IEEE 802.11az Meeting Minutes March 2017 Session P802.11  
Wireless LANs

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| TGaz meeting minutes – March meeting | | | | |
| Date: 2017-03-14 | | | | |
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Abstract

Minutes for the TGaz meeting in Vancouver.

**IEEE 802.11 Task Group AZ**

**March 2017 Atlanta Plenary**

**March 13-17, 2017**

1. TGaz – 14 March 2017 – PM1
   1. Called to order by TGaz chair, Jonathan Segev (Intel Corporation) at 13:30 local time.
   2. TGaz secretary (acting) Carlos Aldana.
   3. Agenda Doc. IEEE 802.11-17/97
   4. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patency Policy, additional guidelines about IEEE-SA meeting and logistics
      2. Chair called for any potentially essential patent, no one stepped up.
      3. Chair reminded all to record their attendance.
   5. Review Agenda
      1. Called for any additional submissions for the week.
      2. Reviewed the agenda based on doc 11-17/97
      3. Chair called for any additional feedback and changes to agenda – none identified, agenda for the week approved.
   6. Previous meeting minutes approval:
      1. Document 11-17/205r0 posted to Mentor February 2nd.
      2. **Motion (#1):**

**To approve document 11-17/205r0 as TG meeting minutes for the Jan. meeting.**

**Moved: Ganesh Venkatesan, 2nd: Assaf Kasher**

**Results (Y/N/A): 18/0/1**

**Motion passes**

* 1. Allan Zhu presented submission 11-16-424 proposed 802.11az functional requirements
     1. C: If changes are made here and a 4 hour rule is not honored, is that a problem?
     2. R: Technical submissions are under the 4 hour rule. The modifications considered here are deemed non-technical.
     3. **Motion (#2):**

**Move to adopt document 11-16-424r5 as the Task Group AZ FRD working draft document.**

**Moved: Allan Zhu, 2nd: SK Yong**

**Results (Y/N/A): 17/0/1**

**Motion passes**

* 1. Chao Chun Wang presented 11-17-462 11-az-tg-sfd
     1. Missing figure from previously approved measurement sequence to be added and motioned on next meeting slot.
  2. Erik Lindskog presented 11-17-417 Passive Location
     1. C: On authentication, the classic attack would be a phishing attack. Authentication should be included. Authentication should be considered for quality control purposes, maybe for true security purposes. Seems a bit of a stretch to me. Use a private key to authenticate that it is a legitimate source. How useful would it be if the AP moved?
     2. R: this concern is also a GPS concern.
     3. C: it’s not true security. We might want to include a public key in message.
     4. R: we could add security to it. If you didn’t have security, it would be simpler.
     5. C: I think t5 and t6 are switched in slide 9. Could you check?
     6. R: Will double check.
  3. Chao Chun Wang presented 11-17-463
     1. C: an AID is used for assoc, it’s very clear. It is lifetime for assoc. You are allocating FTM ID (without assoc) for how long?
     2. R: we have 2000 AID, AP can allocate 7. At most AP can support 600 STA for ranging. 200 assoc, 400 unassoc. AP can recycle through 400 after some period of time. There are various ways of doing this. Right now we are starting discussion and not finalizing protocol design. We just want to present the idea.
     3. C: how do you know if it’s new or old? How do you release? How do STA know how to use it?
     4. R: AP assign a Ranging ID AKA pre-AID for the benefit of our discussion. AP knows which STA it gives ID to. There is a pre aid lifetime timer. After the expiry of this time, the pre aid is automatically expired. That is one way of doing it. This is new introduced here.
     5. C: is it for unassociated STA in the motion?
     6. R: I am OK with this.
  4. 34 people were in the room.
  5. Chair remind members to log their attendance.
  6. TG recess until Jan. 18th PM1.

1. TGaz – 15 March 2017 – PM1
   1. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patency Policy, additional guidelines about IEEE-SA meeting and logistics
      2. Chair called for any potentially essential patent, no one stepped up.
      3. Chair reminded all to record their attendance.
      4. Chair went through time allocation and agreed on presented time allocation for this slot.
   2. 40 people in the room
   3. We went through participation requirements and reminded everyone that participation is on an individual professional basis.
   4. Chao-Chun continued discussion on 462r2.
      1. **Motion (#3):**

**Move to adopt document 11-17-462r2 as the Task Group AZ SFD working draft document.**

**Moved: Assaf Kasher; 2nd: Edward Au**

**Results (Y/N/A): 18/0/2**

**Motion passes**

* 1. Chao-Chun presented submission 11-17-463 Resource Negotiation for Unassociated STAs in MU Operation
     1. C: Why would you require response to be SU in slide 11?
     2. R: you cannot do MU because you don’t have ID and cannot do resource allocation.
     3. C: in 11ax we discuss a pre-AID for unassociated STA. Is the intention to use one reference or two? Can we be consistent and use the term “pre-aid” to make it consistent with 11ax?
     4. R: I prefer to keep it the way it is. I want a generic term for referencing in the unassociated state.
     5. C: Prefer not to have two different references used for same time interval.
     6. C: what is the point of this motion? Do you want to put text somewhere?
     7. R: yes. Needs to be added to SFD. Chair agrees with commenter’s observation. There is no action from this motion. Motion text was modified to reflect the TG template for SFD motioned text.
     8. C: is pre-aid for ranging different from pre-aid defined for 11ax?
     9. R: in the ranging operation, the aid for ranging can be reused for another set of stations. If you want to continue this for association, you can, but that is not what we’re discussing in this spec.
     10. C: in 11ax, pre-aid in 11ax does not prohibit 11ax station from doing ranging.
     11. R: this aid is only for ranging.
     12. C: do you want the name to be TBD?
     13. R: at this time, the name of the ID is TBD.
     14. C: the word assign implies something is done. This seems to reflect a new ID. The ID could be determined in advance.
     15. **Motion (#4):**

**Move to adopt the following text to the spec frame work document.**

**Instruct the editor to include it in the Tgaz SFD working draft under subsection 3.2 and grant the editor the editorial right. “The ID for ranging operation for an unassociated STA used for measurement phase will be in the FTM Rsp frame”**

**Moved: Ganesh Venkatesan, 2nd: Chao-Chun Wong**

**Results (Y/N/A): 11/0/9**

**Motion passes**

* 1. Qinghua Li presented submission 11-17-478 Analysis of Near-far Problem's Impact in UL MU-MIMO with Residual CFO
     + 1. C: how is this not an issue in 11ax?
       2. R: in ax, they can reach power control within certain range the rest is handled by smart scheduling. For range measurement you use low MCS and CFO can reach 1 kHz.
  2. Erik Lindskog presented 11-17-476 UL MU Ranging Options in Light of Rx Power Imbalances E
     + 1. C: if you do approach 2, you still run into problem of near –far.
       2. R: you would do separate power control to those 2 receptions. If you have spatial overlay.
  3. Ganesh Venkatesan presented 11-17-481 NDP-based SU .11az Measurement Protocol
     + 1. C: do you want to do this serially for different users?
       2. R: it is serially, it is a SU scheme, a MU scheme sequence is already in the SFD.
       3. C: do you want to consider having response coming in MU?
       4. R: it was already agreed that there is a multi-user flow. This is a separate scheme where no aggregation of measurements is expected.
       5. C: initiator and responder from here is the same as the one in negotiation? Do we want to add flexibility for the roles to be reversed?
       6. R: at this point, the initiator and responder are the same as negotiation.
       7. **Motion (#5):**

**Move to adopt the following text into the 11az SFD working draft and instruct the editor to include it in the .11az SFD under the “Accuracy and Coverage over 2.4 and 5GHz” subsection and grant the editor with editorial license:**

**The measurement phase for the ranging protocol for SU shall be based on IEEE 802.11 VHT sounding protocol and have the following frame exchange sequence**



**Note: the contents of NDP Announce (.11az), NDP (.11az) and Measurement Feedback; and the spacing between the NDP (.11az) and Measurement Feedback are TBD.**

**Moved: Chitto Ghosh, 2nd: SK Young**

**Results (Y/N/A): 15/0/8.**

**Motion passes.**

* 1. Chair remind members to log their attendance.
  2. TG recess until March 16th AM1.

1. TGaz – March 16th 2017 – AM1
   1. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patency Policy, additional guidelines about IEEE-SA meeting and logistics
      2. Chair called for any potentially essential patent, no one stepped up.
      3. Reviewed participation requirements and that participation is on an individual professional basis.
      4. We went through the IEEE-SA policy documents
   2. Chair reminded all to record their attendance.
   3. Liwen Chu presented 11-17-474 11az NDP Announcement
      1. **Motion (#6):**

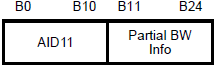
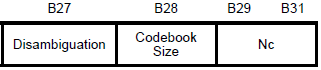
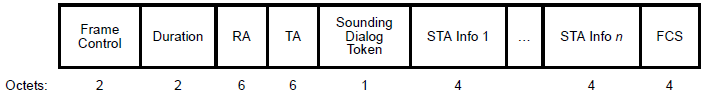
**Move to adopt the following text to the SFD and instruct the SFD editor to include in TGAZ SFD working draft under subsection 3.2 and grant editorial license:**

**In 11az NDP ranging measurement phase, the NDPA has the following properties**

**B0 B1 bits value of the Sounding Dialog Token field shall be set to 0b10 to indicate 11az sequence**

**AID field will be used to indicate the receiver participating in the sounding exchange**

**Feedback Type field will be in 4-byte per STA info field (refer to the figure below)**



Reserved

Reserved

Feedback

Type

B26

**Moved: Liwen Chu 2nd: Naveen Kakani**

**Results (Y/N/A): 12/0/3**

**Motion passes**

* 1. Chair reviewed program timelines and the group agreed that we should focus on closing FRD for the next meeting.
  2. Chair went through Goals for May meeting.
  3. **Motion (#7) on approval of May meeting Goals:**

**We commit the May meeting goals as the TG POR.**

**Moved: Assaf Kasher, 2nd: SK Yong**

**Results (Y/N/A):16/0/0**

**Motion passes**

* 1. Teleconference schedule for April 19th at 10 AM ET for 1 hour.
  2. Chair called for any other business – none identified.
  3. Task Group meeting adjourned.