**RF Spectrum Ad Hoc – Minutes October 16, 2012**

**Provided the IEEE-SA Patent Policy link. Everyone on the call was familiar with the patent policy.**

* https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf

**FDD Downstream frequency band and center frequencies**

Avi Klinger (Broadcom)

* Duane asked if there any harm in going below 108 MHz for TDD
* Avi, said the presentation is for FDD Downstream, not TDD. This is the DOCSIS band and it is above FM radio band. This is where the mid-band.
* Duane asked it would be possible to go lower for TDD. Avi, said yes.
* Saif asked about going higher at the high end. He asked about up to 1.7 MHz.
* Avi used 1200 since it appeared several times in EPoC before and due to the limits of the actual plants.
* Saif agreed that makes sense for current plants. Some operators may want to upgrade their plants to support higher frequencies.
* Steve asked if Saif’s question was for FDD and TDD.
* Saif said there might be use cases for FDD downstream above 1 GHz, in addition to the TDD use cases.
* Bill said he has another presentation addressing the upper band
* Leo said that we do not want to have different generations of products. So on day-one we want to support the entire band. If we go to 1.7 GHz it could add a cost and complexity, that may not be used very many places. Do we want to add that complexity to all products?
* Saif suggested there could be different class of products for different generations. From a specification point-of-view not all products need to support all classes.
* Leo pointed out that we need to specify what a product needs to support to be compliant.
* Saif suggested a Class 1 product my go up to 1 GHz while a Class 2 could go higher
* Marek suggested that different classes use different spectrum.
* Saif said that may work.
* Saif said we may not have sufficent spectrum if EPoC is 500 MHz and we have DOCSIS 3.1 it is not clear where we would find spectrum in a current plant.
* Leo said there is not much return path to share with legacy DOCSIS, DOCSIS 3.1 and EPoC.
* Saif said that is why they are concerned about spectrum
* Steve asked about going down to 108 MHz since the lower spectrum is typically used for broadcast TV.
* Avi captured the entire DOCSIS band. In a Greenfield the lower band is preferred.
* Ed said that we want to compete with Fiber. So we want lots of bandwidth. We want a real IP pipe. We want it to serve the higher bandwidth.

**OFDM Subcarrier Nulling in Downstream P802.3bn**

Leo Montreuil – Broadcom

* Duane commented that the system management should be in scope of the project.
* Leo said the polling of the MER and adjusting the bit-loading could be vendor specific
* Duane said that we need to provide the hooks to get that infomration. Leo agreed.
* Duane asked if this is quasi-real-time. Leo said that it may not be real-time since we can poll mulitple CNUs.
* Steve asked about where to have the communication for SNR. In the PHY or in OAM? Leo suggested the PHY.
* Ed said it could be read out of the PHY using MDIO and sent over OAM
* Duane said if it was done at OAM then would it be avaible at PHY bring up. Ed said that anything that is needed at bring up will need to be in the PHY.
* Steve asked about the Cable Plant Pilots and can we get info from the MSOs. Saif said they are CW tones used for AGC. They can provide info on those channels. They are in the middle of the band.
* Leo said they are between TV channels. Saif agreed.
* Leo said we can handle it as interference. Saif agreed.
* In some cable plants they use a SC-QAM for AGC and there is no cable plant pilot
* Steve said it sounds like there is either one pilot tone in the middle of the cable plant spectrum or no pilot tones since they use the SC-QAM for AGC. Saif agreed.

**High-Band EPoC Deployment Scenarios**

Bill Powell & Randy Sharpe (Alcatel-Lucent)

* We did not have time to cover this presentation. It will be presented at next week’s call

**Annoucements**

* Steve will not be able to chair the call next week due to a scheudle conflict. Mark Laubach will chair the call next week, in Steve’s absense

**Attendance**

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| **Person** | **Affiliation** |
| Dave Barr | Entropic |
| Edward Boyd | Broadcom |
| Marek Hajduczenia | ZTE |
| Charaf Hanna | ST Microelectronics  |
| George Hart | Rogers |
| Avi Kliger | Broadcom |
| Mark Laubach | Broadcom |
| Benny Lewandowski | CTDI |
| Leo Montreuil | Broadcom |
| Michael Peters | Sumitomo Electric |
| Cristian Pietsch | Qualcomm Technologies, Inc. |
| Bill Powell | Alcatel Lucent |
| Saif Rahman | Comcast |
| Duane Remein | Huawei |
| Steve Shellhammer | Qualcomm Technologies, Inc. |
| Joe Solomon | Comcast |