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Upcoming Events

March 24 - 26, 2009

[OFC/NFOEC](#)

San Diego, CA - USA
Booth #1648

April 21 - 23, 2009

OIF Q209 Meeting
Boston, MA – USA
- Verizon Labs Tour
(Principal Members Only)

April 27 - 30, 2009

[IIR Packet Transport Networks](#)

Vienna, Austria

May 19, 2009

[Packet-Optical Transport Evolution](#)

New York, NY - USA

June 11 - 12, 2009

[iPOP 2009](#)

Tokyo, Japan

June 22 - 25, 2009

[IIR WDM and Next Generation Optical Networking](#)

Nice, France

July 21 - 23, 2009

OIF Q309 Meeting
Vancouver, BC – Canada

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A Look at the OIF's 100G Work

The OIF is truly a unique forum. Its member companies are located around the world and are from all levels of the networking ecosystem ranging from components suppliers to service providers. The membership has expertise in systems, software, hardware, ICs, and optics, resulting in a diversity of perspectives that makes better implementation agreements than would otherwise be achievable.

The OIF fosters a unique, cooperative environment where debate and collaboration grow into meaningful technical advances. This past year, the membership had an opportunity to experience this unique environment in action as the OIF began work on the "100G Architecture and Framework." The project objective is to create a 100G long-distance transmission agreement using Dual Polarization Quadrature Phase Shift Keying modulation with a coherent receiver.

In the following months, three additional 100G related projects were started under the umbrella of the framework project. These new projects focus on agreements for 100G building blocks such as integrated photonic components, forward error correction (FEC), and a 100G module MSA.

The 100G project may be the OIF's largest and most complicated endeavor to-date, involving the simultaneous development of coordinated agreements ranging from component specifications to module specifications. Coordination among 100G projects is critical, since a choice made in one project may affect one or more related 100G projects. As a result, the OIF has made a conscious effort to facilitate communication between the various projects.

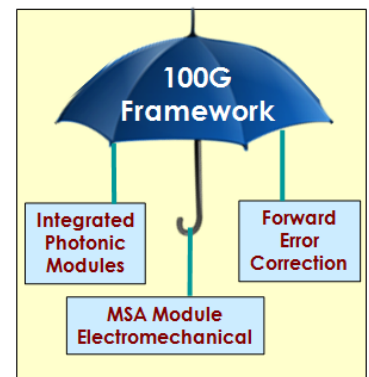
During the past year, several new companies have joined the OIF specifically to participate in the 100G projects. Recently, one of the new members remarked that OIF was a "really comfortable and productive place to develop standards." The member also commented that they were quite pleased with the cooperative working environment, even between members who are or may become competitors.

The agreements resulting from these 100G projects span many different subject areas, some covered, at least in part, by other standards organizations. The OIF's ability to "fill the gaps" in standards has been very beneficial to the optical networking industry during the past decade.

The OIF's 100G projects will provide some certainty around 100G standards, reducing the risk for companies who are developing 100G components and sub-systems. Enabling the 100G ecosystem is a key objective of the OIF's 100G efforts.

The OIF's 100G projects have made excellent progress and we are nearing the release of the first 100G document. I expect this year to be a productive and exciting one as we near completion of other 100G projects.

Jeff Hutchins, CoreOptics and OIF Board Member



Analyst Corner

Several different analyst firms have recently put out reports relating to the 100G market. Here is a synopsis of a few.

- According to a new report from CIR, an industry analyst firm based in Virginia, the market for 40/100 Gigabit Ethernet products will begin to take off in 2010. The latest CIR projections, which are provided in detail in the report titled, 40/100 GigE Markets: 2009-2013, show that revenues from 40/100 GigE transceivers will reach \$ 482 million by 2013.

CIR believes that the economic downturn will not delay early adopters of 40/100 GigE as companies such as Google and Amazon have a “desperate need” for 100G connections today. And, although the current economic situation is having an impact on carrier network upgrades, scaling carrier networks to 100 Gbps will now only be accomplished using a 40/100-Gbps variant.

- A report from Infonetics Research, 10G/40G/100G Market Size and Forecasts, which tracks 10G, 40G, and 100G optical and Ethernet ports and revenue on various types of service provider and enterprise gear, shows that, despite the economic downturn, the 10G market is thriving and will continue to thrive for many years to come, 40G is ramping rapidly, and 100G should begin soon and take off by 2013.

Michael Howard, Principal Analyst - Optical, Routing, Switching, and Ethernet - Infonetics Research

Educational Outreach

OFC/NFOEC Market Watch - Panel V: 100G Standards Update
Thursday, March 26, 2009 – San Diego, CA
1:00pm – 3:00pm



This session will provide an update on the status of 100G standards and associated implementation agreements. Standards work for 100G Ethernet is underway in the IEEE, while the ITU-T is well along on a coordinated activity to standardize a new signal format to transport 100G across global networks. Building on the IEEE and ITU-T standards, the OIF has several projects focused on a specific implementation for 100G transport across ultra long haul DWDM networks. Speakers will provide their perspectives on the work currently taking place in the industry groups.

Moderator: Rod Smith, *Tyco Electronics*, OIF MA&E Co-Chair

Speakers: Joe Berthold, *Ciena*, John D'Ambrosia, *Force 10 Networks*, Mark Jones, *Tellabs* and Bill Gartner, *Cisco Systems*

NFOEC 1: Optical Networks and Services Workshop
Optical and Packet Control Planes: Convergence or Divergence?
Sunday, March 22, 2009
4:30pm – 7:30pm

This workshop will explore the current state of work on optical and packet control planes, and the potential for multi-layer convergence.

Moderator: Lyndon Y. Ong, *Ciena Corp.*, OIF Technical Committee Chair

Speaker: Jim Jones, *Alcatel-Lucent Optical Networking*, VP of Marketing of OIF

IIR Packet Transport Networks
Tuesday, April 28, 2009 – Vienna, Austria
1:00pm



Hans-Martin Foisel, *Deutsche Telekom*, OIF President and Carrier Working Group Chair will present Controlling Packet Optical Transport Networks

OIF Workshop: Optical Networking – Delivering on the Promise
Tuesday, May 19, 2009 – New York
8:30am – 10:00am



OIF Workshop Overview:

Users want seamlessly connected advanced services delivered on-demand wherever they may be, on any platform, over any available network. But as the user experience becomes richer, the underlying technologies and networks become more complex. The OIF guides the development of building blocks for highly intelligent, reliable, interoperable networks that deliver enhanced services – all while meeting the challenges to simplify network operations and drive down costs. In this workshop you will hear from industry experts on OIF work that helps meet these challenges. Get insights on work related to 100G interfaces, 100G long-haul DWDM, as well as on-demand carrier services based on OIF implementation agreements.

IIR WDM and Next Generation Optical Networking
Wednesday, June 24, 2009 – Nice, France



Hans-Martin Foisel, *Deutsche Telekom*, OIF President and Carrier Working Group Chair to present Enabling Broadband On-Demand Services

Technology Update

On the path to becoming an approved implementation agreement is the E-NNI 2.0 signaling IA, which will go to principal ballot the first of next month.

The E-NNI 2.0 Signaling IA adds a number of features not found in the E-NNI 1.0 Signaling IA including:

- Ethernet Private Line (EPL) and Ethernet Virtual Private Line (EVPL) services
- Non-disruptive connection bandwidth modification
- Support for G.709 OTN transport interfaces
- Support for Low Order SONET/SDH connection services
- Enhanced security

In addition, the OIF has several additional, ongoing work projects and soon to be published white papers.

Physical and Link Layer

- 100G Long Distance DWDM Transmission Framework
- 100G Long Distance DWDM Integrated Photonics Components
- Forward Error Correction (FEC) for 100G DP-QPSK Long Distance Communication
- 100G Long-Haul DWDM Transmission Module - Electromechanical
- Common Electrical Interface - 25Gb (CEI-25)
- Integrable Tunable Laser Assembly - MSA Interface Compliance Benchmark

Networking

- E-NNI 2.0 Routing
- Control Plane Security
- Multilayer Signaling

White Papers

Two white papers are being written on CEI-28G and the 100G work in the OIF – these whitepapers will be available on the OIF website next month.

CEI-28G-SR: Simplifying 100 Gigabit Networks

John D'Ambrosia, Force10 Networks
David Stauffer, IBM Microelectronics
Chris Cole, Finisar

While the first generation of devices supporting 100 Gigabit per second (Gb/s) will utilize a 10 lane by 10 Gb/s signaling rate, future power and size reduction requirements will drive the need for a faster, narrower interface. Noting these future needs, the OIF has initiated development of standards for the next generation of electrical signaling for long reach and short reach applications.

This paper, written in conjunction with the Ethernet Alliance, provides an overview of the CEI-28G project, which defines electrical specifications for 28 Gbaud/s signaling that will be used for next generation chip-to-chip and chip-to-module applications that support transmission of 100 Gb/s data rates, such as and 100 Gigabit Ethernet and OTU4.

100G Long Haul DWDM – The Core Problem for Carriers

Jeff Hutchins, CoreOptics
Joe Berthold, Ciena
Steve Joiner, Finisar
Rod Smith, Tyco Electronics

For 100G transport, the Optical Internetworking Forum (OIF) has recognized a need to develop Implementation Agreements for 100G Long Haul DWDM components, modules and systems. To address the service provider needs and the industry requirement for standards, the OIF has initiated key 100G DWDM projects based on its members' consensus and agreement. The objectives of the projects are to provide implementation agreements on several key parameters for optical transport based on DP-QPSK modulation. The OIF will work within the industry and with standards organizations to help develop and build consensus around this modulation format for optical modules, optical components and electronic signaling for DWDM systems. The development of these projects is a key goal of the OIF to enable economic industry development of long haul DWDM 100G transport solutions and address Carriers and Service provider needs.

Newest OIF Members



OIF in the News & Completed Implementation Agreements

Press Releases may be found at <http://www.oiforum.com/public/pressreleases.html>

December 8, 2008

OIF Releases Tunable Laser and Transmitter Assembly Agreements

November 13, 2008

OIF Celebrates 10 Years of Contributions to the Industry
Adds Long Haul DWDM Transmission Module Project to 100G Stable

October 2, 2008

OIF's Newest Piece of 100G Puzzle: Forward Error Correction

Implementation Agreements and Guideline Documents may be found at

<http://www.oiforum.com/public/impagreements.html>

SFI-S-01.0 - Scalable Serdes Frammer Interface (SFI-S): Implementation Agreement for Interfaces Beyond 40G for Physical Layer Devices (November 2008)

OIF-ITTA-MSA-01.0 - Integrable Tunable Transmitter Assembly Multi Source Agreement (November 2008)