IEEE P802.11
Wireless LANs

|  |
| --- |
| 802.11 TGaf May 2012 Atlanta Interim Meeting Minutes |
| Date: 2012-05-20 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Rich Kennedy | Research In Motion Corporation | 7305 Napiet TrailAustin, TX 78729 | +1-972-207-3554 | rikennedy@rim.com |
| Peter Ecclesine | Cisco Systems | 170 W. Tasman Dr., San Jose, CA 95134-1706 | +1-408-527-0815 | petere@cisco.com |
| Zhou Lan | NICT | 3-4, Hikarino-oka, Yokosuka, 239-0847, Japan | +81-46-847-5097 | lan@nict.go.jp |

Abstract

This document contains the meeting minutes from the 802.11 TGaf meetings, held at the May 2012 IEEE 802 Wireless Interim session.

 **May 14th , 2012 (Monday) PM 1:30-3:30**

**Notes – Monday, May 14th, 2011; with 40+ attendees, PM1 meeting**

1. **Richard Kennedy (RIM) is the chair of the group. Peter Ecclesine (Cisco systems) is the vice-chair of the group. Zhou Lan (NICT) is the second vice-chair of the group. Chair called the meeting to order: 1:30 pm.**
2. **The plan of the week was reviewed and approved by unanimous consent.**
3. **The agenda of this meeting was reviewed and approved by unanimous consent.**
4. **Introduction**
	1. Chair welcomed participants.
	2. Chair reminded participants to record their attendance.
5. **Administrative items**
	1. Chair reviewed the administrative items and presented the links for accessing the related documents.
	2. Chair reviewed the patent policy and meeting guideline slides. Chair asked: “Are there any questions on the slides?” None.
	3. Chair asked: “Are there any patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for the use of that standard?” None.
	4. Chair reviewed other guide lines of the IEEE WG meetings.
	5. Chair reviewed IEEE-SA bylaws and operations manual.
	6. Chair reviewed task group chair functions and authority.
6. **Chair reviewed the PAR Scope and Purpose, Purpose, Principles and Vision/Outcome of the project.**
7. **Motion to approve the TGaf minutes from the March Plenary in Waikoloa, and March 20th and 27th, April 3rd, 10th and 17th, and May 1st and 8th teleconferences in documents 11-12-0467r0, 11-12-0483r0, 11-12-0486r0, 11-12-0497r0, 11-12/0515r1, 11-12/563r0 and 11-12/0564r0 respectively.**
	1. **Moved by Peter Ecclesine (Cisco Systems), seconded by Zhou Lan (NICT)**
	2. **Discussions: None**
	3. **Passes with unanimous consent.**
8. **Election of TG chair.**
	1. **Chair Nominees**
		1. **Rich Kennedy (Research In Motion)**
	2. **Nominations closed by the WG Chair in the opening plenary.**
	3. **Rich Kennedy was elected as the TG chair by unanimous consent.**
9. **Election of TG vice-chair.**
	1. **Vice-chair Nominees (select two)**
		1. **Peter Ecclesine (Cisco Systems) and Zhou Lan (NICT)**
	2. **Nominations closed by the WG Chair in the opening plenary.**
	3. **Peter Ecclesine was elected as the TG vice-chair by unanimous consent. Zhou Lan was elected as the second TG vice-chair by unanimous consent.**
10. **Election of TG secretary.**
	1. **Secretary nominee(s)**
		1. **Zhou Lan (NICT)**
	2. **Nominations closed by the WG Chair in the opening plenary**
	3. **Zhou Lan was elected as the TG secretary by unanimous consent.**
11. **Reaffirmation of the Editor**
	1. **Peter Ecclesine has been the TGaf Technical Editor from the beginning of the TG.**
	2. **Chair asked “Any objections to reaffirming Peter as the TGaf Technical Editor?” Hearing None.**
	3. **Peter Ecclesine was reaffirmed as the TG editor.**
12. **Motion to approve speculative draft P802.11af D1.07, posted on 2012-03-07, as the working draft.**
	1. **Moved by Peter Ecclesine (Cisco systems), seconded by Dave Halasz (Motorola Mobility)**
	2. **Discussions: None**
	3. **Passes with 22 YES, 1 NO and 1 ABSTAIN.**
13. **Peter Ecclesine as the TG editor reviewed the progress since March and a realistic plan for this week.**
14. **Ron Porat (Broadcom) presented document 802.11-12/616r0 for the PHY proposal of TGaf.**
	1. Sameer Vermani (Qualcomm) asked why STF uses 64FFT instead of 128.
	2. Ron Porat responded 128FFT on STF is overdesigned, keeping 64FFT fulfills the requirement and keep the structure that existing 11device used.
	3. Sameer Vermani commented the STF design is then equivalent to downclock 20MHz 11ac to this band.
	4. Wookbong Lee (LGE) commented 128FFT may violate the FCC requirement of PSD flatness.
	5. Ron Porat responded the FCC requirements ask the measurement should be taken every 1ms, the 128FFT on the LTF should not have much effect, it only affect the data.
	6. Joe Kwak (InterDigital) asked why option B1 requires a new interleaver.
	7. Ron Porat responded the current 11ac draft doesn’t support interleaver with different MCSs on different channels.
	8. Jens Tingleff (CSR) asked if the proposal has an intention to support half of the bandwidth of 6MHz to support sensing type of applications.
	9. Ron Porat responded low data rate can be supported, but not half of the bandwidth.
	10. Tevfik Yucek (Qualcomm) commented the proposal saves only 3 symbols with the price of having two FFT engine.
	11. Tevfik Yucek commented the red line in slide 18 may have to be lower down 1 or 2 dB to fit into the spectrum mask requirement based on the calculation of 100KHz out of band measurment.
	12. Ron Porat responded the new rule is based on the absolute value, and 1 or 2 dB is not difficult to achieve by increasing the taps of filter a little more.
	13. Wookbong Lee commented coexistence should be taken care of.
	14. Padam Kafle (Nokia) asked whether multiple base bands are needed for the multi-channel support.
	15. Ron Porat responded it depends on the implementation. The specification doesn’t limit people from implementing in that way.
	16. Padam Kafle asked why the legacy preamble is needed because there is no need for backward compatibility.
	17. Ron Porat responded because 11ac frame format should be used.
15. **Peter Ecclesine discussed with the group about the procedure to create TGaf PHY section referring to document 802.11-12/602r1 which is the guide line document adopted by TGah.**
16. **Recessed at 3:30 PM.**

**May 15th , 2012 (Tuesday) PM 4:00-6:00**

**Notes – Tuesday, May 15th, 2012; with 30+ attendees, PM2 meeting**

1. **Richard Kennedy (RIM) is the chair of the group. Peter Ecclesine (Cisco) is the vice-chair of the group. Zhou Lan (NICT) is the second vice-chair of the group. Chair called the meeting to order: 4:00 pm.**
2. **The agenda of the meeting was reviewed and approved by unanimous consent.**
3. **Introduction**
	1. Chair welcomed participants.
	2. Chair reminded participants to record their attendance.
4. **Administrative items**
	1. Chair reviewed the administrative items and presented the links for accessing the related documents.
	2. Chair reviewed the patent policy and meeting guideline slides. Chair asked: “Are there any questions on the slides?” None.
	3. Chair asked: “Are there any patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for the use of that standard?” None.
	4. Chair reviewed other guide lines of the IEEE WG meetings.
	5. Chair reviewed task group chair functions.
5. **Peter Ecclesine discussed with the group about the procedure to create TGaf PHY section referring to document 802.11-12/602r1.**
	1. Peter Ecclesine proposed to adopt the same Band ID concept from 11ad to create switch in section 8, 9, 10 to direct to TGaf PHY section.
	2. Joe Kwak (InterDigital) commented using Band ID prevents TVWS to be able to use other PHYs such as TG ah PHY.
	3. Padam Kafle (Nokia) commented Band ID of TGad is used for fast session transfer and may not be appropriate to serve our purpose.
	4. Peter Ecclesine responded Band ID will not go to frame format. It is only a switch to direct the PHY operation to correct PHY chapter.
	5. Padam Kafle asked whether a motion is needed to decide this document as our guideline document.
	6. Rich Kennedy responded the discussions on this document is just started, no need to hurry.
6. **Wookbong Lee (LGE) presented document 802.11-12/0647r2 for CSM clean up (editorial changes).**
7. **Wookbong Lee (LGE) presented document 802.11-12/0648r1 for information field (editorial changes).**
8. **Wookbong Lee (LGE) presented document 802.11-12/0649r1 for some editorial comments.**
9. **Motion to approve the corrections and changes in documents 11-12/647r2, 11-12/648r1 and 11-12/649r1.**
	1. **Moved by Tevfik Yucek (Qualcomm), seconded by Zhou Lan (NICT)**
	2. **Discussions:**
		1. Padam Kafle asked whether the group should address the requirements in the new Ofcom document
		2. Rich Kennedy responded we should be patient for the rules to finalize.
	3. **Passes with unanimous consent.**
10. **Peter Ecclesine reviewed the new FCC ruling document FCC 12-36.**
11. **Recessed at 6:00 PM.**

**May 16th , 2012 (Wednesday) PM 1:30-3:30**

**Notes – Wednesday, May 16th, 2012; with 30+ attendees, PM1 meeting**

1. **Richard Kennedy (RIM) is the chair of the group. Peter Ecclesine (Cisco) is the vice-chair of the group. Zhou Lan (NICT) is the second vice-chair of the group. Chair called the meeting to order: 1:30 pm.**
2. **The agenda of the meeting was reviewed and approved by unanimous consent.**
3. **Introduction**
	1. Chair welcomed participants.
	2. Chair reminded participants to record their attendance.
4. **Administrative items**
	1. Chair reviewed the administrative items and presented the links for accessing the related documents.
	2. Chair reviewed the patent policy and meeting guideline slides. Chair asked: “Are there any questions on the slides?” None.
	3. Chair asked: “Are there any patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for the use of that standard?” None.
	4. Chair reviewed other guide lines of the IEEE WG meetings.
	5. Chair reviewed task group chair functions.
5. **Discussions on the PHY parameters.**
	1. Ron Porat requested to postpone this topic to Thursday AM1 session due to the ongoing offline discussions.
	2. Rich Kennedy as the TG chair accepted this request.
6. **Recessed at 2:10 pm Local time.**

**May 17th , 2012 (Thursday) AM 8:00-10:00**

**Notes – Thursday, May 17th, 2012; with 40+ attendees, AM1 meeting.**

1. **Richard Kennedy (RIM) is the chair of the group. Peter Ecclesine (Cisco) is the vice-chair of the group. Zhou Lan (NICT) is the second vice-chair of the group. Chair called the meeting to order: 8:00 am.**
2. **The agenda of the meeting was reviewed and approved by unanimous consent.**
3. **Introduction**
	1. Chair welcomed participants.
	2. Chair reminded participants to record their attendance.
4. **Administrative items**
	1. Chair reviewed the administrative items and presented the links for accessing the related documents, placing emphasis on his responsibility to deliver a quality draft standard in a timely fashion, as outlined in the WG P&P, asking that comments and comment resolutions be in the best interest of the standard.
	2. Chair reviewed the patent policy and meeting guideline slides. Chair asked: “Are there any questions on the slides?” None.
	3. Chair asked: “Are there any patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for the use of that standard?” None.
	4. Chair reviewed other guide lines of the IEEE WG meetings.
	5. Chair reviewed task group chair functions.
5. **Ron Porat (Broadcom) presented document 802.11-12/699r0 for TGaf PHY design.**
	1. Wookbong Lee asked for clarification of pre-VHT fields on the middle of TV channel.
	2. Ron Porat responded this design is for the coexistence purpose.
	3. Zhou Lan asked if multi-channel support is still in the proposal.
	4. Ron Porat responded the PHY is designed with enough flexibility to support multi-channel.
	5. Padam Kafle asked the reason why 5.33 is chosen instead of a value more close to 5.5.
	6. Ron Porat responded other value is possible but 5.33 is a clock easy to generate.
	7. **Motion to accept the baseline PHY design in document 11-12/699r0 for the development of the TGaf draft.**
		1. **Moved by Vinko Erceg (Broadcom), Seconded by Tevfik Yucek (Qualcomm)**
		2. **Discussions: None**
		3. **Passes with 30 YES, 0 NO and 2 ABSTAIN.**
6. **Peter Ecclesine reviewed document 802.11-12/602r1 to decide the way the PHY chapter is created.**
	* 1. Peter Ecclesine proposed to create section 23 for 11af PHY with the name of TVHT. No objections were heard.
		2. Padam Kafle recommended to have some initial text ready for people to work together.
		3. Peter Ecclesine commented Band ID will be only in several places such as channel power management.
7. **Hiroshi Harada (NICT) presented document 802.11-12/677r1 for Japanese TVWS regulation updates.**
	1. Peter Ecclesine commented the one-seg capacity seems to be decreasing instead of increasing according to the numbers shown on the slides.
	2. Hiroshi Harada responded it is because more iphone type of handset are entering Japan. However some operator also request iphone type of handset to have one-seg TV capability.
	3. Peter Ecclesine asked whether there will be requirement to protect the one-seg TV receiver.
	4. Hiroshi Harada responded it depends on whether one-seg will become licensed or unlicensed. It has not yet been decided for the moment.
	5. Peter Ecclesine asked if there is a priority to protect DTV, wireless Microphone and then one-seg TV service.
	6. Hiroshi Harada responded the priority for one-seg TV is not yet decided, wireless broadband may have higher priority if more proposals were received.
	7. Ron Porat asked if it is allowed to have one-seg and WiFi coexist in the same 6MHz channel.
	8. Hiroshi Harada responded it is possible, but 11af need to move fast to be able to provide detailed specification if next call for proposal from MIC comes out.
	9. Tevfik Yucek asked if there are any requirements for out of band emission of one-seg service.
	10. Hiroshi Harada responded there is no clear requirement, but it should be lower than 55dBr in practice.
	11. Joe Kwak asked whether one-seg can provide data broadcasting other than TV only.
	12. Hiroshi Harada responded it is possible.
	13. Hiroshi Harada recommended the TG to compete the specification in a timely fashion to be able to catch the trend of Japanese TVWS regulations.
8. **Recessed at 10:00 am Local time.**

**March 17th , 2012 (Thursday) PM 1:30-3:30**

**Notes – Thursday, May 17th, 2012; with 30+ attendees, PM1 meeting**

1. **Agenda was reviewed and approved.**
2. **Introduction**
	1. Chair welcomed participants.
	2. Chair reminded participants to record their attendance.
3. **Administrative items**
	1. Chair reviewed the administrative items, placing emphasis on his responsibility to deliver a quality draft standard in a timely fashion, as outlined in the WG P&P, asking that comments and comment resolutions be in the best interest of the standard, and presented the links for accessing the related documents.
	2. Chair reviewed the patent policy and meeting guideline slides. Chair asked: “Are there any questions on the slides?” None.
	3. Chair asked: “Are there any patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for the use of that standard?” None.
	4. Chair reviewed other guide lines of the IEEE WG meetings.
	5. Chair reviewed task group chair functions.
4. **Ron Porat presented document 802.11-12/709r0 for additional PHY discussions.**
	1. Padam Kafle asked why 11ac interleaver cannot be used as it is.
	2. Ron Porat responded 11ac doesn’t have the interleaver for 216 tones(232 tones in 11ac), the Ncol and Nrot need to be modified.
	3. Wookbong Lee asked whether the proposal supports 2 sets of 4 uncontiguous channels.
	4. Ron Porat responded the intention is to support multi-channels, not to limit to particular number of uncontiguous channels.
	5. Joe kwak commented separated MCSs should be supported on different channels due to the varying channel conditions.
	6. Jens Tingleff asked if the interleaver design is the only option that the PHY will have.
	7. Ron Porat responded option A doesn’t limit other options to be added on later on, but other options should be complete proposal to be added in the draft text.
	8. Padam Kafle asked if multiple channels can have different power, 100mw and 40mw.
	9. Ron Porat responded 11ac use same power for different channels.
	10. **Straw poll: Do you support the proposed design in slide 3?**
		1. **Results: 23YES, 1 NO and 5ABSTAIN.**
	11. **Motion to accept the proposal on slide 3 of 11-12/709r0 for development of the TGaf draft.**
		1. **Moved by Vinko Erceg (Broadcom), Seconded by Jens Tingleff (CSR)**
		2. **Discussions: None**
		3. **Passes with 19YES, 2 NO and 2ABSTAIN.**
5. **Plan for the July meeting.**
	1. Padam Kafle proposed to have a pre-meeting before the July Plenary meeting.
	2. Peter Ecclesine responded a whole day conference call may be more practical for people to join.
	3. Weekly conference calls were decided on Tuesdays starting May 29th (21:00 ET for 2 hours)
	4. A full day conference call was decided on July 12th (Thursday, 19:00 ET for 4hours).
6. **Session adjourned at 3:30 pm Local time.**
7. **References:**
8. <https://mentor.ieee.org/802.11/dcn/12/11-12-0554-01-00af-meeting-plan-and-agenda-atlanta-2012.ppt>
9. <https://mentor.ieee.org/802.11/dcn/12/11-12-0709-00-00af-multi-channel-phy.pptx>
10. <https://mentor.ieee.org/802.11/dcn/12/11-12-0699-00-00af-revised-phy-proposal.pptx>
11. <https://mentor.ieee.org/802.11/dcn/12/11-12-0649-01-00af-editorial-comment.docx>
12. <https://mentor.ieee.org/802.11/dcn/12/11-12-0648-01-00af-scope-of-information-value-field.docx>
13. <https://mentor.ieee.org/802.11/dcn/12/11-12-0647-02-00af-csm-clean-up.docx>
14. <https://mentor.ieee.org/802.11/dcn/12/11-12-0616-00-00af-phy-proposal.pptx>