IEEE P802.22
Wireless RANs

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| Minute of IEEE 802.22b Task group at Hawaii Face-to-Face Meeting  |
| Date: 2013-5-14 |
| Author(s): |
| Name | Company | Address | Phone | email |
| Xin Zhang | NICT | 20 Science Park Road, #01-09A/10 TeleTech Park, Singapore Science Park II | +65- 67711008 | Amy.xinzhang@ieee.org |

Abstract

This document presents the minutes of IEEE 802.22b task group at Hawaii Face-to-Face Meeting from 14th May 2013 to 16th May 2013.

 **IEEE 802.22b Task Group**

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**14th May (Tuesday), AM2**

**Minutes:**

1. The meeting was called to order by Chair at 1030 AM.

2. Chair reminded everyone to mark attendance.

3. The patent policy was read out as well as the Title, PAR and Purpose of 802.22b task group.

4. The agenda as contained in 22-13-0078-00-000b for the coming week was reviewed. The following motion was proposed to approve the agenda.

**Motion:**

Motion to approve 2013 Mar Orlando Plenary agenda for 802.22b task group as contained in 22-13-0078-00-000b

Move: Chang-woo Pyo

Second: Zhang Xin

No objection was heard. Motion passed.

5. Achievements in March meeting were reviewed. During the previous face-to-face meeting, 6 technical contributions were received and presented.

6. The timeline for creating draft document was reviewed and show that our current progress is on schedule.

7. Chair reviewed the face-to-face meeting minute as well as the teleconference minutes.

**Motion:**

Motion to approve 2013 Mar Orlando meeting minute for 802.22b task group as contained in 22-13-0080-00-000b

Move: Chang-woo Pyo

Second: Sunghyun Hwang

No objection was heard. Motion passed.

Jerry Kalke joined from teleconference.

8. Review of teleconference meetings. There were total 5 teleconferences conducted between March and May face-to-face meeting. The teleconference meeting minute was reviewed one by one. The following motion was proposed.

**Motion:**

Motion to approve 802.22b task group teleconference minutes as contained in

22-13-0062-01-000b

22-13-0064-00-000b

22-13-0071-00-000b

22-13-0075-00-000b

22-13-0076-00-000b

Move: Chang-woo Pyo

Second: Zhang Xin

No objection was heard, Motion passed.

8. Discussion of time slots for each technical contribution. There were total 3 technical contributions for this face-to-face meeting.

Tuesday May 14th PM1: Resource allocation for IEEE 802.22b system. Dr Hwang

Wednesday May 15th AM1:

Wednesday May 15th AM2: MAC and PHY modification, Dr Sasaki, Dr Zhao

 Schedule of IEEE 802.22b Technical items by HiKE, Dr Toh

Thursday May 16th AM1:

Thursday May 16th AM2: Comparison of Channel Models for Devices with Low-Height Antennas, Dr Villardi

9. There were discussions of difference between 802.22 and 802.22b. Several suggestions were pointed out to enhance the functionality of 802.22b

 9.1 It has to be economically competitive.

 9.2 Another advantage point is 802.22 and 802.22b co-exist in the same device.

 9.3 The device is better to have small battery and compact.

 9.4 Low capacity device is expected to be low cost.

 9.5 Another possible application of 802.22b is to work with TV tuner.

 9.6 Trade off between flexibility and cost-effective. Right now, 802.22 is rather flexible.

 9.7 It was suggested to have a comparison between 802.22 and 802.22b from the implementation point of view.

10.The meeting was recessed at 1200 PM. **IEEE 802.22b Task Group**

**14th May (Tuesday), PM1**

**Minutes:**

1. The meeting was called to order by Chair at 1:30 PM.

2. “Proposed Text of PHY technical items relate to Section 9.1 and 9.2 of the Std 802.22-2011” (document number: 22-13-0070-00-000b) is presented.

Q: Is the sampling factor different for different bandwidth?

A: They are the same, which is 28/25\*(required bandwidth-1).

Q: It was once suggested to remove the SCH. Is this feature deleted from the 1k mode or 802.22b whole group? If the answer is latter, it means we will remove superframe. This indicates a large amount of changes from the base standard.

A: Yes, we understand that. We need to dicuss this more in the whole group and consider carefully.

3. “Resource allocation for 802.22b System” (document number: 22-13-0088-01-000b) is presented.

Q: Is the H-CPE here mobile, because it is shown to be placed on the vehicle?

A: 802.22 system doesn’t support high-speed communication, so the mobile group considered here doesn’t move very fast. I assume it is stationary here. It can be changed to portable.

Q: What is the operating channel?

A: It is the channel currently used in that network. If there is only one channel, we will share the resource between the base station and the L-CPEs.

Q: The number of bits for resource allocation is 12 bits. Can we support up to 4k devices?

A: We support the minimum number of devices; I think it should be ok

Q: Slide 7, the size of DS/US-MAP IE, should it be the integer number of bits?

A: Yes, we will use padded bits.

Q: Slide 15, who controls the adding and deleting of a device?

A: Base station.

4. The meeting was recessed at 3:15 PM.

**IEEE802.22b Task Group**

**15th May (Wednesday), AM1**

**Minutes:**

1. The meeting was called to order by Chair at 8:30 AM.

2. “802.22b CPE initialization” (Document no: 22-13-0060-00-000b) was presented.

 2.1 Concern was raised when S-CPE was in the keep-out region which may cause interference to other TV incumbents.

 2.2 Concern was raised regarding the texting of the document. It is suggested to carefully use the word “superframe”, because in 802.22b the superframe structure will be removed.

 2.3 A new terminology is suggested to propose for L-CPE and S-CPE, because CPE represents something a little big in the house, with the antenna on the roof. Chair applauded such suggestion and called for innovative idea.

3. The meeting was recess at 10:00 AM.

**IEEE802.22b Task Group**

**15th May (Wednesday), AM2**

**Minutes:**

1. The meeting was called to order by Chair at 10:30 AM.

2. “Proposed Text of PHY technical items related to Section 9.6 of the STd.802.22-2011” (document no: 22-13-0066-01-000b) was presented.

In audience’s understanding, 802.22b has one MAC and two completely different PHY. Concern was raised on how to organize the draft.

3. “Proposed Text of PHY technical items related to Sections 9.7, 9.8 and 9.9 of the Std. 802.22-2011” (document no: 22-13-0070-00-000b) was presented.

Doubts were raised on patterns of CDMA ranging. Authors reply that this pattern is desired because 802.22b is designed to support a large number of subscribers.

4. “Proposed PHY Technical Items for the IEEE802.22b” (document no: 22-13-32-02-000b) was presented. “Proposed Text for MAC Text for the IEEE 802.22b” (document no: 22-13-82-00-000b) was presented next.

5. “Proposed Text for the IEEE 802.22b” (document no: 22-13-0081-00-000b) was presented.

Doubt was raised about the feasibility of 256-QAM implementation in the market. Also the complexity of device and cost that would be caused by 256 QAM poses some hidden challenge in 802.22b.

Authors expressed the difficulty from University to build prototype, but they are willing to provide some measurements supporting the proposal.

Doubt was also raised about the modulation schemes that could be actually supported in the 802.22 system.

6. “Schedule of IEEE 802.22b MAC Technical Items by Hitachi Kokusai Electri” (document no: 22-13-0083-00-000b) was presented.

7. The meeting was recessed at 1230PM.

**IEEE802.22b Task Group**

**16th May (Thursday), AM1**

**Minutes:**

1. The meeting was called to order by Chair at 8:30 AM.

2. “802.22b Ranging” (Document no: 22-13-0069-00-000b) was presented.

3. “802.22b General Frame”(Document no: 22-13-74-00-000b) was presented.

Concern was raised that, the general frame here may force the worst case scenario.

4. The following motion is proposed:

 **Motion #4**

Move to authorize the 802.22 WG Chair to forward, Document 22-13-0087 Rev0 [<https://mentor.ieee.org/802.22/dcn/13/22-13-0087-00-0000-802-22-inputs-to-itu-question-236-on-smart-grid-power-management-systems.docx>] to 802.18 RR-TAG as preliminary input for the ITU Question 236. Allow 802.22 Chair or any other representative (e. g. Mr. Peter Flynn or Mr. Ivan Reede) to make modifications based on the inputs from 802.18 to represent the position of the 802.22 Working Group.

Move: Chang-woo Pyo

Second: Peter Flynn

Discussion: None

For:  8

Against:

Abstain:

**Motion Passes Unanimously**

5. The meeting was recessed at 10:00 AM.**IEEE802.22b Task Group**

**16th May (Thursday), AM2**

**Minutes:**

1. The meeting was called to order by Chair at 10:35 AM.

2. Jerry Kalke joined from teleconference.

3. “Comparison of Channel Models for Devices with Low-Height Antennas” (Dcoument no: 22-13-0086-00-000b) was presented.

 2.1. Audience shows interest in knowing the exact communication distance between the two models.

 2.2. Audience is interested in knowing the environment of making all the calculations.

 2.3 Low-antenna model doesn’t have a frequency component; does it mean it can be applied in every spectrum band? Author reply, this model is measured in the 800 MHz, he doesn’t suggest to run the risk to model bands that are far from 800 MHz.

4. All contributions are done for this face-to-face meeting. Chair discussed the schedule of future teleconference from now till July face-to-face meeting.

The following dates are scheduled tentatively:

23rd May

30th May

6th June

13th June

20th June

27th June

4th July

Eastern time 9 PM (the next day Japan/Korean 10 am)

5. The meeting was adjourned at 1140 AM.