

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)
- We could add some calls at a different time if there is interest from our participants from Asia
- 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 CNU's

October 18 Ad Hoc Call

- Prior to a call a presentation with questions on MSO requirements [1] was distributed to the email reflector
- EPoC member (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

- PHY throughput of at least 1.6 Gb/s 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

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