IEEE P802.3av «10GEPON»
Task Force

Report to IEEE 802.3 Closing Plenary
November 15, 2007
Atlanta, GA

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Accomplishments This Week

• Reviewed 16 presentations
  – 7 presentations submitted from the floor

• Accepted Baseline Proposals
  – Major PMD Rx and Tx parameters (Y:42 N:0 A:5)
  – Remaining downstream wavelength bands (Y:31 N:3 A:10)
  – Adjustable laser on/off times (Y:33 N:0 A:3)
  – FEC mechanism – RS(255, 223) (Y:22 N:3 A:12)

• Approved Draft 1.0 (Y:32 N:0 A:0)
  – Did a full cycle of comments resolution

• Approved Project Timeline (Y:29 N:0 A:4)
Objectives

- Support subscriber access networks using point to multipoint topologies on optical fiber  
  (Passed by voice vote without opposition)

- PHY(s) to have a BER better than or equal to $10^{-12}$ at the PHY service interface  
  (Passed by voice vote without opposition)

- Provide physical layer specifications:
  - PHY for PON, 10 Gbps downstream/1 Gbps upstream, single SM fiber  
    (Y:34, N:0, A:2)
  - PHY for PON, 10 Gbps downstream/10 Gbps upstream, single SM fiber

- Define up to 3 optical power budgets that support split ratios of 1:16 and 1:32, and distances of at least 10 and at least 20 km.  
  (Y:51, N:0, A:10)
Three Optical Power Budget Classes

- **Symmetric power budgets:**
  - PR10 – 20 dB (for the same outside plant as PX10)
  - PR20 – 24 dB (for the same outside plant as PX20)
  - PR30 – 29 dB

- **Asymmetric power budgets (10G down/1G up):**
  - PRX10 – 20 dB (for the same outside plant as PX10)
  - PRX20 – 24 dB (for the same outside plant as PX20)
  - PRX30 – 29 dB

- **How do we fulfill our objectives?**

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<th>1:16</th>
<th>1:32</th>
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<tr>
<td><strong>10 km</strong></td>
<td>PR10, PRX10</td>
<td>PR20, PRX20</td>
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<td><strong>20 km</strong></td>
<td>PR20, PRX20</td>
<td>PR30, PRX30</td>
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PMDs

OLT Side

- Symmetric
  - 10GBASE-PR-D1
  - 10GBASE-PR-D2
  - 10GBASE-PR-D3

- Asymmetric
  - 10/1GBASE-PRX-D1
  - 10/1GBASE-PRX-D2
  - 10/1GBASE-PRX-D3

ONU Side

- Symmetric
  - 10GBASE-PR-U1
  - 10GBASE-PR-U3

- Asymmetric
  - 10/1GBASE-PRX-U1
  - 10/1GBASE-PRX-U2
  - 10/1GBASE-PRX-U3
TF Approved Project Timeline

Approved by TF on November 15, 2007
Y:29  N:0  A:4
Actions for January

- **Commenting period for D1.0**
  - 802.3av / ******
  - Comment Submission deadline – December 17, 2007

- **Remaining PMD parameters**
  1. Burst mode timing study (AGC, CDR)
  2. Transmitter spectral limits
  3. Define TDP value
  4. Jitter budgets reference model
  5. PRX30 Upstream power budget

- **10G PCS changes for burst-mode operation**
  1. Synchronization FSM
  2. BER monitoring
  3. Link fault Signaling
  4. PCS diagnostic modes

- **Coexistence model description**
  1. Layering diagram
  2. Dual-rate burst-mode receiver
Joint ITU-T/IEEE Workshop

- ITU-T SG15 considers organizing joint ITU-T SG15/FSAN/IEEE 803.3av workshop on broadband optical access network issues
  - ITU-T headquarters in Geneva, Switzerland
  - June 19-20, 2008

Straw Poll (everybody in the room)

- I will definitely participate ___10___
- I will likely participate ___5___