IEEE P802.11  
Wireless LANs

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| TGad Conference Call Minutes | | | | |
| Date: 2012-01-05 | | | | |
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Abstract

TGad conference call minutes for 2012.

# Conference Call Times

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| --- | --- | --- |
| **Date** | **Start Time** | **End Time** |
| January 5, 2012 | 10 AM Eastern Time | 12 PM Eastern Time |
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# Minutes from January 5, 2012 Conference Call

## Agenda

* Check to see if anyone is not familiar with the IEEE patent policy <http://standards.ieee.org/board/pat/pat-slideset.pdf>
* Mark Hamilton (Polycom), 12/0005r0, TGad Architecture Discussion Topics

## Patent Policy

No one was not familiar with the IEEE patent policy.

No essential patent disclosure

## 12/0005r0, TGad Architecture Discussion Topics

* Comments are around Clause 4.9 in the draft
* Multiple MAC entities that share one PHY
  + Other advantages (slide 4)
    - i) some applications that already have built-in encryption (e.g., HDMI) may dismiss the need for double encryption at the MAC. This would allow better power saving. With multiple MAC this is possible, but it is not possible with a single MAC (encryption is per MAC); ii) concurrent WLAN/WPAN access, each with its own MAC entity
    - can extend range of TSPEC (via ADDTS), by having different TSPECs per MAC addresses
    - multiple MACs and single PHY can be viewed as contention for a single source
  + Slide 5
    - bullet one:
      * independent encryption is the major advantage (e.g. HDMI). Also, multiple MAC entities may ease the implementation complexity for concurrent WLAN/WPAN operation.
      * Main advantage is multiple security domains
    - Bullet two: Multiple MAC complements FST, in the sense that it is possible to do FST between MACs that are operating under the same PHY.
    - Bullet 3: The noted subclause basically describes the notion of the MM-SME. And, the concept of MM-SME is used in many places in the spec. So, it seems a subclause explaining this concept is definitely needed.
* Multi-band operation
  + Slide 6
    - Multiple MAC is about separate MACs over a single PHY. But yes, FST could be done over an implementation of multiple MACs.
    - Could be seen as multiple STAs within a device (note that the quoted sentence from the spec states “device”, not “STA”). Each MAC within a device could potentially be using the same MAC address. This would enable transparent FST.
    - No instance of a single MAC using multiple PHYs.
      * Diagram should be added: additional architectural entity, which is the FST end point that sits about two MACs and exports a single MAC end point; critical question to answer is where it sits in relation to 802.1X.
      * Single MAC/SAP for transparent FST
      * Multiple MAC/SAP for non-transparent FST
      * Brian Hart will draft up first version
  + Slide 7
    - Each MAC entity would share the same MAC address and MAC\_SAP. However, the RSNA management is different, since keys would be separately setup for each band.
    - Each MAC entity operates in a unique (operating class, channel number) combination. That’s the unique key, so to speak.
    - A single MAC entity would not allow simultaneous operation in different bands. Note that this is already allowed today in the context of Wi-Fi Direct, which allows concurrent WLAN/WPAN operation.
    - Can have more than one RSNA’s; but, cannot have two with transparent FST on both sides
      * Add table with source, destination, options for same or different RSNA; Carlos will draft up first version
  + Slide 8
    - The problem with this approach is that the DBand PHY is totally different than the PHYs in the lower bands. Similarly, there are many MAC differences too.
    - Problem is that the activities of PHYs are independent, would need to Tx/Rx, sense NAV
    - Intent is different MAC entities
    - There are use cases: 1) simultaneous streaming and web browsing 2) seamless transition from 60 to 2.4/5 when moving out of range
  + Slide 9
    - 802.21 is media independent, we are very media dependent
    - There is not much difference, except that the 11ad MAC provides explicit protocol support that can lead to, hopefully, a better handling at the upper layer. But, yes, in the end the upper would be needed to provide the complete solution.
    - In case of non-transparent, management entity that connects MAC/SAPs; discussion of single or multiple MAC/SAPs

# Attendance

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| **Participant** | **Jan 5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Osama Aboul-Magd (Huawei) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Magued Barsoum (Fortress Technology) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Liwen Chu (ST) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Carlos Cordeiro (Intel) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mark Hamilton (Polycom) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Christopher Hansen (Broadcom) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Brian Hart (Cisco) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reza Hedayat (Cisco) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| David Hunter (wirefi networks) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Assaf Kasher (Intel) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yongsun Kim (ETRI) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Eric Lindskog (CSR) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sai Nandagopalan (Tensorcom) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Eldad Perahia (Intel) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Adrian Stephens (Intel) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Solomon Trainin (Intel) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chao-Chun Wang (MediaTek) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| James Wang (MediaTek) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| James Yee (Mediatek) | **x** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chanho Yoon (ETRI) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |