

Evaluation Criteria and Requirements Ad Hoc – Status Report

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Formation

- The Evaluation Criteria and Requirements Ad Hoc was formed at the September 2012 EPoC Task Force Meeting

Conference Calls

- The Ad Hoc holds weekly conference calls
- Thursdays 7 AM Pacific Time (10 AM Eastern Time)
- Three conference calls so far
 - October 11, October 18 and November 8
- Minutes of the meetings have been sent to the email reflector
- At the October Task Force meeting we agreed to have a weekly Ad Hoc call at a time that was “China Friendly”
 - Wednesdays 9 AM Shanghai Time
 - Will be shared by all four Ad Hoc committees

October 11 Ad Hoc Call

- General discussion on possible categories of evaluation criteria and requirements
- Possible categories
 - EPoC Delay
 - PHY Throughput in 192 MHz channel
 - Frequency bands to avoid due to legacy services
 - Depends on region of Operation
 - Requirement derived from Mobile Backhaul support
 - For example, support time/frequency synchronization
 - Requirements derived from other services
 - For example, constant bit-rate services
 - Support for different modulation order and coding rate to/from different CNUs

October 18 Ad Hoc Call

- Prior to a call a presentation with questions on MSO requirements [1] was distributed to the email reflector
- Jim Farmer provided some suggested answers to the questions
- The questions in the presentation are in the following categories
 - Frequency Bands
 - Spectrum Availability
 - PHY Data Rate
 - EPoC Delay Budget
 - Protection of Legacy Services
 - PHY Optimization for Cable Plant Channel Variation

November 8 Ad Hoc Call

- Start to draft recommendations for evaluation criteria and requirements

Study Group Presentations Regarding Evaluation Criteria and Requirements

- Evaluation Criteria
 - http://www.ieee802.org/3/epoc/public/jan12/schmitt_01_0112.pdf
- A high level perspective on EPoC requirements
 - http://www.ieee802.org/3/epoc/public/jan12/noll_01_0112.pdf
- MSO Topology Scenarios
 - http://www.ieee802.org/3/epoc/public/mar12/mallette_01_0312.pdf
- Operating conditions under which EPoC is expected to work
 - http://www.ieee802.org/3/epoc/public/mar12/noll_01a_0312.pdf
- China NG HFC Key Requirements
 - http://www.ieee802.org/3/epoc/public/mar12/huang_01_0312.pdf
- Evaluation Criteria Beyond Objectives
 - http://www.ieee802.org/3/epoc/public/jul12/laubach_01_0712.pdf

Plan Going Forward

- Encourage improved attendance from MSOs!
- Hear proposals on Evaluation Criteria and Requirements
 - Very Interested in hearing proposals from MSOs
- Build consensus on specific evaluation criteria and requirements
- Straw poll evaluation criteria and requirements during Ad Hoc time-slot
- Make recommendations to the Task Force at Task Force meetings

Possible Evaluation Criteria and Requirements

Evaluation Criteria

- EPoC Delay using EPoC Delay Model [1]

Requirements

- A data rate of at least 1.6 Gb/s at the MAC/PLS service interface, in a 192-MHz OFDM channel, in baseline channel conditions
 - This is conditioned on the final definition of “baseline channel conditions” from the Channel Model Ad Hoc.

[1] Andrea Garavaglia, Ed Boyd, Rick Li, Bill Powell, Hesham ElBakoury, and David Barr, “EPoC Performance Model Delay and Efficiency,” September 2012

References

1. Steve Shellhammer, “Questions on MSO Requirements,” October 2012