

Optical Internetworking Forum Report

<http://www.oiforum.com/>

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Optical Internetworking Forum

- The mission of the Optical Internetworking Forum (OIF) is to foster the development and deployment of interoperable products and services for data switching and routing using optical networking technologies.

OIF Working Groups

- Architecture
 - Develops and recommends implementation agreements related to architectures for Optical Internetworks.
- OAM&P
 - Develops operations, administration, maintenance and provisioning requirements, guidelines, and implementation agreements related to optical internetworking.
- Physical and Link Layer (PLL)
 - Specifies implementation agreements related to physical and data-link layer interfaces between Optical Internetworking elements, reusing existing standards when applicable.

PLL Study Items

- Development of 10Gb/s interface based upon SONET/SDH standards
 - Selection of appropriate physical interfaces (SR, IR, LR, etc.)
 - Payload mapping
 - Synchronization and jitter requirements
 - Link layer protocol
- Development of interface agreements based on Packet-Over-SONET/SDH (POS) at 155 Mb/s, 622 Mb/s, and 2.5 Gb/s
 - All of the above issues for STS-1/STS-3c/STS-12c/STS-48c and a combination thereof

PLL Study Items (Cont'd)

- Development of a low-cost 10 Gb/s interface for intra-office data applications
- Development of standard System Physical Interface (SPI) for interconnection between the physical and link layer devices
- Development of specifications for SERDES/Framer electrical interface for OC192

PLL WG Summary - Feb 1 - New Orleans

- General Topics
 - *October '99 Meeting Minutes - OIF99.150 - Approved*
 - *PLL Vice-Chair - Shahrukh Merchant appointed by PLL WG*
 - *Intellectual Property Disclosure - Letters from PMC-Sierra Distributed and captured in the mtg minutes*

PLL WG Summary - Feb 1 - New Orleans

- STUDY POINT 7: Framer/SERDES Electrical Interface
 - OIF99.102.4- (Technical Doc) voted by PLL WG to forward to TC for approval. All comments/changes approved by PLL are incorporated in 102.4
 - {Stylistic changes to reflect correct document template}
- STUDY POINT 5-1: System Physical Interface SPI-4
- Study Point 5-2: System Physical Interface SPI-3
- {These do not apply to IEEE activities }

PLL WG Summary - Feb 1 - New Orleans

- Study Point 6 Low-cost OC-192/STM-64 Interface
 - *4 Task Groups formed to focus on VSR serial and parallel optics based interfaces - TG Champions - Gary Nicholl (Parallel - 12X1.2G), Tom Palkert (4X2.xG), Ed Cornejo (Serial -600m/2km), Robert Williamson (VCSEL Serial)*
 - *Objectives for the TGs - Bring in contributions that reflect the consensus of the Task Groups to the PLL WG for discussion and voting*
 - *Chair will send email addresses of the TG Champions to PLL WG members and establish email exploders for the Task Groups*
 - *OIF00.21 approved to be the basis for evaluation criteria of the proposals - Jay Shah will coordinate with TG chairs to consolidate in an evaluation contribution*

VSR comparison criteria

- Media type: number of fibers, type of connectors, connector scopes etc.
- Link budgets: Optical power, jitter
- Testability
- Reliability
- Thermal management
- EMI
- Form factor
- Multiple vendor support
- Interface protection
- Network management
- Cost comparisons

PLL WG Agenda - January 31, 2000

Jan, 00	2Q, 00	3Q '00	4Q '00	1Q '01	2Q '01
SERDES/Framer Interface spec ready for vote	SERDES/Framer Intf - Approved by OIF	Low-cost OC-192 Parallel Optics approved by OIF	40G intf?		
SPI-3 ready for vote	SPI-3 - Approved by OIF				
SPI-4 - Baseline Tech Doc but alternative proposals on the table	SPI-4 - Phase-I approved; Phase-II Tech Doc	SPI-4 Phase-II approved			
SONET/SDH intf & DataLink Layer - Agreement Tech Doc TBD	SONET/SDH Interface & Data Link Layer - Tech Doc	Low-cost OC-192 Serial Optics ready for vote by TC			
Low-cost OC-192 Intf - Parallel optics - Baseline Tech Doc but alternative proposals on the table; Serial Optics Several proposals - work on progress	Low-cost OC-192 - Parallel Optics agreement and Tech Doc ready to be sent to TC	Low-cost OC-192 Serial optics intf approved by OIF			
	Serial Optics - Agreement				