IEEE P802.22
Wireless RANs

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| Minute of IEEE 802.22b Task group at Vancouver Face-to-Face Meeting  |
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Abstract

This document presents the minutes of IEEE 802.22b task group at Vancouver Face-to-Face Meeting from 13th Jan 2012 to 17th Jan 2013.

 **IEEE 802.22b Task Group**

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**15th Jan (Tuesday), PM1**

**Minutes:**

1. The meeting was called to order by the chair at 1335 AM.

2. Dr Pyo 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 22-13-0008-00-000b for the coming week was reviewed. The following motion was proposed to prove the agenda.

**Motion:**

Motion to approve 2013 Jan Vaouver Interim agenda for 802.22b task group as contained in 22-13-0008-00-000b

Move: Chang-woo Pyo

Second: Zhang Xin

No objection was heard. Motion passed.

5. Achievement in November meeting was reviewed. During the previous face-to-face meeting, 5 proposals and 1 technical contribution were received.

6. Chair review the face-to-face meeting minute as well as the teleconference minute.

7. Chair discussed the tentative future plan for 802.22b, the following comments were received:

* 7.1 It is suggested to allocate more time to power-point discussion than word document. Ans: From other’s experience, the development of draft will be faster if it is in text.
* 7.2 The point is to compare each proposal; we don’t need to restrict the document type. If we feel easy to compare in power point format, we can compare using power-point. The text submission is done in July meeting, before that, we shouldn’t restrict the presentation type.
* 7.3 Q: Are we going to combine all proposals? or selection will be carried out. Ans: comine and selection
* 7.4 Q: When is this carried out? Ans: July meeting
* 7.5 Temporary concesus is reached: before July meeting, we can discuss the document in the form of power point, not using baseline document. The goal is to complete the draft before July meeting.
* 7.6 Chair asked if everyone agrees to have the draft ready in July. Some feel this timeline is aggressive.
* 7.7 From experience, in the process of proposal comparion and merging, we need to have conference call very frequently. During face-to-face meeting, we also need to have many time slots for discussion. To compare the big picture, it is more efficient to use power point. To compare the details, text is more effective. To compare the parameter, excel is more effective. Hence, the document type is not important. In some case, we may need ad-hoc meeting before face-to-face meeting.
* 7.8 Q: Time to deployment is much shorter than the standard process. I wish it is reasonable to compress the timeline. There shouldn’t be too many debates over PHY since we are a small group. The typical review time window is rationally shorter. As a result, the draft development process can be sped up.

8. Discussion of time slot for presentation.

Thursday AM1: Oodo san. Zhang Xin (NICT)

Thursday AM2: Toh Keat Beng (Hitachi Kokusai)

Thursday PM1: Discussion of future plan

9. Approval of meeting minute

 **Motion:**

Motion to approve November face-to-face meeting minute for 802.22b task group as contained in 22-13-0003-00-000b

Move: Pyo

Second: Hwang

No objection was heard, Motion passed.

**Motion:**

Motion to approve December Teleconference meeting minute for 802.22b task group as contained in 22-13-0004-01-000b

Move: Pyo

Second: Toh Keat Beng

No objection was heard, Motion passed.

10. The meeting was recessed at 1430 PM

**IEEE 802.22b Task Group**

**17th Jan (Thursday), AM1**

**Minutes:**

1. The meeting was called to order by Dr. Pyo at 8:36AM.

2. Link budget calculation was presented by Zhang Xin. The following Q are received.

* 2.1 Why is L-CPE 30 dBm, for typical case, it can be 20 dBm. Ans: Because max range is the goal, hence max EIRP is assumed. But the suggestiong was good, for typical case, 20 dBm should be more common.
* 2.2 slide 7, why is -77.3 dBm is obtained. Ans: This value is obtained according the value stated in base standard and followed appendix waterfall figure.
* 2.3 Does your one hop definition refer to BS to L-CPE? Ans: Nope. Our one hop definition refers to the number of entities involved. It is not restricted to only BS to L-CPE, but also BS to H-CPE. One hop refers communication between two entites.
* 2.4 Why is 10 m for H-CPE in typical case assumed? Ans: that is because in smart grid application, we assume meters as L-CPE, the access point in a building as H-CPE. It is practival to install H-CPE with a 10 m height which is around 3 floors.
* 2.5 What is difference in upstream and downstream? Ans: In our calculation, it is mainly the required power at the receiver that differes upstream and downstream.

3. PHY performance for NICT proposal was presented by Dr Oodo.

* 3.1 Simulation result for channel D should be provided. 20 micro second is not enough, need 70 micro second channel delay spread (dispersion delay). A typical scenario for Channel D is SF bay area, there are eco and value around, and the range is from 12-15 km. Ans: 22b coverage area is smaller. Q: I would like to see 60microsecond for the channel delay spread,
* 3.2 pilot pattern, suggest to move the last column to the center.
* 3.3 Legacy pilot pattern disperse the energy between sub-carrier. Some calculation for the proposed pilot on EIRP would be nice to provide.
* 3.3 In the proposed pilot patter, what happen when the pilot hit the deep null situation?
* 3.4 It is suggested to find the channel measured data from Apurva, this is the data used by broadcaster.
* 3.5 Q: Could you explain why the proposed pilot pattern has better performance, is it in term of channel estimation? Ans: Proposed pilot can use linear interpolation, while legacy cannot. C: The ratio between two patterns is the same. It depends on the channel estimation technique used.

4. The meeting was recessed at 1000Am

**IEEE802.22b Task Group**

**17th Jan (Thursday), AM2**

**Minutes:**

1. The meeting was called to order by Dr. Pyo at 1035AM.

2. “MAC proposal for IEEE 802.22b by Hitachi Kokusai Electric” 22-12-0087-r1 was presented by Dr Toh.

3. The following questions were received:

* Q: how do we know the channel location? Ans: we know it from the database. BS will decide which channel is allocated to which CPE.
* Q: we can access the channel aggregation from DB; L-CPE can’t access DB directly. In that case, L-CPE need to communicate with BS. We need to define that message. Ans: Message as shown in slide 12 will be received.
* Q: which information will show channel index. Ans: Aggregation channel
* Q: how can we identify the location of channel index using that information? Ans: there is a algorithm done by the base station
* Q: Aggregation number is not necessary. 8 bit \*n is a bit large. We are looking for numbers less than 10. It is Suggested to reduce to 5 bi \* n. Ans: 8 bit =1 byte, which is easy for implementation
* Q: slide 8, channel allocation manager, how is it different from spectrum manager in the legacy. Ans: Spectrum manager didn’t perform channel allocation in legacy 802.22, because only one channel. Also it didn’t have the function to deal with multiple-structure which consists of BS, and L-CPE and H-CPE. Main difference is multi-channel operation and single channel operation.

4. The next item is the discussion of future plan.

Slide 7 of 22-12-0110-00-000b is shown. From our earlier discussion, it is difficult to create text document.

Slide 21 from 22-13-0009-01-000b is shown. The new approach is to create TOC as a working document. Before March, we create technical item and assign volunteer for each item.

Comment: Before the input of detailed technical item, we can submit input step by step, item by item. We may need to compromise concept. TOC will be served as a skeleton. And details will be filled up slowly step by step after we compromised concept.

Chair request main picture from each presenter. Question such as “Is main picture for full proposal or contribution” is asked. Answermis it doesn’t matter.

5. Discussion of teleconference plan.

The following schedule has been arranged and agreed to carry out teleconference.

Feb 7:

Feb14:

Feb 21

Feb 28:

Mar 7:

Time: 10 AM Japan/Korean, duration: 1.5 hours-2 hours

6. 802.22b meeting was adjourned at 1130 AM.