

802.3bn EPoC Ad-hoc Multiple Modulation Profile (MMP) Open Report

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Objectives of the Ad-Hoc

- Continue the Ad-hoc and its current objective until the 802 Plenary in March, 2013
 - Make a decision on whether to include MMP or not into the EPoC Standard
- If the Ad-hoc agrees that MMP should be implemented in some or all use cases, then expand the objective of the Ad-Hoc to achieve consensus on how MMP would be implemented
 - This would save time in the overall goal of completing the standard as per the current schedule

MMP Ad-hoc Meeting Summary

- Conference Calls on Tuesdays at 9:00 – 10:00 AM ET and Thursdays at 1:00 – 2:00 PM ET
 - Tried to schedule for US west coast and European participation
- Met twice a week since the Phoenix IEEE meeting
 - 9 meetings
 - Average of 18 participants in each meeting

Straw Polls

- 8 straw polls were held
 - Occurred over 2 meetings to ensure participation; no participant was allowed more than 1 vote in a given straw poll
- Should MMP be required for TDD?
 - Yes: 21 No: 2 Undecided: 6
- Should MMP be specified for DS in FDD?
 - Yes: 9 No: 9 Undecided: 10
- Should MMP be REQUIRED for DS in FDD?
 - Yes: 3 No: 18 Undecided: 7
- Should MMP be optional for DS in FDD?
 - Yes: 7 No: 17 Undecided: 4

Straw Polls (Continued)

- Should MMP be specified for US in FDD?
 - Yes: 15 No: 3 Undecided: 9
- Should MMP be required for US in FDD?
 - Yes: 9 No: 9 Undecided: 10
- Should MMP be optional for US in FDD?
 - Yes: 8 No: 14 Undecided: 6
- MMP shall be used in bursting DS and US transmissions in the EPoC standard.
 - Yes: 20 No: 1 Undecided: 10

Conclusions

- There is wide agreement, shown in the last straw poll, that implementing MMP in the bursting interfaces is desirable.
- Presentations have shown that:
 - MMP can address per CNU variability in channel quality more effectively than typical RF interventions (power adjustments, pre-equalization)
 - MMP more effectively uses bandwidth across CNUs with different channel qualities; all CNUs are not brought down to worst performer
 - Since CNUs only have to support one MP at a given time, does not increase the complexity of the CNU
 - The CLT needs to know the modulation scheme of the incoming burst and this can be communicated with markers in the burst
 - Specifying MMP for FDD US will not greatly increase the effort, since it should be the same as TDD US
 - FDD US will have a minimal impact on complexity

Proposed Motion

The EPoC standard shall support multiple modulation profiles for the bursting DS and US PHY.

YES:

NO:

Undecided: