# MMF Ad Hoc meeting minutes

13<sup>th</sup> December 2012
approved minutes
recorded by Jonathan King

### MMF ad hoc meeting minutes, 13<sup>th</sup> Dec 2012 ... 1

- Meeting started at 8:30 am Pacific, chaired by Jonathan King.
- Attendee list was taken from the Webex attendee list, ~40 attendees were noted.
- Presentations shared in the MMF ad hoc can be found at the MMF ad hoc web page.
  - http://www.ieee802.org/3/bm/public/mmfadhoc/meetings/index.html
- **IEEE patent policy:** Attendees were reminded of the IEEE patent policy
  - http://www.ieee802.org/3/patent.html
- Agenda slides agreed.
- **Meeting minutes for 29**<sup>th</sup> **Nov**: Jonathan asked if anyone had amendments to the unapproved minutes for the 29<sup>th</sup> October meeting. Two name/affiliation errors were noted and corrected before the meeting. Piers asked that the record of discussion on FER be corrected (Pete recommended FER of 5.12× 10<sup>-10</sup> (calculation method C, Q at PMA interface >3.89); Piers said he preferred the requirement of FER less than 6.62 × 10<sup>-10</sup> (calculation method B, Q at PMA interface >3.88). Jonathan will revise the minutes and re-distribute for further comment.
- Presentations and discussion:
- Jonathan King: 100m MMF reach objective Tx and Rx parameters working document
   The group went through the working document of Tx, Rx, and Link specs. Formulae for
   dependent Tx and Rx specs (ie specs that are dependent on other TBD parameters) were
   discussed and agreed, (shown on next slide). An updated version of the working document
   will be available on the MMF ad hoc meeting materials page.

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Average launch power	min	dBm	Tx <sub>av_min</sub>	=Tx <sub>OMA_min</sub> - 2
Optical Modulation Amplitude (OMA)	max	dBm	Tx <sub>OMA_max</sub>	=Tx <sub>av_max</sub> + 0.6 note1
OMA	min		Tx <sub>OMA_min</sub>	7.00 (1
OMA at max TDP	min	1000000	Tx <sub>OMA@TDP</sub>	
Launch power in OMA minus TDP	min		Tx <sub>OMA-TDP</sub>	=Tx <sub>o</sub> , oran - TDP

Damage threshold	min	dBm	$P_{dmg}$	= Tx <sub>av max</sub> + 1
Average power at receiver	max	dBm	Rx <sub>av_max</sub>	= Tx <sub>av_max</sub>
Average power at receiver	min	dBm	Rx <sub>av_min</sub>	= Tx <sub>av_min</sub> - IL
Optical Modulation Amplitude (OMA)	max	dBm	Rx <sub>inOMA_max</sub>	= Tx <sub>OMA_max</sub>

#### MMF ad hoc telecon minutes, 13<sup>th</sup> Dec 2012 ... 2

#### Actions and issues requiring resolution:

- A description is needed for the error statistics required at the PMA service interface in order to meet the required FER. Pete Anslow, Adam Healey, Mike Dudek, Matt Brown were particularly active during discussion of this topic.
- A PIC statement will be required to describe the PMA service interface BER requirement and the error statistics.
- 802.3bm will also need to define a normative test to guarantee system operation
- If defined, should the 20m reach PMD be compatible with the 100m PMD?
- Further contributions addressing the 100m MMF reach objective
- Further contributions addressing options for 20m MMF reach objective, showing significant cost density or power improvements
- **Next meeting:** Thursday 20<sup>th</sup> December, 2012, 8.30 am Pacific, duration 1.5 hours Webex meeting details are shown on the last slide

### **Attendees**

John Abbott, Corning Pete Anslow, Ciena Murat Arabaci, Juniper Dave Brown, Gennum Michael Brownell, Piers Dawe, IPtronics Dan Dove, Applied Micro Mike Dudek, Qlogic Galen Fromm, Moa Garcia, TI Hioroshi Hamano, Fujitsu Kenneth Jackson Jonathan King, Finisar Sharon Lutz, US Conec

Jeffery Maki, Juniper Phil McClay, TE Connectivity Greg McSorley, Amphenol Dale Murray, LightCounting Peter Pepeljugoski, IBM Randy Perrie, Onechipphotonics Michael Ressl, Peter Stassar, Huawei Jim Theodoras, Paul Vanderlaan, Nexans CK Wong, FCI Hiroki Yanagisawa, Pavel Zivny, Tektronix

# Webex details

- Start: 8.30am Pacific, 4.30pm GMT, 1.5 hours duration
- Webex meeting number: 591 327 019
- Meeting password: IEEE
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- To join the meeting go to
  - https://finisar.webex.com/finisar/j.php?J=592272448&PW=NYWY4OTVhYTAy
  - 2. If requested, enter your name and email address.
  - 3. Enter the meeting password: IEEE
  - 4. Click "Join".
  - 5. Follow the instructions that appear on your screen.
- Teleconference information
  - Call-in toll-free number: 1-8666545792 (US)
  - Show global numbers:
     <a href="https://www.tcconline.com/offSite/OffSiteController.jpf?cc=9805136069">https://www.tcconline.com/offSite/OffSiteController.jpf?cc=9805136069</a>
  - Conference Code: 980 513 6069