IEEE P802.11
Wireless LANs

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| San Francisco Meeting Minutes |
| Date: 2011-07-22 |
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Abstract

This document contains minutes of TGaa meeting minutes from the July 2011 San Francisco Meeting..

**July 18th, 2011 Monday PM1 (Pacific-G)**

**The TG was called to order at 13:30 Hrs PDT**

**Administrivia:**

* **Attendance Announcement**
* **Patent Policy** -- no questions on the patent policy
* **Knowledge of Essential Patents or knowledge of owners of Essential Patents** -- no knowledge of essential patents/essential patent holders

***Agenda/Notes:***

1. ***Administrivia***
2. ***Agenda for the week (plan and review)***
3. ***Review of Sponsor Package Contents (document 11/1005r0)***
* The chair walked through the document
* Unsatisfied Comment Reports are still not completed
* A request has been sent to all DISAPPROVE voters asking for feedback on which of their comments from all the letter ballots are still not satisfied – based on the responses received during this week, this report will be updated.
* A WG leadership review of the report is scheduled for Wednesday 12:00 noon
1. ***Overview of Comment Spreadsheet –***

The comments are in document 11/0876r2 – All but 3 OBSS comments have resolutions but the resolutions have not been uploaded to the comment database. CID #4119 (General Category) is still open and does not have any resolution.

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| --- | --- | --- | --- | --- | --- |
|  | ***Blank***  | ***Accept***  | ***Principle (Revised)***  | ***Disagree (Rejected)***  | ***Total***  |
| ***Editor***  |  | ***31*** | ***16*** | ***16*** | ***63*** |
| ***GCR***  |  | ***3*** | ***22*** | ***5*** | ***30*** |
| ***General***  | ***1*** |  |  |  | ***1*** |
| ***Interworking***  |  | ***1*** |  |  | ***1*** |
| ***OBSS***  | ***26*** |  |  |  | ***26*** |
| ***SCS***  |  |  | ***6*** | ***5*** | ***11*** |
| ***Total***  | ***27 (20.45%)***  | ***35*** | ***44*** | ***26*** | ***132*** |

1. ***Motions to approve non-contentious comment resolutions – updates to the draft due to MEC review of Draft 5.0 (11/0872r0)***

**Motion-15**

Move to approve document 11/872r0 and instruct the 802.11aa Technical Editor to incorporate the corresponding changes in the next draft of P802.11aa.

**Moved: Alex Ashley**

**Seconded: Graham Smith**

**Result: 9/0/0 Motion Passes**

1. ***Comment Resolutions –***

**OBSS Comments:**

***CID #4107:***

DISAGREE (LB179: 2011-07-18 23:14:15Z)

Please see presentation 11/0019r1. This presentation was made to introduce this TSF synchronization and is based upon 11s TSF synchronization. The point that may have been overlooked is that the APs synchronize always to the slower so in the example when AP 2 looks at AP3, AP 2 is the slower and AP3 will match to that. Note that AP 2 has previously matched to AP1 which is the slowest of the three. Hence, after one 'round' all three are therefore matched to AP1

No text changes required.

***CID #4006:***

AGREE IN PRINCIPLE (LB179: 2011-07-19 00:28:17Z)

The formula is not correct, but the 0.25 is correct. Please see 09/0496r2 which looked at actual video streams and on slide 8 showed that +/- 2σ was a good approximation for Max and Min.

Hence, MAX = MEAN + 2σ and MIN = MEAN - 2σ

Or 4σ = MAX – MIN giving σ = 0.25(MAX – MIN)

Proposal: ***REVISED via e-mail exchange in the reflector***

Change formula on Page 126 line 10 to "σi = 0.25(MAXi – MINi)"

Change formula on Page 127 line 16 to "σi = 0.25(MAXi – MINi)"

***CID #4008:***

AGREE IN PRINCIPLE (LB179: 2011-07-18 23:12:55Z)

Agreed, as it stands the first AP will have advantage in the proportional sharing scheme. AP2 can only advertize successful ADDTSs and hence will never be able to accept TSPECs over the remaining time that AP1 has already reserved. The scheme for building the Potential Traffic Self (PTS) is by monitoring the maximum Allocated Traffic Self (ATS) over a 7 day period and ATS represents active traffic, i.e. successful TSPECs. The solution would be for the QAP to note unsuccessful ADDTSs where the decline was due to the failure at step 4 and to use these in its calculation of PTS. It need not wait for 7 days to increase the PTS, it could add the unsuccessful TSPEC values to its running <mean, standard deviation, AC\_VO, AC\_VI> tuple, and as this would represent an increase in maximum values in the tuple, the PTS field is updated. In this way the proportional sharing allocations change each time AP2 gets caught at step 4.

***Revised via e-mail exchange in the reflector:***

Add the following Draft 5.0 P125L30: "If the AP refuses an ADDTS request due to a perceived over allocation, (for example, step, b) 4) in the Proportional Sharing Scheme described in X.4.2.2), then the AP adds the TSPEC values of the rejected request to the tuple.

**GCR Comments:**

12 comments in the GCR Category (CID # 4121, #4122, #4123, #4124, #4125, #4126, #4127, #4128, #4129, #4130, #4131 and #4132) are withdrawn by the commenter. The commenter intends to work on these and bring in a submission to resolve them during the sponsor ballot phase.

**The TG recessed till Tuesday PM1 at 15:36 Hrs PDT.**

**July 19th, 2011 Tuesday PM1 (Board Room-C)**

**The TG was called to order at 13:30 Hrs PDT**

**Administrivia:**

* **Attendance Announcement**
* **Knowledge of Essential Patents or knowledge of owners of Essential Patents** -- no knowledge of essential patents/essential patent holders

**Agenda/Notes:**

* + **Comment Resolution (#782, #783, #784)**

**#782:** Change resolution to “Revised: See Cl. 9.19.2.6.2 paragraphs 2 and 3 in Draft 5.0.”

**#783:** The referred NOTE is removed. Why is this, a “Disagree” resolution? Change resolution to Accept.

**#784:** Change resolution to “Revised:

Change P79L24-34 (Draft 5.0) to:

For GCR streams with retransmission policy equal to GCR Block Ack, an originator may regularly send a BlockAckReq with the GCR Group Address subfield in the BAR Information field set to the GCR group address and the Block Ack Starting Sequence Control set to the sequence number of the earliest A-MSDU of the GCR stream that has not been acknowledged by all group members and has not expired due to lifetime limits, in order to minimize buffering latency at receivers in the GCR group.

NOTE 1- An originator might transmit management frames, QoS data frames with a group address in the Address 1 field (including different GCR streams), and non-QoS data frames intermingled. Since these are transmitted using a single sequence counter, missing frames or frames sent to group addresses absent from a receiving STA‘s dot11GroupAddresses table complicates receiver processing for GCR streams with a GCR Block Ack retransmission policy since the cause of a hole in a receiver‘s Block Ack bitmap is ambiguous: it is due either to an MPDU being lost from the GCR stream or to transmissions of MPDUs not related to the GCR service using the same sequence number counter.

* + **Review “Conditional Approval” package –** still awaiting response from Disapprove voters. There are 200+ unsatisfied comments at this time.
	+ **Motions (if needed) – none.**
	+ **Comment Resolution:** reviewed GCR and SCS comments.

**The TG recessed till Tuesday PM2 at 15:30 Hrs PDT.**

**Tuesday July 19th, 2011 PM2 (Board Room-C)**

**The TG was called to order at 16:03 Hrs PDT**

**Administrivia:**

* **Attendance Announcement**
* **Knowledge of Essential Patents or knowledge of owners of Essential Patents** -- no knowledge of essential patents/essential patent holders

**Agenda/Notes:**

* + **Administrivia**
	+ **TGaa Timeline**
	+ **Plan for**

(a) a recirculation LB with Draft 6.0 and a clean recirculation of Draft 6.0 (with no changes) and

(b) a recirculation LB with Draft 6.0 and a recirculation with Draft 7.0 clean recirculation of Draft 7.0 (with no changes)

An alternate time line is not a good idea. The request for conditional approval from EC is based on the fact that we are confident about a recirculation and a clean recirculation. If we are not confident about this, we should not be requesting conditional approval at this time.

|  |  |  |
| --- | --- | --- |
| Fifth WG Ballot (D6.0)  | Open 29-Jul-11  | Close 13-Aug-11  |
| Clean recirculation (D6.0)  | 23-Aug-11  | 02-Sep-11  |
| Pool formation  | 15-May-11  | 30-Jun-11  |
| First sponsor ballot  | 07-Sep-11  | 17-Oct-11  |
| Second sponsor ballot  | 14-Nov-11  | 29-Nov-11  |
| Third sponsor ballot  | 05-Dec-11  | 20-Dec-11  |
| Fourth sponsor ballot  | 20-Jan-12  |  04-Feb-12  |
| EC to RevCom  | Mar-12  |  |
| RevCom to SB  | Jun-12 |  |

* + **Review GCR and SCS Comments**

**CID #4119**

**CID #4109/#4110**

**CID #4097:** DEI Bit in HT Control field – TGac has defined a new interpretation of the HT Control fied: If bit-0 of HT Control field is set to 0, it is interpreted as defined in TGmb (D9.0)+.11s +.11ae + .11aa. However, if bit 0 of the HT Control field is set to 1, it is interpreted as VHT Control field as defined in .11ac D1.0 Cl. 8.2.4.6.3. In this interpretation Bit-29 is allocated to “Unsolicited MFB” which is part of the 11ac Link Adaptation feature.

There are comments submitted to both TGaa and TGac to address this issue. From the discussions in TGac, it is clear that VHT data frames can use the HT Control field interpreted as legacy Control field (Bit-0 set to 0) in order to use the DEI bit.

DISAGREE

DEI bit is in the HT interpretation of the HT control field and will function as expected when used in HT or VHT data frames as long as the HT control field gets interpreted using the HT interpretation (b0 is set to 0). There is no need to remove the DEI feature or devise another mechanism to signal DEI.

If HT control field with b0 set to 1 is used in a VHT data frame, 11aa STA will not be able support both DEI and the ability to fast transition from non-VHT to VHT states.

No changes needed in P802.11aa.

**The TG recessed till Wednesday PM1 at 15:32 Hrs PDT.**

**July 20th, 2011 Wednesday PM1 (Pacific-D)**

**The TG was called to order at 13:40 Hrs PDT**

**Administrivia:**

* **Attendance Announcement**
* **Knowledge of Essential Patents or knowledge of owners of Essential Patents** -- no knowledge of essential patents/essential patent holders

**Agenda/Notes:**

* + **Unsatisfied CID 164 comments discussion**

**Motion-14**

Move to approve resolutions to CID #782, #783 and #784 in document 11/0876r4 and instruct the 802.11aa Technical Editor to incorporate the corresponding changes in the next draft of P802.11aa.

**Moved: Graham Smith**

**Seconded: Alex Ashley**

**Result: 6/0/1 Motion Passes**

* **Update on Report to EC**

**The chair received feedback from a few “Disapprove” voters that they are satisfied with the resolutions to their comments from previous letter ballots. The number of unsatisfied comments now stands at 89 comments.**

**In the meeting with WG leadership we received the following feedback:**

* + 1. **Add a slide to show the list of DISAPPROVE voters**
		2. **Add a row to show updates since close of LB179 to slide#4**
		3. **In slide #5, only show Unsatisfied comments**
		4. **In slide #6, show total comments (not a break-up of comments by letter ballots).**
* **Joint Meeting topics:** There are three topics we need to cover in the joint meeting, (a) QoS maintenance report using .11k/v mechanisms, (b) MaxRes for 802.11 and (c) STA-Bridge issue.

There are no updates to the MaxRes and STA-Bridge issues. The chair signed up to work on the QoS Maintenance Report.

**The TG recessed till Thursday at 15:30 Hrs PDT.**

**July 21th, 2011 Thursday AM1 (Pacific-H, SeaCliff AB)**

**The TG was called to order at 08:15 Hrs PDT**

**Administrivia:**

* **Attendance Announcement**
* **Patent Policy** -- no questions on the patent policy
* **Knowledge of Essential Patents or knowledge of owners of Essential Patents** -- no knowledge of essential patents/essential patent holders

***Agenda/Notes:***

* **P802.11aa Update –** timeline review, conditional approval request to EC this week and change of TGaa leadership.
* **Specific details on 802.11k/v traffic stream statistic reports**
	+ **No updates on this topic.**
	+ **Will bring a submission answering the following questions:**

what are the required capabilities of the devices?

 what parameters can triggers be set on?

 what frames are used to set triggers?

 what reports are generated?

* **MaxRes for 802.11 – no update**
* **How to deal with STA-Bridge issue? – no update**
* **Feedback on 802.1BA –** Recommend that in Table 6-1 of P802.1BA replace Table 6-1

“… the IEEE 802.11ADDTS QoS mechanism, and the IEEE P802.11aa Reliable Multicast.”, with

“… the IEEE 802.11QoS mechanisms (EDCA Admission Control and HCCA), and the IEEE P802.11aa Groupcast with Retries (GCR).”

* **802.1BA is complete with no DISAPPROVE voters. This issue will be discussed with 802.1BA editor and most likely will be handled during the corrigenda generation process.**
* **Update on .1AVB –** the six specifications that make up 802.1AVB are essentially done and there are devices implementing this suite of protocols starting to show up in the market. There is interest in extending 802.1AVB to ultra-low latency applications. 802.1AVB is looking at redundant path between talker and listener to improve Quality of Experience, AVB over prioritized QoS paths and 802.1AS time synchronization over non-ethernet media.

**The Joint meeting adjourned at 08:50 Hrs PDT.**

**TGaa was called to order at 09:00 Hrs PDT**

SCS comment resolution.

**The TG recessed till Thursday AM2 at 10:01 Hrs PDT.**

**July 21st, 2011 Thursday AM2 (Pacific-G)**

**The TG was called to order at 10:30 Hrs PDT**

**Administrivia:**

* **Attendance Announcement**
* **Patent Policy** -- no questions on the patent policy
* **Knowledge of Essential Patents or knowledge of owners of Essential Patents** -- no knowledge of essential patents/essential patent holders

***Agenda/Notes:***

* **Administrivia**
* **Comment Resolution**
	+ **SCS Comments**
* **Review of the report to EC (11/1005r2) – 49 Unsatisfied comments remain.**
	+ The report containing all the unsatisfied comments still has “Response”s that point to other CIDs or to documents that are not part of the report. This makes it hard for a person reading the report to be able to understand what the “Response” is.
	+ The excel format report has columns that need to be hidden in order for the “Comment” to be displayed without requiring a horizontal scroll.

**The TG recessed till Thursday PM1 at 13:30 Hrs PDT.**

**July 21st, 2011 Thursday PM1 (Pacific-G)**

**The TG was called to order at 13:30 Hrs PDT**

**Administrivia:**

* **Attendance Announcement**
* **Patent Policy** -- no questions on the patent policy
* **Knowledge of Essential Patents or knowledge of owners of Essential Patents** -- no knowledge of essential patents/essential patent holders

***Agenda/Notes:***

* **Administrivia**
* **Chair Election**

One candidate, Graham Smith (DSP Group) volunteered for the open TGaa chair position. The TG unanimously approved recommending Graham Smith to the WG chair, as the new chair of TGaa.

* **Comment Resolution wrap up and motions**

**Motion-4**

Move to approve comment resolutions to editorial comments as described in document 11/903r0 and instruct the editor to incorporate them in the next TGaa draft

**Moved: Alex Ashley**

**Seconded: Santosh Pandey**

**Result: 7/0/0 Motion Passes**

**Motion-5**

Move to approve comment resolutions to SCS comments as described in document 11/0876r7 (SCS Worksheet) and instruct the editor to incorporate them in the next P802.11aa draft

**Moved: Ganesh Venkatesan**

**Seconded: David Hunter**

**Result: 7/0/0 Motion Passes**

**Motion-6**

Move to approve comment resolutions to GCR comments as described in document 11/0876r7 (GCR Worksheet) and instruct the editor to incorporate them in the next P802.11aa draft

**Moved: Alex Ashley**

**Seconded: David Hunter**

**Result: 7/0/0 Motion Passes**

**Motion-7**

Move to approve comment resolutions to OBSS comments as described in document 11/0876r7 (OBSS Worksheet), in addition, P126L1 delete ‘**, the mean value, *μ, is ‘,*** and instruct the editor to incorporate them in the next P802.11aa draft

**Moved: Alex Ashley**

**Seconded: Graham Smith**

**Result: 7/0/0 Motion Passes**

**Motion-8**

Move to approve comment resolution to the General comment as described in document 11/0876r7 (General Worksheet) and instruct the editor to incorporate them in the next P802.11aa draft

**Moved: Ganesh Venkatesan**

**Seconded: David Hunter**

**Result: 6/0/0 Motion Passes**

**Motion-9**

Move to approve the resolutions to CIDs #609 and #610 in document 11/0876r7 (LB164 Worksheet)

**Moved: Alex Ashley**

**Seconded: David Hunter**

**Result: 6/0/0 Motion Passes**

**Motion-10**

Having approved comment resolutions for

* the comments CID #782, #783 and #784 as contained in document 11/0876r7 (LB164 Worksheet)
* the comments received from LB179 as contained in document 11/0876r7 (LB179 Worksheet)
* the comments received from 802.11 Internal MEC and IEEE SA MEC as contained in document 11/0872r0,

Instruct the editor to prepare Draft6.0 incorporating these resolutions and,

Approve a 15-day Working Group Recirculation Ballot asking the question “Should P802.11aa D6.0 be forwarded to Sponsor Ballot?”

**Moved: Graham Smith**

**Seconded: Alex Ashley**

**Result: 6/0/0 Motion Passes**

**Motion-11**

Move to approve document 11/872r0 and instruct the 802.11aa Technical Editor to incorporate the corresponding changes in the next draft of P802.11aa.

**Moved: Alex Ashley**

**Seconded: Graham Smith**

**Result: 9/0/0 Motion Passes**

**Motion-12**

Move to decline all comments listed in document 11/0876r7 that have a blank resolution status with the resolution of “The TG requires another recirculation ballot to gain feedback from the WG on this topic.”

**Moved: David Hunter**

**Seconded: Mark Hamilton**

**Result: 6/0/0 Motion Passes**

**Motion-13**

* Approve document 11/1005r2 as the report to the IEEE 802 Executive Committee on the requirements for conditional approval to forward P802.11aa to Sponsor Ballot, and
* Request the IEEE 802 Executive Committee to conditionally approve forwarding P802.11aa to sponsor ballot.

**Moved: Graham Smith**

**Seconded: Mark Hamilton**

**Result: 8/0/0 Motion Passes**

**Motion-16**

Move to express group’s gratitude to our outgoing chair, Ganesh Venkatesan for his dedication and work during the Study Group and Task Group phases.

**Moved: Graham Smith**

**Seconded: Alex Ashley**

**Result: 9/0/0 Motion Passes**

* **Plan for Sept 2011 meeting**
	+ After the July 2011 meeting
		- Complete Draft 6.0 recirculation, clean recirculation and satisfy all conditions in order to start Sponsor Ballot
		- Start Sponsor Ballot
	+ At the Sep 2011 Meeting
		- Since the First Sponsor Ballot is planned for completion on Oct 17, 2011, there will be no comment resolution business that can be conducted in the September 2011 (Okinawa) meeting. The TG plans to meet for one session and provide the TG and WG member a status update
* **Teleconference Schedule**

**Motion-1**

Move to approve the following teleconference schedule:

Aug 15, Sept 01, Oct 24, 27, 31, Nov 03 2011

1130-1330 Hrs ET

**Moved: David Hunter**

**Seconded: Satish Putta**

**Results: 6/0/0 Motion Passes**

* **Review Closing Report –** reviewed and updated document 11/1071r0. Need to update with details from the joint meeting with 802.1AVB and election of the new chair for the TG.
* **Adjourn**

**The TG adjourned the San Francisco meeting at 15:38 Hrs PDT**