10GBASE-LRM
CLOSING REPORT TO IEEE 802.3

17th November 2005
Outline

- IEEE802.3aq Officers
- Reflector and Web details
- Achievements this week
- Working Group and Confirmation Ballot Results
- TF Motions in 10GBASE-LRM meetings
- Motions to IEEE802.3
IEEE 802.3aq Officers

• Task Force Chair: David Cunningham
• Editor: Nick Weiner
• Web Master: Piers Dawe

• TP2 weekly call leader: Tom Lindsay
• TP3 weekly call leader: Jim McVey

• Channel Ad hoc Chair: Ian White
  Task 1 (OM1, OM2, OM3 & connectors) leader: Richard Penty
  Task 2 (Time variation of channel & MN): Jonathan King
  Task 3 (Input-output parameters) leader: Lars Thon
  Task 4 (Launch & Mode Filtering) leader: Yu Sun
  Task 5 (Validation) leader: Nick Weiner
There is a reflector set up

To subscribe, use this URL:
• http://ieee802.org/3/aq/reflector.html

To subscribe via e-mail send this message

• stds-802-3-10gmmf <yourfirstname> <yourlastname> to ListServ@ieee.org

The IEEE 802 web page URL:
http://ieee802.org/3

10GBASE-LRM web page URL:
• http://ieee802.org/3/aq
ACHIEVEMENTS FOR THIS MEETING

• Completed comment resolution on Draft P802.3aq/D2.4.

• No changes were made to D2.4.

• TF passed motions to:
  ➢ Tidy up project objectives
  ➢ Accept interoperation report
  ➢ Approve recirculation of unsatisfied comments on D2.4
  ➢ Direct TF chair to request conditional approval for Sponsor Balloting of D2.4/D3.0
### Working Group Confirmation Ballot Results

<table>
<thead>
<tr>
<th></th>
<th>D2.0</th>
<th>D2.1</th>
<th>D2.2</th>
<th>D2.3</th>
<th>D2.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voters</td>
<td>206</td>
<td>206</td>
<td>206</td>
<td>206</td>
<td>206</td>
</tr>
<tr>
<td>Approve</td>
<td>72</td>
<td>86</td>
<td>95</td>
<td>99</td>
<td>103</td>
</tr>
<tr>
<td>Disapprove</td>
<td>22</td>
<td>22</td>
<td>19</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Abstain</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Returns</td>
<td>103</td>
<td>112</td>
<td>120</td>
<td>123</td>
<td>126</td>
</tr>
<tr>
<td>Comments T</td>
<td>85</td>
<td>25</td>
<td>10</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Comments TR</td>
<td>107</td>
<td>44</td>
<td>51</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Comments E</td>
<td>209</td>
<td>64</td>
<td>37</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>Comments ER</td>
<td>57</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Comments</td>
<td>458</td>
<td>138</td>
<td>106</td>
<td>54</td>
<td>27</td>
</tr>
<tr>
<td>RespRate</td>
<td>50.00%</td>
<td>54.37%</td>
<td>58.25%</td>
<td>59.71%</td>
<td>61.17%</td>
</tr>
<tr>
<td>AppRate</td>
<td>76.60%</td>
<td>79.63%</td>
<td>83.33%</td>
<td>84.62%</td>
<td>85.83%</td>
</tr>
<tr>
<td>AbsRate</td>
<td>8.74%</td>
<td>3.57%</td>
<td>5.00%</td>
<td>4.88%</td>
<td>4.76%</td>
</tr>
<tr>
<td>New Disapprove</td>
<td>22</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Ballot closed on the 1 November 2005
Unsatisfied TR Comments on D2.4

Comments requiring recirculation:

- Comment 1, R Mei: Power budget
- Comment 2, L Adriaenssens: Interoperation
- Comment 5, P Kolesar: Broad Market Potential
- Comment 6, P Kolesar: Fails 300 m objective
- Comment 7, J Abbott: Range with 50MMF
- Comment 19, J Abbott: Range with OM3 50MMF

Comments not requiring recirculation:

- Comment 11, A Ghiasia: Jitter (Withdrawn)
- Comment 12, A Ghiasia: CSRS test (Withdrawn)
- Comment 20, N Swenson: TWDP limit (Pile-on)
Unsatisfied TR’s And ER

63 unsatisfied R comments on Drafts 2.0 to 2.4:

<table>
<thead>
<tr>
<th>On D2.4</th>
<th>On D2.3</th>
<th>On D2.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>7, 19</td>
<td>2</td>
<td>22, 23</td>
</tr>
<tr>
<td></td>
<td>Adriaenssens, Luc</td>
<td>49, 67</td>
</tr>
<tr>
<td>5, 6</td>
<td>Kolesar, Paul</td>
<td>37, 75, 86</td>
</tr>
<tr>
<td>1</td>
<td>Mei, Richard</td>
<td>64</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On D2.1</th>
<th>On D2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1066, 1116</td>
<td>105, 106</td>
</tr>
<tr>
<td>1050, 1059</td>
<td>173, 231, 273, 279, 281, 295, 433 (ER)</td>
</tr>
<tr>
<td>1031, 1047</td>
<td>6, 215, 369</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On D2.1</th>
<th>On D2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1066, 1116</td>
<td>105, 106</td>
</tr>
<tr>
<td>1050, 1059</td>
<td>173, 231, 273, 279, 281, 295, 433 (ER)</td>
</tr>
<tr>
<td>1031, 1047</td>
<td>6, 215, 369</td>
</tr>
</tbody>
</table>

IEEE 802.3aq TASK FORCE, Vancouver, Canada, 15-17 November 2005
Motion 1 (Technical)

- Move to accept the *10GBASE-LRM Interoperability Report* (mcvey_1_1105) as fulfillment of the requirements of the motion below from the 11/16-18/04 10GBASE-LRM meeting;

  Motion # 3  Move that IEEE 802.3aq demonstrate a $10^{-12}$ BER over the rated distance on a specified channel (TBD) and show interoperability between PMD’s of at least three vendors for 10GBASE-LRM to support technical feasibility prior to sponsor ballot.

  - Moved: Dan Dove
  - Seconded: Sudeep Bhoja
  - Results: For: 39  Against: 0  Abstain: 7
Motion 2 (Technical)

Change project objectives to remove the requirement:

At least 300 meter on selected multimode fiber.

• Moved: Mike Dudek
• Seconded: Tom Lindsay
• Results:
  For: 34  Against: 1  Abstain: 9
Motion 3 (Technical)

In the project objectives, delete the publication date of 60793-2-10 in all 6 places.

- Moved: Paul Kolesar
- Seconded: Steve Swanson
- Results: Passed without objection.
Motion 4 (Technical)

TF directs TF Chair to move that IEEE802.3 accept the amended 10GBASE-LRM objectives:

- Use the existing 10GBASE-R PCS
- Support a BER of better than or equal to $10^{-12}$
- Support fiber media selected from IEC 60793-2-10

- 62.5µm
  - 160/500 MHz-km (A1b, 60793-2-10)
  - 200/500 MHz-km (A1b, 60793-2-10)

- 50µm
  - 500/500 MHz-km (A1a.1, 60793-2-10)
  - 400/400 MHz-km (A1a.1, 60793-2-10)
  - 1500/500 MHz-km (A1a.2, 60793-2-10)

- Provide a Physical Layer specification which supports link distances of:
  - at least 220m on installed 500MHz.km multimode fiber

Moved: Dan Rausch
Seconded: Sudeep Bhoja
Votes: Y 34 N 0 A 4

IEEE 802.3aq TASK FORCE, Vancouver, Canada, 15-17 November 2005
Motion 5 (Technical)

Request WG authorization for sponsor ballot of P802.3aq/D2.4 per “Procedure For Conditional Approval To Forward a Draft Standard (formerly Procedure 10)” and authorize re-circulation ballots and interim meetings as necessary.

Moved: John Jaeger
Seconded: Lew Aronson

Votes: Y 32  N 2  A 2
Motion 6 (Technical)

Request SEC authorization for sponsor ballot of P802.3aq/D2.4 per “Procedure For Conditional Approval To Forward a Draft Standard (formerly Procedure 10)” and authorize re-circulation ballots and interim meetings as necessary.

Moved: John Jaeger
Seconded: Jim McVey

Votes: Y 32  N  2  A 2
10GBASE-LRM Motions to IEEE 802.3 & Supporting Material
Move that IEEE802.3 accept the amended 10GBASE-LRM objectives:

**OBJECTIVES**

- Use the existing 10GBASE-R PCS
- Support a BER of better than or equal to $10^{-12}$
- Support fiber media selected from IEC 60793-2-10
  
  - 62.5µm
    - 160/500 MHz-km (A1b, 60793-2-10)
    - 200/500 MHz-km (A1b, 60793-2-10)
  
  - 50µm
    - 500/500 MHz-km (A1a.1, 60793-2-10)
    - 400/400 MHz-km (A1a.1, 60793-2-10)
    - 1500/500 MHz-km (A1a.2, 60793-2-10)

- Provide a Physical Layer specification which supports link distances of:
  
  - at least 220m on installed 500MHz.km multimode fiber

Moved: David Cunningham on behalf of 10GBASE-LRM TF

IEEE802.3 Votes: Y: 52 N: 1 A: 19
Request WG authorization for sponsor ballot of P802.3aq/D2.4 per “Procedure For Conditional Approval To Forward a Draft Standard (formerly Procedure 10)” and authorize re-circulation ballots and interim meetings as necessary.

Moved: John Jaeger
Seconded: Lew Aronson

TF Votes: Y  32  N  2  A  2

Moved: David Cunningham on behalf of 10GBASE-LRM TF
IEEE802.3 secretary recorded vote.
Motion passed.
LRM Motion 3 (Technical)

Request SEC authorization for sponsor ballot of P802.3aq/D2.4 per “Procedure For Conditional Approval To Forward a Draft Standard (formerly Procedure 10)” and authorize re-circulation ballots and interim meetings as necessary.

Moved: John Jaeger
Seconded: Lew Aronson
TF Votes: Y  32        N  2        A  2

Moved: David Cunningham on behalf of 10GBASE-LRM TF
IEEE802.3 Votes Y:  57        N:  3        A:  9
Draft Re-circulation and Ballot Schedules

• Recirculation of unsatisfied TR’s:
  > 22\textsuperscript{nd} November – 6\textsuperscript{th} December 2005

• WG Chair, TF Chair & TF editor confirm approval rate greater than 75% and draft any required responses:
  > 7\textsuperscript{th} December 2005.

• Sponsor Ballot:

• 10GBASE-LRM only Comment resolution meeting: