

**Unapproved Meeting Minutes
IEEE P802.3bq Rx CMNR Ad Hoc**

**September 2nd, 2015
Prepared by Pete Cibula**

Meeting Agenda:

- 1) Roll call - Record attendance, attendees' names and affiliations
- 2) Reminder of IEEE patent policy: www.ieee802.org/3/patent.html
- 3) Housekeeping:
 - a) Review & approve meeting agenda
- 4) New business for the September 2nd ad hoc meeting as follows:
 - a) Review and discussion of comments received against Clause 113.5.4.3 and/or Annex 113A, including any changes to Annex 113A for P802.3bz which, per the Editor's Note in P802.3bz_D1.0, have been commented to 802.3bq.
- 5) General Discussion and meeting wrap-up
 - a) Next steps/future meetings

The 12th meeting of the P802.3bq Receiver Common-Mode Noise Rejection (Rx CMNR) Ad Hoc was called to order at 9:36 AM Pacific Daylight Time.

- 1) Participants were asked to register their attendance by email; responses are reproduced in the attendance record at the end of these minutes.
- 2) Participants were reminded of the IEEE's patent policy. All in attendance acknowledged the policy; as a reference, anyone not familiar with said policy is directed to the URL above.
- 3) Houskeeping & general updates:
 - a) The meeting agenda was reviewed with those in attendance and was approved without opposition.
- 4) New business:
 - a) Review and discussion of comments received against Annex 113A – The P802.3bq Chief Editor kindly provided a summary of comments received against informative Annex 113A for discussion in the ad hoc. The goal of the discussion was to review comments within the ad hoc so they can be efficiently addressed and resolved in the upcoming September Interim Task Force meetings. Participants began reviewing comments in numerical order as listed in "[P802.3bq D2.2 Comments – Annex 113A](#)".
 - Comment #135:
 - (1) Participants agreed with the proposed response to this Editorial comment.

- Comment #136:
 - (1) The intent of the comment is allow test practitioners some flexibility in the hardware and techniques used to measure induced common-mode and differential-mode signals during the validation phase of the cable clamp test setup. Participants agreed that providing this flexibility is helpful and that the proposed text is an excellent starting point and needs only relatively small changes (formatting/identification of “Note 1” and “Note 2”).
 - (2) During discussion, it was noted changing the lower specification limit to 30MHz, while aligned with P802.3bz ENUCA ad hoc discussions related to Clause 126.5.4.3, has the potential to obviate a more general application of Annex 113A to other cable clamp tests. Participants were reminded that the intent of defining a 1MHz to 2GHz range for equipment used in the cable clamp test setup is allow the “calling” specification to use such bandwidth as needed for a particular specification. Participants agreed to review the text in “Annex 113A.1 Overview” and to develop appropriate text to include in the overview to clarify and/or emphasize that the equipment bandwidth defined in Annex 113A intentionally may exceed the range defined in any normative text that references Annex 113A.
 - (a) Assuming that the lower frequency range of Annex 113A will remain at 1MHz, the lower frequency ranges of proposed updates to the balun specifications will be updated to align with the 1MHz limit or lower range of the target baluns, whichever is greater.

- Comments related to modifying the text to reflect the test frequency sweep range, which in general suggested increasing the lower frequency range from 1MHz up to 30MHz, should be addressed by clarifying that the “calling” normative specification defines the limits to be used for a specific PHY rate.

- Comment #140:
 - (1) The comment proposes modifying the measurement setup used in 113A.3 Cable Clamp Validation to allow better characterization of the signal injected at the clamp input. Inserting a directional coupler between the signal generator and the clamp input, and replacing the “Signal Sensor” with a 50 ohm termination would allow better characterization of the injected signal power level, harmonic distortion, and envelope rise/fall time.
 - (2) Participants asked to see a comparison between signal measurements made using the existing configuration and the proposed modification to better understand the advantages of the proposed change.
 - (3) Details of the proposed modification to the test setup may be found on Page 3 of [“Annex 113A Comments for P802.3bq.”](#) (Note – this document provides additional background information on several other comments discussed in these minutes.)

- Comment #189:
 - (1) The comment proposes removing the suggested compensation for unloaded clamp losses. During discussion, participants noted that the intent of this were alerted to the fact that there are several instances where normative language has been used in the Annex, and these should be reviewed and updated with text that is more appropriated for an informative portion of the specification.

- (a) As an example, the text for Note 1 currently reads as
*“NOTE 1 —Prior to making validation measurements or performing the test described in 113A.4, the cable clamp should be tested without the cable inserted to determine the variation of the signal generator voltage with frequency at the output of the clamp. The signal generator output should be adjusted to the specified signal power (for example 6 dBm for 40GBASE-T) at 20 MHz on the signal sensor. When the frequency is varied from 1 MHz to 2000 MHz, the measured power should not vary more than ±10 %. If the measured power varies more than ±10%, then a correction factor **must** be applied at each measurement frequency.”*

Participants were reminded that the intent of this calibration process is to parallel the “field calibration with no EUT in place” procedure defined in IEC 61000-4-3, 6.2 “Calibration of field” so that a constant source power reference is established over the test frequency range before validating the setup and performing the test. Participants were asked to consider if an alternate remedy that removes the restrictive language would be an acceptable alternative.

In this case the text “...then a correction factor **must** be applied at each measurement frequency.” would be changed to “...then a correction factor **may** be applied at each measurement frequency.”

- 5) Meeting wrap-up - The next P802.3bq Rx CMNR ad hoc meeting will be scheduled for September 9th, 2015 at 9:30 AM Pacific Daylight Time. Thanks very much to German Feyh, P802.3bz ENCUA ad hoc chair, for providing the ENUCA time slot to continue our work on comments received against P802.3bq D2.2.

Note – Due to several scheduling conflicts, the planned meeting was delayed until Thursday, September 10th, 2015 at 9:30AM PDT.

The P802.3bq Rx CMNR Ad Hoc meeting was adjourned at 11:06 AM Pacific Daylight Time.

Meeting Attendance (From e-mail acknowledgements and on-line participant list)

Name	Employer	Affiliation (if different)
Jim Bauer	Marvell	
Geoffrey Chacon	HP	
Pete Cibula	Intel	
Larry Cohen	Aquantia	
German Feyh	Broadcom	
Dave Hess	Cord Data	
Dave Jeskey	Sentinel Connector Systems	
Mike Klempa	UNH-IOL	
Brett McClellan	Marvell	
Bryan Moffitt	CommScope	
Rick Rabinovich	ALE	
Victor Renteria	Bel/TRP	
Dieter Schicketanz	University of Reutlingen	
Tom Souvignier	Broadcom	
Peter Wu	Marvell	
George Zimmerman	CME Consulting	Aquantia, Commscope