



Verizon
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 Irving, TX 75038-3897

**Short Term Public Notice of Network Change Under Rule 51.333(a)
 Verizon Optical Networking (VON) (Update of 7/30/03 Disclosure)**

January 30, 2004

Type of change:

This network disclosure is primarily associated with Verizon Optical Networking (VON) services, which were formerly called IntelliLight® Flexible Optical Networking (IFON) services. A previous disclosure under the IFON service name included private line (point-to-point) Ethernet, Fast Ethernet, and Gigabit Ethernet (partial-rate and full-rate) channels transported over Verizon's SONET infrastructure. This disclosure updates a previous VON disclosure posted on July 30, 2003.

Ethernet, Fast Ethernet, and Gigabit Ethernet data from customer equipment would be mapped into SONET payloads or virtual tributaries using various mappings listed below. Similarly, Fibre Channel and FICON data from customer equipment would be mapped into SONET payloads as listed below. Conversely, Ethernet, Fast Ethernet, Gigabit Ethernet, FICON, and Fibre Channel data would be extracted from SONET payloads and virtual tributaries and sent to customer equipment. Multiple SONET payloads/tributaries containing the data types listed above or other types of data may be multiplexed together into larger SONET payloads. SONET payloads/tributaries are in turn multiplexed onto and off of SONET transmission systems.

This disclosure includes the SONET mappings listed in the table below.

Data Type	Data Specification	SONET Payload /Tributary	Mapping Standard	Data Rate (Approx.)
Ethernet	ANSI/IEEE 802.3	VT-1.5	ITU-T G.7041 or IETF RFC 2615	1.5 Mb/s
Ethernet	ANSI/IEEE 802.3	VT-1.5-2v	ITU-T G.707, ITU-T G.7041	3 Mb/s
Ethernet	ANSI/IEEE 802.3	VT-1.5-4v	ITU-T G.707, ITU-T G.7041	6 Mb/s
Ethernet	ANSI/IEEE 802.3	VT-1.5-7v	ITU-T G.707, ITU-T G.7041	10 Mb/s
Ethernet	ANSI/IEEE 802.3	STS-1	ITU-T G.7041 or IETF RFC 2615	10 Mb/s
Ethernet	ANSI/IEEE 802.3	STS-1-1v	ITU-T G.707, ITU-T G.7041	10 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	VT-1.5-2v	ITU-T G.707, ITU-T G.7041	3 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	VT-1.5-4v	ITU-T G.707, ITU-T G.7041	6 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	VT-1.5-7v	ITU-T G.707, ITU-T G.7041	10 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	VT-1.5-16v	ITU-T G.707, ITU-T G.7041	25 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	VT-1.5-32v	ITU-T G.707, ITU-T G.7041	50 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	STS-1	ITU-T G.7041 or IETF RFC 2615	50 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	STS-1-1v	ITU-T G.707, ITU-T G.7041	50 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	STS-1-2v	ITU-T G.707, ITU-T G.7041	100 Mb/s
Fast Ethernet	ANSI/IEEE 802.3u	STS-3c	ITU-T G7041 or IETF RFC 2615	100 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1	ITU-T G.7041 or IETF RFC 2615	50 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1-1v	ITU-T G.707, ITU-T G.7041	50 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1-2v	ITU-T G.707, ITU-T G.7041	100 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-3c	ITU-T G.7041 or IETF RFC 2615	150 Mb/s

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Data Type	Data Specification	SONET Payload /Tributary	Mapping Standard	Data Rate (Approx.)
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1-3v	ITU-T G.707, ITU-T G.7041	150 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1-6v	ITU-T G.707, ITU-T G.7041	300 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-3c-2v	ITU-T G.707, ITU-T G.7041	300 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1-9v	ITU-T G.707, ITU-T G.7041	450 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1-12v	ITU-T G.707, ITU-T G.7041	600 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-3c-2v	ITU-T G.707, ITU-T G.7041	600 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-12c	ITU-T G.7041 or IETF RFC 2615	600 Mb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-1-21v	ITU-T G.707, ITU-T G.7041	1 Gb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-3c-7v	ITU-T G.707, ITU-T G.7041	1 Gb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-3c-8v	ITU-T G.707, ITU-T G.7041	1 Gb/s
Gigabit Ethernet	ANSI/IEEE 802.3z	STS-48c	ITU-T G.7041 or IETF RFC 2615	1 Gb/s
Fibre Channel	ANSI X.3.303	STS-1-19v	ITU-T G.707, ITU-T G.7041	1 Gb/s
FICON	SG24-6266-01	STS-1-19v	ITU-T G.707, ITU-T G.7041	1 Gb/s

This disclosure also includes the following native mode interfaces that will be supported by Verizon:

Fiber CONnection (FICON) provides full duplex, serial bit transmission at a link rate of 1.0625 Gb/s and 2.125 Gb/s among mainframes, storage devices, and peripherals. Multiple concurrent input/output (I/O) interfaces can occur on a single FICON channel. FICON is defined by IBM specifications SG24-6266-01 and SG24-5169-00.

Fibre Channel provides full duplex, serial bit transmission at a link rate of 133 Mb/s, 266 Mb/s, 531 Mb/s, 1.0625 Gb/s, and 2.125 Gb/s among mainframes, storage devices, and peripherals on a single channel. Fibre Channel is defined by ANSI STD X.3.303.

Intersystem Channel – 1 (ISC-1) provides serial bit transmission (531 Mb/s and 1.0625 Gbps line rate) point-to-point transmission between servers in a Parallel Sysplex environment (SG24-5637-00 and SG24-5638-00). ISC-1 is defined by IBM specification SA23-0395.

Intersystem Channel – 2 (ISC-2) provides serial bit transmission (531 Mb/s and 1.0625 Gb/s line rate) point-to-point transmission between servers in a Parallel Sysplex environment. ISC-2 is defined by IBM specification SA23-0395.

Intersystem Channel – 3 (ISC-3) provides serial bit transmission (1.0625 Gb/s and 2.125 Gb/s line rate) point-to-point transmission between servers in a Parallel Sysplex environment. ISC-3 is defined by IBM specification SA23-0395.

External Timing Reference/Control Link Oscillator (ETR/CLO) – The External Time Reference (ETR) facilitates the synchronization of time-of-day (TOD) clocks to ensure consistent time stamp data in an installation with multiple coupled systems. The Control Link Oscillator (CLO) allows two ETRs in an expanded availability configuration to maintain synchronization. ETR/CLO has line rates of 8 Mb/s and 16 Mb/s line rate. ETR and CLO are defined by IBM specification SG24-2070-00.

10 Gigabit Ethernet – 10 Gigabit Ethernet uses the Ethernet MAC protocol and frame formats that are similar to Ethernet, Fast Ethernet, and Gigabit Ethernet formats. 10 Gigabit Ethernet is specified by ANSI/IEEE Std 802.3ae, which defines two physical (PHY) layer interface classifications, WAN PHY (which includes 10G-Base-SW, 10G-Base-LW, and 10G-Base-EW) and LAN PHY (which includes 10G-Base-SR, 10G-Base-LR, and 10G-Base-ER).

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These services will conform to the following technical references (or subsequent versions):

Telcordia Technologies:

Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria, GR-253-CORE, Issue 3, September 2000.

American National Standards Institute (ANSI):

ANSI X3.303 Fibre Channel Physical Interface, 1998.

Institute of Electrical and Electronic Engineers (IEEE):

IEEE 802.3-2002 Information Technology - Telecommunication & Information Exchange Between Systems - LAN/MAN - Specific Requirements - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications 2002. This standard includes specifications for Ethernet (802.3), Fast Ethernet (802.3u), Gigabit Ethernet (802.3z).

International Telecommunications Union (ITU):

Network Node Interface for the Synchronous Digital Hierarchy, ITU-T Recommendation G.707, October 2000. Generic Framing Procedure (GFP), ITU-T Recommendation G.7041, October 2001.

Internet Engineering Task Force (IETF):

PPP over SONET/SDH, IETF Network Working Group, RFC 2615 - June 1999 and RFC 3255 - April 2002.

International Business Machines (IBM) Publications:

[FICON Native Implementation and Reference Guide](#), SG24-6266-01, October 2002;
[IBM S/390 FICON Implementation Guide](#), SG24-5169-00, December 1999;
[OS/390 Parallel Sysplex Configuration, Volume 1: Overview](#), SG24-5637-00;
[OS/390 Parallel Sysplex Configuration, Volume 2: Cookbook](#), SG24-5638-00, September 2000; Coupling Facility Channel I/O Interface Physical Layer, SA23-0395, December 1999; and OS/390 Time Management and IBM 9037 Sysplex Timer, SG24-2070-00.

To obtain documents contact:

Telcordia Customer Service
8 Corporate Place, Room 3A184
Piscataway, NJ 08854-4156
1-800-521-CORE (USA and Canada)
908-699-5800 (all others)
<http://www.Telcordia.com>

American National Standard Institute (ANSI)
Customer Service
11 West 42nd Street
New York, NY 10036
212-642-4900
<http://www.ANSI.org>

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To obtain documents contact (*continued*):

IEEE Publications Office
10662 Los Vaqueros Circle
P. O. Box 3014
Los Alamitos, CA 90720-1264
1-800-272-6657
<http://www.ieee.org>

International Télécommunications Union
Place des Nations
CH-1211 Geneva 20
Switzerland
Telephone: +44 22 730 6141
Fax: +41 22 730 5194
<http://www.itu.int/>

Internet Engineering Task Force (IETF)
IETF "Request for Comments" web site
<http://www.ietf.cnri.reston.va.us/rfc.html>

IBM North America
1133 Westchester Avenue
White Plains, NY 10604
United States
Telephone: 1-888-746-7426
<http://www.ibm.com>

Dates changes are to occur:

Verizon began offering a limited set of Ethernet over SONET services in July 2003. Verizon plans to offer the additional services described in this disclosure beginning in May of 2004. To confirm the scheduled deployment dates, contact the Offer Manager listed below.

Location changes are to occur:

VON services described in this disclosure will be available throughout the Verizon region where suitable facilities and capacities are available.

Impact of changes:

Customers interested in ordering VON services will need to utilize customer provided equipment (CPE) that meets the interface requirements listed above or listed in previous disclosures. Currently, a number of standards apply to EoS mappings. To interoperate, network elements on both ends of the network must implement the same mappings.

Verizon Contact:

For more specific information regarding geographic availability, pricing, or technical information, contact:

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