Meeting Minutes

Group: IEEE P802.3bn Channel Model Ad Hoc committee.

Event: Teleconference

Date: 13 Dec 2012 from 5:30 PM to 6:10 PM EST

Recorded by Duane Remein

Summary: The Ad Hoc reviewed a presentation ("Priority Scenarios for the EPoC Channel Model") provided by Rob Howald, Saifur Rahman and Hal Roberts. Topologies covering the drop and in-house network were also presented.

Opening

The group reviewed the agenda.

The group reviewed IEEE Patent Policy and a Call for Patents was made, no responses were received.

Priority Scenarios for the EPoC Channel Model

Rob Howald walked the Ad Hoc through this presentation. In general the numbers in this presentation should be considered preliminary at best and in some cases more of an example. Refinements will be provided before the Jan. meeting.
On slide 2 the term CMC is equivalent to FCU. In Option A and B it should be understood that the analog HFC optical signal is typically distributed to the HFC Node on a separate fiber from the EPON signal.
On slide 3 the 15 dBmV level at the Tap Port is an equivalent analogue carrier, some adjustment should be expected. It was noted that, while a two-way splitter is somewhat a-typical incurrent cable deployments, it should be expect in EPoC deployments. One tap from the two-way splitter would be dedicated to the EPoC CNU and the second tap would feed the HFC signals to the rest of the in-house network. The uptilt level of 16 dB is becoming more the norm in current cable plants. The spectrum gap between 1 GHz and 1.2 GHz is to allow for new DOCSIS data signals, other applications (such as MOCA) and network inconsistencies due to older plant components. This gap may not be present in all networks, especially those in China (to be confirmed).
On slide 4 it should be noted that this material is less mature and therefore more likely to change. The RF Cascade reflects typical practice describing RF funneling. The number of Amps should read 12 and not 20. The Spectrum noted reflects mid and high split thinking but the top split should only include the 900 MHz to 1.1 GHz line and the 1.2-1.7 GHz line band is not under consideration.
On slide 6 it should be noted that the case presented is for a node+6 topology and this is not typical for an EPoC deployment, some adjustment of the figures is expected for the typical EPoC topologies. The numbers in the last three rows can be ignored at this time. Figures in the "Typical" column represent what can be expected from 99% of deployed cable networks.
Slide 7 focuses on interferers. The approach used is to document the well known interferers such as analog video and LTE signals. Data for Burst Noise and Impulse Noise is still being collected.

Slide 8 addresses the frequency response of the network. The reflection parameters should be considered a mask. The units in columns 2, 3 & 4 should be dBc. The figures in column 3 (under “use CL data instead”) are from SCTE-40 and in general are considered too pessimistic. The “Slope” row was requested but may be overly difficult to provide.
On slide 9 documents parameters more properly associated with the EPoC transmitter and not the channel model per se’ but it was felt that these should be tracked and are very closely related to the channel model. The rows under “implementation loss” will be removed. The items at the bottom of the table are parameters that are “on hold’ and may not appear in the final table.

Topologies

In addition to the Topologies shown in the previous call three new illustrations were added to describe in-house networks. These illustrations show a “Good” (or 99%) installation, a “Bad” installation and an optimized solution. It was noted that in most cases the “RG-59” should be replaced by “RG-6”. Also the filter block shown that isolates the cable plan (and EPoC CNU) from the in-house network is likely impractical in many cases. Appropriate changes to these figures will be made for the next call.

Action Items

No new action items were taken.

Detailed presentation material:

All presentations will be available at the p802.3bn private web site.

Attendees:

Name	Affiliation
Brown, Alan	Aurora Networks
Farmer, Jim	Aurora Networks
Howald, Rob	Motorola
Laubach, Mark	Broadcom
Rahman, Saifur	Comcast
Shellhammer, Steve	Qualcomm
Solomon, Joe	Comcast
Remein, Duane	Huawei