IEEE P802.11
Wireless LANs

|  |
| --- |
| TGax Spatial Reuse ad hoc group meeting minutes – San Antonio, November 2016 |
| Date: 2016-11-08 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jae Seung Lee | ETRI | 161 Gajeong-dong,Yuseong-gu, Daejeon, Korea | +82 42 860 1326 | jasonlee@etri.re.kr  |

Abstract

This document contains the minutes of the November 2016 meeting of the IEEE 802.11ax Spatial Reuse ad hoc group held in San Antonio.

**EVE - Monday 19:30 November 7, 2016 – Plenary Meeting**

EVE session was chaired by Guido (Ericsson).

Chair called the meeting to order at 19:33.

Chair informed the group about IEEE patent policy at 19:34.

Chair called for potentially essential patent claims at 19:35. There was no response from the audience.

Chair went through the agenda. Chair reviewed the list of submission.

Chair reviewed the agenda (11-16/1481), and asked if there is any comment on the order of the presentation. None noted.

The first presenter, Matthew, was not in the room.

**11-16/1063r3, Unified SR text DSC, ATPC, inter-BSS & 11-16/1064r3, Unified SR approach DSC, ATPC and Inter-BSS**

Presented by Graham (SR Technologies)

Graham presented document 11-16/1064r3 at 19:38.

Guido asked if there are any questions or comments at 20:00

Laurent: You are bringing a lot of new things. We need a lot of discussion. What you are proposing here is to have the AP to provide some guidance to the STAs, so if the STA is close to the AP it is more aggressive and if it is far away, it is less aggressive.

Graham: How does the AP manage the network if nothing is specified? Whole point about the DSC is that it is very well described and explained. If you want to have small coverage area, that’s how the AP sets the Upper Limit and the Margin.

Graham: With DSC, the threshold is managed, and you know what is going on.

Graham: DSC does not restrict the STAs. DSC means that you can control the network. You can control the size of the network. You can control the spatial reuse.

George: We have the color code based determiniation on inter-BSS and intra-BSS transmission and we stop earlier.

Graham: DSC can stand on its own.

George: Are you proposing to use CCA effective value in conjunction with the color code or apart from the color code?

Graham: It’s optional.

Graham: You can use either fixed OBSS\_PD value or you can use it dynamic.

George: You use the color code to determine whether the packet is inter-BSS or intra-BSS packet?

Graham: Correct.

George: What is the relationship here? It tries to approach the problem with two different angles.

Jianhan: Everything is optional in slide 9.

Graham: The idea is that you can use DSC with these two mechanisms.

Jianhan: If I did not implement the rest of two, can I still use DSC?

Graham: Yes, we can.

Jianhan: Then that’s the problem, because you don’t know the OBSS was going on and you just set based on your own BSS.

Graham: The point is that you have to make sure you hear everyone else in your network.

Jianhan: You don’t know where the packet comes from. You do the transmission based on the distance from your own AP, but you may have a STA in the OBSS very close to you.

Graham: Every single simulation scenario has been ananlyzed with DSC.

Graham asked the following straw poll at 20:23

**Straw Poll R20161107001**

* **Do you agree to incorporate 11-16/1063r3 into the TGax draft?**
	+ Yes: 6
	+ No: 16
	+ Abstain: 34

Graham asked to record the vote.

Guido answered that this is just a straw poll and we usually do not record the vote.

**11-16/0947r18, Proposed Text Changes for OBSS\_PD-based SR parameters**

Presented by Matthew (Broadcom)

Matthew presented the document 11-16/0947r18 at 20:28.

Guido asked if there are any questions or comments at 20:49.

Graham: What if you are mobile? If these STAs are moving, then about this choosing a PD, how can other guys do something?

Graham: If other guys are using different rule to you, how do I know what to do?

Graham: There’s no way to simulate. You have to have a rule which does not exist.

Matt: If the rule is going to fail, then there is nothing you can do.

Graham: I have not seen the simulations.

There were some questions for clarification from Sean.

Sean: Are there bits to allow or disallow SRP?

Matt: That will be the other document – SRP document.

Matt asked the following straw poll at 21:00.

**Straw Poll R20161107002**

**• Do you agree to incorporate 11-16/947r18 into the TGax draft?**

- Yes: 30

- No: 2

- Abstain: 16

**🡪 passes**

**11-16/1121r2, Spec Texts: Spatial Reuse Indication for Trigger**

Presented by Po-Kai Huang (Intel)

Po-Kai presented the document 11-16/1121r2 at 21:05.

Guido asked if there are any questions or comments at 21:08.

There were no questions.

Po-Kai asked the following straw poll at 21:10.

**Straw Poll R20161107003**

**• Do you agree to incorporate 11-16/1121r2 into the TGax draft?**

- Unanimously accepted

**🡪 passes**

**11-16/1337r0, cr-on-SR-CCA-rules-clause-25.9**

Presented by Bo Sun (ZTE)

Bo Sun presented the document 11-16/1337r0 at 21:11.

Guido asked if there are any questions or comments at 21:16.

There were no questions.

Bo asked the following straw poll at 21:17.

**Straw Poll R20161107004**

**• Do you agree to accept the resolution provided in 11-16/1337r0 for the comments with CIDs 187, 224, 803, 1233, 1578, 1579, 2284, 2433, 2666, 2912, 2915, 2916, 2917?**

- Unanimously accepted

**🡪 passes**

**11-16/1403r0, SR Backoff Procedure**

Presented by Jayh Hyunhee Park (LGE)

Jayh presented the document 11-16/1403r0 at 21:19.

Guido asked if there are any questions or comments at 21:23.

Question: What does it mean to resume backoff?

Po-Kai: You can go to the straw poll. We just follow the current backoff procedure. We just refer to legacy section.

Jing Ma: I think that this backoff procedure is already covered by the current draft. It’s covered by OBSS PD-based SR operation.

Jayh: The backoff counter is not defined.

Jing Ma: Maybe this backoff procedure is the same as the legacy, right?

Jayh: The backoff procedure for SR delayed case is different and it should be defined.

Jayh asked the following straw poll at 21:29.

**Straw Poll R20161107005**

**• Do you agree to add the following text in the 11ax spec draft?**

- “25.9.3 SRP-based Spatial reuse operation

**-** SR Backoff procedure for SR delayed case

. The STA may resume its backoff procedure after the end of the PPDU carrying the SR delay entry by following the procedure defined in 10.22.2 HCF contention based channel access (EDCA)

. NOTE - The countdown of an existing backoff procedure is suspended until the end of the PPDU carrying the SR delay entry since the medium is busy during the duration of the PPDU carrying the SR delay entry.

- Unanimously accepted

**🡪 passes**

The SR ad hoc meeting was recessed until Tuesday PM2.

**PM2 – Tuesday 16:00 November 8, 2016 – Plenary Meeting**

PM2 session was chaired by Guido (Ericsson).

Chair called the meeting to order at 16:00.

Chair called for potentially essential patent claims. There was no response from the audience.

Chair went through the agenda. Chair reviewed the list of the remaining submissions.

Chair: Does anyone object if we change the agenda so the doc 11-16/1440 as the next document to present? No objection.

**11-16/1440r2, Proposed Resolutions to CID 2719**

Presented by Jing Ma (NICT)

Jing Ma presented the document 11-16/1440r2 at 16:03.

Guido asked if there are any questions or comments at 16:07.

Jayh: During the last September meeting, I guess that we had the related motion on OBSS\_PD-based SR procedure and defined it.

Jing Ma: You mean that you already proposed the same thing?

Jayh: Yes

Jing Ma: I will check it out.

Jing Ma will check it out and come back again.

**11-16/1430r0, Comment Resolution for SR on BSS Color**

Presented by Junichi Iwatani (NTT)

Junichi presented the document 11-16/1430r0 at 16:10.

Guido asked if there are any questions or comments at 16:14.

There were no questions or comments.

Junichi asked the following straw poll at 16:15.

**Straw Poll R20161108001**

**• Do you agree to accept the resolutions provided in submission 11-16/1430r0 for comments with CIDs 448, 833, and 1232?**

- Approved by unanimous consent.

**🡪 passes**

**11-16/1450r0, CR-for-CID 2492-section-25-9-spatial-reuse-operation**

Presented by Kaiying Lv (ZTE)

Kaiying presented the document 11-16/1450r0 at 16:17.

Guido asked if there are any questions or comments at 16:18.

There were no questions or comments.

Kaiying asked the following straw poll at 16:19.

**Straw Poll R20161108002**

**• Do you agree to accept the resolution to the comment with CID 2492 as provided in submission 11-16/1450r0 and to modify the 802.11ax draft amendment as shown in the submission?**

- Approved by unanimous conset.

**🡪 passes**

**11-16/1476r5, SRP**

Presented by Matthew Fischer (Broadcom)

Matt presented the document 11-16/1476r5 at 16:25.

Guido asked if there are any questions or comments at 16:44.

Laurent commented on DSRP\_PPDU, HE Trigger based PPDU, target RSSI, and so on.

Matt modified the sentences to reflect Laurent’s comments.

Kaying: I have a question on page 5, last line.

Matt: This is dependent on how you interprete this.

George commented on several sentences and Matt reflected George’s comment.

There was long discussion on the proposed text. Several members including Laurent, Kaying, George, Po-Kai, Guido, and Peter commented on the sentences and Matt has modified the text to reflect the comments.

Chair recommended a five minutes recess to prepare the revised document at 17:00.

The meeting recessed for 5 minutes and Matt prepared the revised document to reflect the comments.

Matt announced that the revised document has been uploaded as 11-16/1476r6 at 17:05.

The meeting resumed at 17:09.

Matt asked the following straw poll at 17:16.

**Straw Poll R20161108003**

**• Do you agree to modify the 802.11ax draft amendment as proposed in submission 11-16/1476r6?**

- Yes: 27

- No: 0

- Abstain: 12

**🡪 passes**

Jing Ma revisited the revised document 11-16/1440r3 at 17:10..

Jing Ma explained the modified part in her revised document.

Jing Ma asked the following straw poll at 17:16.

**Straw Poll R20161108004**

**• Do you agree to accept the resolution to the comment with CID 2719 and to modify (adding text to the end of section 25.9.2.1 on page 157 line 33) the 802.11ax draft amendment as proposed in submission 11-16/1440r3?**

- Yes: 4

- No: 0

- Abstain: 24

**🡪 passes**

Chair adjourned the meeting of the TGax SR ad hoc at 17:25.