- RFC 793, *Transmission Control Protocol*

- RFC 1332, *The PPP Internet Protocol Control Protocol (IPCP)*

- RFC 1519, *Classless Inter-Domain Routing (CIDR): An Address Assignment and Aggregation Strategy*

Border Gateway Protocol (BGP)

- RFC 1771, *A Border Gateway Protocol 4 (BGP-4)*

- RFC 2385, *Protection of BGP Sessions via the TCP MD5 Signature Option*

Open Shortest Path First (OSPF)

- RFC 2328, *OSPF Version 2*

Routing Information Protocol (RIP) v2

- RFC 2082, *RIP-2 MD-5 Authentication*

- RFC 2453, *RIP Version 2*

Enhanced Interior Gateway Routing Protocol (EIGRP)

- Enhanced Interior Gateway Routing Protocol

  http://www.cisco.com/en/US/tech/tk826/tk365/technologies_white_paper09186a0080094cb7.shtml

For EIGRP documentation, please contact:
> Cisco Systems, Inc.
> 170 West Tasman Drive
> San Jose, CA 95134-1706
> www.cisco.com
> 800-553-NETS

To obtain IETF "Request for Comments" documents, visit the following web site:
> http://ietf.org/home.html

Date changes are to occur:
This service will be offered in limited trial deployments starting in July 2003. The generally available service is scheduled to be available in 4Q03 where facilities are available. To confirm availability at your location, contact the Product Manager listed below.

Location changes are to occur:
The service will be offered in focused geographies across Verizon footprint where suitable facilities are available.

Reasonable foreseeable impact of change:
Customer Premises Equipment (CPE) vendors who are interested in providing CPE to connect customer equipment to Verizon IP-VPN Service will need to meet the interface requirements.

Verizon Contact:
For additional information regarding IP-VPN Service, contact:

> **Paula Rhea**
> Offer Manager
> Phone: 972-718-5838
> Fax: 972-718-0014
> Address: 700 Hidden Ridge
>   Irving,TX 75038
> Email   paula.rhea@verizon.com