Fremont, CA – June 6, 2012 – The OIF approved two new Implementation Agreements (IAs), published two new whitepapers and completed interoperability testing in the last month addressing a wide variety of technologies. The Physical and Link Layer and Networking Working Groups continue to remain active in addressing several different areas of technology with input from the entire optical industry food chain from carriers, and equipment vendors to component suppliers and test equipment manufacturers.

“The type of work taking place within the OIF continues to expand to meet the industry’s needs,” said Jonathan Sadler, of Tellabs and the OIF Technical Committee Chair. “The different groups within the OIF work together diligently to identify and address technology gaps that are needed to advance the industry to the next level.”


Implementation Agreements

The Multi-Link Gearbox (MLG) Implementation Agreement defines a 10:4 Mux function to convert multiple (up to 10) independent 10Gb/s links into 4x25G lanes, and a 4:10 DeMux function to convert the 4x25G lanes back to multiple (up to 10) independent 10Gb/s links. This enables a variety of applications reusing 100GBASE-R technology for the transport of individual 10G links.
The second implementation agreement approved by OIF membership is the End-to-End Transport of UNI Client Authentication, Integrity, and Data Plane Security Support Information. This IA describes a new end-to-end digital signature mechanism that provides authentication, integrity, and support for non-repudiation of UNI-C to UNI-C communications. It provides guidelines for implementers describing what to protect and how to apply this protection. It also discusses performance impacts, policy enforcement, security credentials and error handling.

Whitepapers

The Management Plane (OSS) Support for Control Plane (CP) Networks whitepaper documents some of the network management functionality that is needed for the management of multi-domain intelligent optical networks. Carriers have expressed interest in operational support for multi-domain CP driven networks and in the rapid deployment of new CP technologies and capabilities without network service disruption. This whitepaper identifies areas that need to be addressed in network management to help operators achieve this goal.

The whitepaper on Thermal Management at the Faceplate represents the work of the OIF to consider the system issues for thermal management at the faceplate of a line card. Issues associated with air cooling of pluggable modules in a line card are examined including a brief tutorial of the basic physics, examples of methods that can be used to improve cooling and discussion of design limitations and trade-offs. Guidance on the necessary communications between optics plug suppliers, the system architects and system thermal designers is provided.

Security Interoperability Testing

The OIF furthered its commitment to secure control plane networks by performing interoperability testing of the Security Extension for UNI and E-NNI 2.0 and Security for Management Interfaces to Network Elements 2.0 implementation agreements. These tests are a first-of-its kind for control plane
networks and were performed at the close of OIF Interoperability 2012 – Enabling High-Speed Dynamic Services earlier this year and reviewed by membership at the Q2 meeting. The test results will be used to evaluate future changes to the security agreements and to determine the need for future security tests.

Two OIF members participated in the interoperability test, each with a different style of implementation. One implementation was integrated into the network element, while the other provided an external security appliance used to communicate with other Control Plane NEs. Mixtures of secure-to-secure and secure-to-external interfaces were tested, demonstrating the ability for highly secure deployments of control plane to coexist with unsecured control plane networks. OIF Carrier members observed and provided guidance as the tests were performed.

About the OIF

Launched in 1998, the OIF is the first industry group to unite representatives from data and optical networking disciplines, including many of the world's leading carriers, component manufacturers and system vendors. The OIF promotes the development and deployment of interoperable networking solutions and services through the creation of Implementation Agreements (IAs) for optical, interconnect, network processing, component and networking systems technologies. The OIF actively supports and extends the work of standards bodies and industry forums with the goal of promoting worldwide compatibility of optical internetworking products. Information on the OIF can be found at http://www.oiforum.com.

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