Optical Internetworking Forum Completes First 10Gbps Specifications

FREMONT, CA – October 2, 2000 - The Optical Internetworking Forum announced today that it has approved three separate documents that outline specifications to improve the cost-effectiveness and flexibility for optical networking interfaces. These documents currently include electrical interfaces, low-cost optical interfaces and signaling protocols. The documents submitted by OIF's Physical & Link Layer Working Group include; SPI-3 specification for interfaces within routers in OC-48 bandwidth applications, SPI-4 Phase 1 specification for interfaces within routers in 10 Gbps bandwidth applications, and SFI-4 electrical interface specification for the transfer of data between STS-192/STM-64 framers and the Serializer/Deserializer.

“The approval of these three documents is significant in that it brings the optical networking industry one step closer to having a standardized specification for key network components," said Russ Tuck, chairman of OIF's Physical & Link Layer Working Group. "Acceptance of a standardized specification for optical network interfaces will ensure that compatible parts will be available from multiple vendors. That added flexibility will improve time-to-market for new products and will lower system costs.”

The SPI-3 document specifies the OIF’s recommended interface for the interconnection of OC-48 Physical Layer (PHY) devices to Link Layer devices. Based on the SATURN Development Group’s “POS-PHY 3” interface, the document defines the system side interface of an OC-48 framer. SPI-3 specifies a 32-bit and 8-bit data path, both at a maximum rate of 104 MHz, to support the full OC-48 bandwidth as well as OC-12 bandwidths respectively. The interface supports bi-directional data transfer between two devices, through two different sets of signals that operate independently from each other.

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SPI-4 Phase 1 outlines the OIF’s near-term recommended high-speed packet interface specification for the interconnection of Physical Layer (PHY) devices and Link Layer devices in 10 Gbps aggregate bandwidth applications. It specifies a 64-bit data path, running at 200 MHz and using HSTL signals, to support packet and cell transfer over OC-192 SONET/SDH, as well as 10 Gbps Ethernet applications. This interface also supports bi-directional data transfer between two devices, through two different sets of signals that operate independently from each other.

SFI-4 represents the OIF’s recommended electrical interface specification for the transfer of data between STS-192/STM-64 framers and the Serializer/Deserializer. The document defines the clocking of the STS-192/STM-64 SERDES and SONET/SDH framer as well as the interface at the STS-192/STM-64 SERDES, connecting to the SONET/SDH framer ASIC. SFI-4 does not include mechanical or environmental specifications and does not specify signals beyond the scope of this interface, even though both can be present in a module that includes this interface.

“The companies participating in the Physical and Link Layer Working Group have made significant progress towards establishing standardized specifications for optical interfaces,” said Carol Sensale, OIF president. "Now that these documents have been approved, the role of the OIF will be to provide the backing and support necessary to drive widespread education and acceptance of their work.”

About the OIF Physical & Link Layer Working Group

The OIF Physical and Link Layer (PLL) Working Group specifies implementation agreements related to physical and data-link layer interfaces between Optical Internetworking elements, reusing existing standards when applicable. The PLL Working Group focuses on those functions and characteristics necessary to define and establish the interconnection of signals between optical internetworking equipment. The OIF PLL Working Group defines the transport mechanisms necessary to support the functions of the OIF Operations Administration, Maintenance, & Provisioning (OAM&P) Working Group. The charter of the OIF PLL Working Group includes the concept, definition, analysis, and documentation of matters pertaining to interconnection of Optical Internetworking signals. The technical documents can be viewed on the OIF website at http://www.oiforum.com/public/technical.html.
About the OIF

Launched in April of 1998, the OIF is a rapidly growing, non-profit organization with 240+ member companies to date, including many of the world’s leading carriers and vendors. As the only industry group uniting packet and voice networks, the OIF helps advance the standards and methods of optical networks. The mission of the OIF is to foster the development and deployment of interoperable products and services for data switching and routing using optical networking technologies.

With the goal of promoting worldwide compatibility of optical internetworking products, the OIF actively supports and extends the work of national and international standards bodies. Formal liaisons have been established with The ATM Forum, IEEE 802.3 HSSG and the IETF. More information on the OIF can be found at www.oiforum.com.

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