

Channel Modeling ad hoc report

IEEE P802.3bq 40GBASE-T Task Force

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Channel Modeling ad hoc charter and scope/deliverables

- Define a set of channel models for PHY complexity evaluation, including host channel model
- Provide early feedback on key parameters to cabling bodies (Can a parameter be improved? Is a relaxation a cost benefit?)

Channel Modeling ad hoc activity since January 2014

- One face-to-face meeting and two well attended channel modeling ad hoc calls – January 24th, February 18th, and March 4th
- Meeting minutes and contributions are available at the 40GBASE-T website [channel modeling ad hoc area](http://www.ieee802.org/3/bq/public/channelmodeling/index.html)
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- New area for investigation – system background noise
 - Received a request from the P802.3bq PHY Baseline Proposal ad hoc to solicit contributions on
 - Measurement methodology for background noise in systems
 - Measurement results of background noise in systems, including broadband, stationary, and nonstationary narrowband sources

Channel Modeling ad hoc activity since January 2014

- Meeting highlights
 - Started discussion and activities related to system background noise at the January face-to-face meeting; identified several areas for investigation
 - Received updated s-parameter files for an improved ARJ45 ICM
 - Additional channel elements and end-to-end channels continue to be configured and modeled
 - New Class II channel with ARJ45 and various PCB trace configurations
 - 5m direct attach (Response to PHY Baseline Proposal ad hoc request for direct attach models)
- Reminder: A basic set of elements for an end-to-end channel is available at the P802.3bq task force [channel data](#) area
 - <http://www.ieee802.org/3/bq/public/channeldata/index.html>
 - We now have a large number of potential model elements available
 - To minimize/eliminate any confusion about what's available, we will be creating and posting an element “decoder ring” workbook

Channel Modeling ad hoc next steps

- Further work
 - Continue work associated with system background noise to support of the work of the PHY Proposal ad hoc
 - Continue to refine cable channel definitions and share results, including identifying a subset (“Top X”) of PHY-to-PHY channel model configurations that are recommended for use in establishing our PHY baseline proposal
 - Expand MDI and isolation path data set
- Next meetings
 - Are held (generally) every other Tuesday at 8:00AM PST
 - Meeting weeks are scheduled to alternate with the P8032.3bq PHY Baseline Proposal ad hoc
 - Next ad hoc Tuesday, April 8th, 2012
- Thanks to all ad hoc contributors and participants
 - You can be a contributor, too!

Thank You!