IEEE P802.11
Wireless LANs

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| 802.11 TGaf March 2012 Hawaii Plenary Meeting Minutes |
| Date: 2012-03-20 |
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Abstract

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

 **March 12th , 2012 (Monday) PM 4:00-6:00**

**Notes – Monday, March 12th, 2011; 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. Chair called the meeting to order: 4:00 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 January Wireless Interim in Jacksonville, and January 31st, February 7th, 14th and 21st teleconferences in documents 11-12-0176r0, 11-12-0192r0, 11-12-0208r0, 11-12-0305r1 and 11-12/0306r0 respectively.**
	1. **Moved by Peter Ecclesine (Cisco System), seconded by Zhou Lan (NICT)**
	2. **Discussions: None**
	3. **Passes with unanimous consent.**
8. **Motion to approve document 802.11-11/277r27 as the LB171 comment resolution spreadsheet.**
	1. **Moved by Peter Ecclesine (Cisco system), seconded by Yohannes (NICT)**
	2. **Discussions: None**
	3. **Passes with unanimous consent.**
9. **Motion to approve speculative draft P802.11af D1.06, posted on 2012-3-7, as the working draft.**
	1. **Moved by Zhou Lan (NICT), seconded by Peter Ecclesine (Cisco system)**
	2. **Discussions: None**
	3. **Passes with unanimous consent.**
10. **Peter Ecclesine as the TG editor reviewed the progress since January and a realistic plan for this week.**
	1. Joe Kwak (InterDigital) asked if there is any progress in the PHY.
	2. Ron Porat (Broadcom) responded there will be a short presentation in this week and several straw polls will be performed to determine the channel bandwidth and down clocking ratio.
	3. Yohannes (NICT) commented some background information would be helpful for people to understand the straw polls.
	4. Peter Ecclesine responded there will be a regulatory update slot to provide background information.
11. **Peter Ecclesine reviewed the Ofcom document of *draft regulatory requirements for white space devices in the UHF TV band (16 Feb. 2012).***
12. **Rich Kennedy as the TG Chair said in order to obtain regulatory information of Japanese TVWS, TGaf decides to request the WG to approve Hiroshi Harada of NICT a liaison between 802.11 and White Space Promotion Committee of Japan. Chair asked if there is any objection of such request. No objection was heard.**
	1. Hiroshi Harada (NICT) briefly talked about the information of White Space Promotion Committee of Japan.
13. **Motion to approve Zhou Lan of NICT as a second vice chair of TGaf.**
	1. **Moved by Peter Ecclesine (Cisco system), seconded by Jens Tingleff (CSR)**
	2. **Discussions on the motion: None**
	3. **Passes with unanimous consent**
14. **Recessed at 6:00 PM.**

**March 13th , 2012 (Tuesday) AM 8:00-10:00**

**Notes – Tuesday, March 13th, 2012; with 30+ 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.
	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. **Wookbong Lee (LGE) presented document 802.11-12/330r0 for channel model and down-clocking factor.**
	1. Tevfik Yucek (Qualcomm) asked how the RMS delay was calculated in the document.
	2. Wookbong Lee responded the RMS delay is calculated by simulations.
	3. Tevfik Yucek doubted about the applicability of the channel model because it was measured in 2.4GHz band.
	4. Wookbong Lee responded that only pass loss model is frequency dependent, the delay spread should not be so related with operation frequency.
6. **Yongho Seok (LGE) presented document 802.11-12/383r0 for the WSM according to Ofcom rules.**
	1. Padam Kafle (Nokia) commented the comments have been resolved by previous submissions, why the TG has to spend time on reopen these comments for unfixed Ofcom rules.
	2. Peter Ecclesine recommended people should firstly listen to the contribution and then decide how to move forward.
7. **Chen Sun (NICT) presented document 802.11-11/1292r2 for spectrum mask updates.**
	1. Peter Ecclesine commented the main difference between this contribution and the other contribution is that document 802.11-11/1349 uses linear interpolation against steps used in 802.11-11/1292r2. However linear interpolation is used by the FCC unlicensed band rule documents.
8. **Recessed at 10:00 AM.**

**March 13th , 2012 (Tuesday) PM 4:00-6:00**

**Notes – Tuesday, March 13th, 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. **Chen Sun presented document 802.11-12/0210r1 for NCC writing style updates.**
	1. **Motion to approve document 802.11-12/0210r1 with the changes as shown on the screen.**
		1. **Moved by Chen Sun (NICT), Seconded by Padam Kafle (Nokia)**
		2. **Discussions: None**
		3. **Passes with unanimous consent.**
6. **Padam Kafle presented document 802.11-12/0283r1 for CAQ writing style updates.**
	1. **Motion to add the text in document 802.11-12/0283r1 to the TGaf draft.**
		1. **Moved by Padam Kafle (Nokia), Seconded by Chen Sun (NICT)**
		2. **Discussions: None**
		3. **Passes with unanimous consent.**
7. **Peter Ecclesine presented document 802.11-11/1349r2 for spectrum mask updates.**
	1. Jens Tingleff (CSR) proposed to merge 802.11-11/1349r2 with 802.11-11/1292r2.
	2. Ron Porat (Broadcom) asked about the difference between these two proposals.
	3. Peter Ecclesine responded that the way the spectrum mask is represented is different, 1349 uses linear interpolation; while 1292 uses steps.

1. **Recessed at 6:00 pm Local time.**

**March 14th , 2012 (Wednesday) AM 8:00-10:00**

**Notes – Wednesday, March 14th, 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. Peter is the acting chair of this meeting. Acting 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. Acting Chair welcomed participants.
	2. Acting 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. **Acting Chair called for participation by 11ac PHY participants for Thursday AM1 meeting.**
6. **Acting Chair reviewed the preparation of the PHY meeting in Thursday AM 1.**
	1. PHY Discussion:  3 presentations and 30 minute straw polls
		1. Regulatory domain selections => which regulatory domains
		2. Best options for available TV channel widths
		3. Straw poll for down clocking plans
7. **Acting Chair started the discussions of identifying major issues.**
	1. Peter Ecclesine commented there are now two ways to do the request and response dialog, one of them might be removed.
	2. Peter Ecclesine commented there are at least two regulatory domains that need to be considered.
	3. Peter Ecclesine commented many of PHY parameters need to be decided.
	4. Joe Kwak commented not only high data rate but also low data rate applications such as smart utility networks should be considered as in the scope of TGaf.
	5. Peter Ecclesine responded reliability is an issue for smart utility network, it is more appropriate to address this application in TGah not here.
	6. Peter Ecclesine commented that we shouldn’t worry too much about smart utility network, because the PAR of TGaf is to meet the laws, not anything else.
8. **Mingtuo Zhou (NICT) presented 802.11-12/416r1 for indoor channel model.**
	1. Joe Kwak commented the gain loss of 20 dB is strange.
	2. Tevfik Yucek responded this can be normal due to antenna polarization.
9. **Alina (NICT) presented document 802.11-12/0421r0 for outdoor channel model.**
	1. Vinko Erceg (Broadcom) commented delay spread is not that much related with centre frequency, around 5us CP should be enough to protect the system from delay spread.
10. **Recessed at 10:00 am Local time.**

**March 14th , 2012 (Thursday) AM 8:00-10:00**

**Notes – Thursday, March 14th, 2012; with 50+ attendees, AM1 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 (Broadcom) presented document 802.11-12/0424r0 for channelization and down-clocking factor.**
	1. Padam Kafle commented that digital filter design to achieve 55dB suppression is hard but possible, more information should be provided for implementation.
	2. Padam Kafle asked how different the PA backoff would be from 5MHz to 6MHz.
	3. Ron Porat responded there is not much difference regarding PA backoff.
	4. Tevfik Yucek responded the taps needed for 4MHz, 5MHz are almost same, 6MHz requires more taps, but energy concentrates on the centre taps.
	5. Erik Lindskog (CSR) commented if digital pre-distortion can be used to solve the problem.
	6. Wookbong Lee asked what is the drawback of 6MHz operation.
	7. Ron Porat responded filter design would be more difficult but it is good for coexistence.
	8. Jens Tingleff commented how about to select multiple down-clocking rate.
	9. Ron Porat responded that multiple DC is not preferred due to implementation complicity.
	10. Peter Ecclesine commented now the group has to take FCC as the assumption, we cannot make decision on Ofcom unless the rule is finalized.
	11. Joe Kwak responded assuming FCC is good, however low data rate should be considered here.
	12. Richard Edgar (CSR) commented the half channel operation should be considered.
	13. **Straw poll: Which regulatory domain(s) should we concentrate on?**
		1. **Results: US :28, UK:27, ETSI 22, Other:4 and All:15**
	14. **Straw poll: Do you support 5MHz or 6MHz channelization for 6MHz channels?**
		1. **Results: 35 YES, 2 NO and 5 ABSTAIN**
	15. **Straw poll: Do you support DC ratio of 5 or 6 for 8MHz channels?**
		1. **Results: 30 YES, 0 NO and 11 ABSTAIN**
	16. **Straw poll: Do you support defining non-contiguous operation of 2 minimum channel widths per regulatory domain?**
		1. **Results: 40 YES, 0 NO and 3 ABSTAIN**
5. **Recessed at 10:00 am Local time.**

**March 14th , 2012 (Thursday) PM 1:30-3:30**

**Notes – Thursday, March 14th, 2012; with 20+ 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. **Wookbong Lee presented document 802.11-12/0383r1for WSM changes according to Ofcom updates.**
	1. Chen Sun (NICT) commented Ofcom has not finalized the rules, it might be better to wait until the rules are decided.
	2. **Motion to add the text in document 802.11-12/0383r1 (to become r2) with changes shown on the screen to the TGaf draft.**
		1. **Moved by Chen Sun (NICT), Padam Kafle (Nokia)**
		2. **Discussions: None**
		3. **Passes with unanimous consent.**
5. **Chen Sun presented document 802.11-12/1292r3 for updates on spectrum mask descriptor.**
	1. Tevfik Yucek asked what are the usage cases?
	2. Chen Sun responded that the maximum allowable power can be adjusted based on the out-of-band emission characteristics of the devices.
	3. Tevkik Yucek commented that Ofcom may give up this direction due to the pressure from broadcasters.
6. **Rich Kennedy reviewed the plan for May session.**
	1. Discuss and approve PHY submission (if ready).
	2. Review remaining PHY comments and plan for Draft 2.0 in July.
7. **Rich Kennedy reviewed the teleconference plan, and adjusted the TG timeline. [INSERT new timeline here or refer to 11-12/438r0 TGaf closing report]**
8. **Session adjourned at 3:30 pm Local time.**
9. **References:**
10. <https://mentor.ieee.org/802.11/dcn/12/11-12-0383-02-00af-white-space-map-for-uk.doc>
11. <https://mentor.ieee.org/802.11/dcn/11/11-11-1292-03-00af-spectrum-mask-descriptor-in-tlv-format.doc>
12. <https://mentor.ieee.org/802.11/dcn/12/11-12-0424-00-00af-tgaf-phy-downclocking.pptx>
13. <https://mentor.ieee.org/802.11/dcn/12/11-12-0421-00-00af-outdoor-channel-models-for-802-11af.ppt>
14. <https://mentor.ieee.org/802.11/dcn/12/11-12-0416-01-00af-broadband-indoor-tvws-channel-measurement-and-characterization-at-670-mhz.pptx>
15. <https://mentor.ieee.org/802.11/dcn/11/11-11-1349-02-00af-spectrum-mask-descriptor-examples.docx>
16. <https://mentor.ieee.org/802.11/dcn/12/11-12-0330-00-00af-considerations-on-down-clocking-ratio.pptx>
17. <https://mentor.ieee.org/802.11/dcn/12/11-12-0302-01-00af-meeting-plan-and-agenda-waikoloa-2012.ppt>
18. <https://mentor.ieee.org/802.11/dcn/11/11-11-0277-27-00af-tgaf-lb-comment-resolutions.xls>