IEEE P802.22
Wireless RANs

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| Minute of IEEE 802.22b Task group at Geneva Face-to-Face Meeting  |
| Date: 2013-7-16 |
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Abstract

This document presents the minutes of IEEE 802.22b task group at Geneva Face-to-Face Meeting from 15th July 2013 to 19th July 2013.

 **IEEE 802.22b Task Group**

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**16th July (Tuesday), AM1**

**Minutes:**

1. The meeting was called to order by Chair at 0810 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 22-13-0101-00-000b for the coming week was reviewed.

The following motion was proposed to approve the agenda.

**Motion:**

Motion to approve 2013 July Geneva Plenary agenda for 802.22b task group as contained in 22-13-0100-00-000b

Move: Chang-Woo Pyo

Second: Apurva Mody

No objection was heard. Motion passed.

5. Achievements in May meeting were reviewed. During the previous face-to-face meeting, 6 technical contributions were received and presented. 3 were from PHY layer and 3 were from MAC layer. After the face-to-face meeting, 6 teleconferences were held.

6. The timeline for creating draft document was reviewed and our current progress was shown to be on schedule.

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

**Motion:**

Motion to approve 2013 May Harwaii meeting minute for 802.22b task group as contained in 22-13-0102-01-000b

Move: Chang-woo Pyo

Second: Jerry Kalke

No objection was heard. Motion passed.

8. Review of teleconference meetings. There were total 6 teleconferences conducted between May and July 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

22-13-0103-00-000b

22-13-0104-00-000b

22-13-0105-00-000b

22-13-0106-00-000b

22-13-0107-00-000b

22-13-0108-00-000b

Move: Chang-woo Pyo

Second: Hwang

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 July 16th PM1:

Wednesday July 17th AM1: “Management message for group resource allocation”

Wednesday July 17th AM2: “Proposed PHY text for 802.22b”

Thursday July 18th AM1: “Proposed MIMO topics for 802.22b”

Thursday July 18th AM2: “Channel Aggregation”

The following are the scheduled discussion for working document discussion.

Tuesday July 16th PM1: “802.22b general”

Wednesday July 17th AM1: PHY

Wednesday July 17th AM2: “802.22b General Frame”

Thursday July 18th AM1: “Initialization and Association”

Thursday July 18th AM2: “802.22b Ranging”

9. Presentation of OmniRan by Max Riegel “IEEE 802 OmniRan EC SG Results and Outlook” was presented.

10.The meeting was recessed at 9:30 PM. **IEEE 802.22b Task Group**

**16th July (Tuesday), PM1**

**Minutes:**

1. The meeting was called to order by Chair at 1:40 PM.

2. The agenda for this session was to discuss the document “802.22b general” (document No:22-13-0089-00-000b) and “802.22b General Frame” (document No: 22-13-0074-03-000b)

3. Document “802.22b general” (22-13-0089-00-000b) was first presented, Section 7.

4. Document “802.22b General Frame” (22-13-0074-03-000b) was then presented.

It was suggested to maintain the legacy pilot structure. But the audience concerned about if this proposed frame structure can support the legacy pilot structure. The author replied that the legacy frame structure was remained; the proposed frame structure is to add some additional zone into the legacy frame strcture. So there would be no issue in backward compactibility in the pilot structure.

5. The meeting was recessed at 3:45 PM.

**IEEE802.22b Task Group**

**17th July (Wednesday), AM1**

**Minutes:**

1. The meeting was called to order by Chair at 8:17 AM.

2. According to the planned schedule, “Management message for group resource allocation configuration” (document: 22-13-0118-00-000b) by Dr Hwang was presented.

 There was doubt about the bit length for SID and GID. And more information element was suggested to be added in. Author agreed and would reconsider it.

3. “Proposed Text of PHY technical items related to Section 9.4 of the Std. 802.22-2011” (22-13-) was presented by Dr Oodo.

The following questions were asked after the presentation.

 Is the removal of superframe structure applied to new PHY only or the legacy structure as well? The author replied this remains an issue for discussion. We have to consider the SCH information. We have to check if there is no problem to remove SCH information. In the new PHY, there is no superframe preamble, this idea can have some impact on the synchronization problem. If we can solve these two problems, it is ok to remove the superframe structure.

 In the legacy standard, superframe structure was in section 9.4. but the propose structure is in section 9.X.4, how to merge these two? It was suggested to have a completely new section, as section 10, because there is no compactibility between the two.

4. There was half an hour more to the end of this session, Dr Zhao volunteered to move his presentation from AM2 to AM1. So the schedule is modified. “Proposed PHY text for 802.22b” was presented by Dr. Zhao in this session.

The following questions were asked after the presentation.

Do we need to specify TCM schemes? The authors replied more time is needed to provide more values in the multiplath scenario.

Do you consider the feasibility of 256 QAM in the multipath channel? The author replied that we are trying to do is to add some modification to cover higher data rate. That is our intention to propose the 3D modulation schemes. Hence, we put 256 QAM in the table for backward compatibility.

 It was pointed out that to support 256 QAM in multiplath channel, the required CNR is almost 50 dB. Audience showed concerns over the high SNR required.

The author is not too sure if 256 QAM can work very well in WRAN channel. It was pointed out that if 256 QAM is included in the draft, the overhead will be increased overall to include this MCS. This is another concern.

Author asked the footnote on channel B which is extracted from 802.22 base standard. Audience confirmed that this footnote is for channel B.The values are from the channel measure document. Channel profile B is a typical channel to represent WRAN and also the best condition. C and D are the worst case scenarios.

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

**IEEE802.22b Task Group**

**17th July (Wednesday), AM2**

**Minutes:**

1. The meeting was called to order by Chair at 10:40 AM.

2. Document “18-13-0085-00-0000” was discussed in this session. Several sections were modified such as section 6.4 “Backhaul” and section 8 “Impact of widespread deployment of wired and wireless networks used for power grid management systems on spectrum availability”. This updated document would be uploaded to 802.22 mentor as document 22-13-0123-00-0000.

3. **Motion**

Move to approve document 22-13-0123-00-0000 as 802.22 input to 802.24 to respond to ITU question 236 on smart grid power management system. Also move to allow the working group Chair to make editorial change to the document as he sees fit before submission.

Move: Apurva Mody

Second: Shigenobu Sasaki

Result

For: 11

Against: 0

Abstain:0

No objection is heard, the motion is passed.

4. The agenda was amended.

**Motion:**

Move to approve the amended agenda as contained in document 22-13-0096-02-0000.

Move: Apurva Mody

Second: Jerry Kalke

Result:

For: 11

Against: 0

Abstain:0

No objection is heard, the motion is passed.

5. As scheduled, “802.22b General Frame” was presented.

Question was raised on the definition of segment? Is it the same as 802.16, the legacy mode doesn’t have the segment structure, so this proposed frame only apply to the new PHY.

It was suggested to clarify the contribution which is applied to both PHY mode, or apply to only the new PHY mode.

The author was asked definition of Access Zone, it means the direct communication between any devices. it is defined in both upstream and downstream.

Access zone is already known. is there any reason for introducing it here? Author replied that there is no special reason; rather it is for distinguishing different functions performed by different parts of the frame.

Is the length of each zone variable or fixed? Authors reply that it is variable.

6. The meeting was recessed at 12:30 PM, session will continue in PM1.

**IEEE802.22b Task Group**

**17th July (Wednesday), PM1**

**Minutes:**

1. The meeting was called to order by Chair at 2:30 PM.

2. Author continue to present “802.22b General Frame”

3. “Initialization and Association” (22-13-0060-02-000b) was presented.

4. No further questions were asked after the presentation. The meeting was recessed at 3:30 PM.**IEEE802.22b Task Group**

**18th July (Thursday), AM1**

**Minutes:**

1. The meeting was called to order by Chair at 8:10 AM.

2. “802.22b Ranging” (Dcoument no: 22-13-0069-01-000b) was presented.

3. The meeting breaks at 0920 AM.

4. The meeting resumes at 9:25 AM.

5. “Suggested MIMO Topics to the Std.802.22b” (Dcoument no: 22-13-0125-00-000b) was presented.

The MIMO topic was tentatively proposed. The document serves to ask the opinion from the group what topic should be included and any topic should be removed.

Audience has a question about including relaying because relayng is not related to number of antenna, and not a sub topic under MIMO. The presenter answered that, the reason to put here is because relay may employ MIMO.

Audience point out that we need to consider both PHY and MAC layer operation in channel aggregation and MIMO

MIMO is one way to meet the throughput requirement. Audience thinked that MIMO should be optional. The author answered, if we count on MIMO to reach the throughput or beyond the throughput, how can we promise the throughput with an optional technique. Audience thinked that to put a technique as mandatory, we need to make sure the feasibility. This question is open to discussion.

There was a short discussion on Fractionality of the spectrum.

6. The meeting was recessed 1015 AM

**IEEE802.22b Task Group**

**18th July (Thursday), AM2**

**Minutes:**

1. The meeting was called to order by Chair at 10:50 AM.

2. “Proposed Text of MAC technical items related to 7.2X Multi-Channel Operation” (document: 22-13-0124-00-000b) was presented.

Question was raised if this contribution works on contingous channel? Author answer there is no constraint on the channel situation. It can work on either contingous channel or discontingous channel.

There was concern on the backup list channel if there are more users in 802.22b. Presenter thinked that in the legacy standard, there is no specified number of users, so we could leave it unchanged at the moment.

3. The presentation of “802.22b Ranging” (document:22-13-0069-01-000b) continued.

4. The closing of 802.22b taskgroup.

Chair reviewed all presented contributions this week. Chair applauded all the good work done, and was happy that the task group progress is on schedule.

The following teleconferences were schedule. Every Thrusday from 25th July to 5th Sep

5. The meeting was adjourned at 0920 AM.