**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | Peer Aware Communications (PAC) Task Group minutes for July 2013. | |
| Date Submitted | 2nd Aug. 2013 | |
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| Re: |  | |
| Abstract | Task Group minutes of the IEEE 802.15.8 Plenary Meeting in Geneva, Switzerland. | |
| Purpose | To develop interest in this technology with a view to determine its possible standardization within the 802.15 WG. | |
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These are the minutes of IEEE 802.15.8 Task Group PAC meeting held at the International Telecommunications Union, July 15-18, 2013.

**Monday July 15th, 2013**

1. Room: Room A in CCV building
2. The Chair called the meeting to order at 16:05.
3. Chairman: Myung Lee
4. Attendees were asked to sign in the IMAT system for attendance.
5. The Chair presented the proposed agenda (DCN: 15-13-0363-00-0008) for the week, and mentioned the submitted documents to PAC for this session.
6. The agenda was approved without objection of the attendees
7. There were no objections on approving the minutes (DCN: 15-13-0343-00-0008) on the previous TG8 meeting held at the Hilton Waikoloa Village, May. 13-16, 2013.
8. There was discussion about how to present the submitted contribution documents.
9. Even though presentation time slot allocation after classifying all the submitted documents into two separate categories, MAC and PHY, was recommended, a motion was made to vote on the order of presentation.
10. Motion: To present related presentation materials all together at one time.  
    Mover: Byung-Jae Kwak  
    Seconder: Suhwook Kim  
    Vote: 8-0-3 (Passed)
11. After discussions about the order of presentation, the chair announced that 40 minutes (except Q&A) were available for presentation and 80 minutes were available for the proposal including both MAC and PHY. All questions were to be asked after presentation.
12. The chair asked the MAC Editor, Byung-Jae Kwak, to create an excel document of which row and column represented the document number and the technical item in TGD, respectively.
13. There was discussion about whether Qing Li was eligible for presentation in this meeting. Careful review of the CFP document (DCN: 15-13-0069-05-0008) showed that no restrictions on presentation in July were imposed on whom was absent in May meeting once the pre-proposal had been submitted in May. Her presentation in July was approved without objection.
14. Presentation time schedule for all the submitted contribution documents including Qing Li’s document was made by the chair.
15. The chair asked all the proposers to email the excel file to the MAC Editor, Byung-Jae Kwak, after filling in the draft excel file which would be released by using the PAC email reflector.
16. Igor Dotlic presented "NICT Impulse Radio Ultra Wideband PHY proposal to IEEE 802.15.8" (DCN: 15-13-0383-00-0008).
17. The PHY Editor, Seung-Hoon Park, showed a draft excel file.
18. The meeting was recessed at 17:44.

**Tuesday July 16th, 2013**

1. Room: Room A in CCV building
2. The group reconvened at 08:05.
3. Attendees were asked to sign in the IMAT system for attendance.
4. The chair reminded the attendees of presentation schedule written in the agenda (DCN: 15-13-0363-01-0008).
5. Marco Hernandez presented “NICT PHY Proposal, Part A” (DCN: 15-13-0369-00-0008).
6. Marco Hernandez presented “NICT PHY Proposal, Part B” (DCN: 15-13-0370-00-0008).
7. Byung-Jae Kwak presented “ETRI Technical PHY proposal for IEEE 802.15 TG8 PAC Standard” (DCN: 13-0373-01-0008).
8. Byung-Jae Kwak presented “A Feasible and Efficient Channel Access Scheme for PAC Networks” (DCN: 13-0374-01-0008).
9. The meeting was recessed at 09:55.
10. The group reconvened at 10:31.
11. Byung-Jae Kwak presented “Self Spatial Filtering Scheme for PAC” (DCN: 15-13-0375-01-0008). After the presentation, he showed and gave a brief explanation of the text proposal (.doc) embedded in slide #24 of DCN: 13-0373-01-0008.
12. Seung-Hoon Park presented “Samsung Proposal: PAC Operations and Frame Structures” (DCN: 15-13-0376-01-0008).
13. The meeting was recessed at 12:22.
14. The group reconvened at 13:31.
15. The chair reminded the attendees of emailing the updated excel file to the MAC Editor, Byung-Jae Kwak.
16. Tae-Joon Park presented “Low Energy Service Discovery PHY for PAC WPAN” (DCN: 15-13-0385-01-0008).
17. Wun-Cheol Jeong presented “Low Energy Service Discovery MAC protocol for PAC WPA” (DCN: 15-13-0378-01-0008).
18. Huan-Bang Li presented “NICT’s MAC Proposal With Simulation Results” (DCN: 15-13-0381-00-0008).
19. The meeting was recessed at 15:30.
20. The group reconvened at 16:00.
21. The chair announced that, even though all the presentations scheduled for Tuesday were over, next presentations scheduled for Wednesday would be presented in PM2 time slot.
22. The Chair recessed the meeting at 16:07 in order for the next presenter to be ready for a presentation after uploading the updated presentation material.
23. The Chair resumed the meeting at 16:12.
24. Woongsoo Na and Junbeom Hur presented “Technical Proposal for IEEE 802.15.8” (DCN: 15-13-0446-00-0008). DCN appeared at the right upper corner of presentation material (.ppt) was 15-13-0274-01-0008. The presenter said that the DCN appeared at the right upper corner was wrong and 15-13-0446-00-0008 was a shortened version of 15-13-0387-00-0008. The Chair asked the presenter to correct the wrong DCN in .ppt and to upload the revised .ppt with DCN 15-13-0446-01-0008.  
    Even though most part of presentation material was covered by Jeongseok Yu, security mechanism (slide #58~#60) was presented by Junbeom Hur.
25. The meeting was recessed at 17:03.

**Wednesday July 17th, 2013**

1. Room: Room A in CCV building
2. The group reconvened at 10:30.
3. Attendees were asked to sign in the IMAT system for attendance.
4. Seong-Soon Joo presented “TG8 PAC Link Layer Specification” (DCN: 15-13-0367-01-0008).
5. Jinyoung Chun presented “Technical proposal of PAC procedure” (DCN: 15-13-0394-00-0008).
6. Suhwook Kim presented “Performance evaluation for LG’s proposal” (DCN: 15-13-0389-01-0008).
7. The meeting was recessed at 12:30.
8. The group reconvened at 16:06.
9. Qing Li presented “Final Proposals for IEEE802.15.8” (DCN: 15-13-0380-01-0008).
10. Michael McLaughlin presented “UWB PHY Proposal to TG8” (DCN: 15-13-0278-02-0008).
11. The meeting was recessed at 18:15.

**Thursday July 17th, 2013**

1. Room: Room A in CCV building
2. The group reconvened at 08:03.
3. Malfunction of network made all the attendees unable to sign in the IMAT system for attendance.
4. Seungkwon Cho presented “Overview of a proposal for PAC operating in synchronous mode (ppt)” (DCN: 15-13-0391-01-0008).
5. Seokki Kim presented “A PHY proposal for PAC operating in synchronous mode (ppt)” (DCN: 15-13-0393-01-0008).
6. Seungkwon Cho presented “A MAC proposal for PAC operating in synchronous mode (ppt)” (DCN: 15-13-0390-01-0008).
7. Attendees were asked to sign in the IMAT system for attendance.
8. The meeting was recessed at 10:07.
9. The group reconvened at 10:34.
10. Time for an extended Q&A was allocated to Qing Li and she gave a supplementary presentation (slide #79 ~) with a revised presentation material, “Final Proposals for IEEE802.15.8” (DCN: 15-13-0380-02-0008).
11. Marco Hernandez presneted “Comment and resolution to TGD” (DCN: 15-13-0407-00-0008). His suggestion regarding “9.4.1.1. ES/N0 calculation” in the TGD (DCN: 15-13-0568-05-0008) was either to delete the interference term or to replace it with aggregate noise as was described in the presented document, DCN: 15-13-0407-00-0008.
12. Even though there was a group discussion about the suggestion, decision on the adoption of his suggestion was left for further discussion. The chair recommended the attendees to read Marco’s document, DCN: 15-13-0407-00-0008.
13. The MAC Editor, Byung-Jae Kwak, presented the merged categorization excel file. He stated that only a few proposers filled in the “ProposalList” sheet in the categorization excel file.
14. The PHY Editor, Seung-Hoon Park, showed how to fill in the “ProposalList” sheet.
15. The Chair asked the PHY Editor, Seung-Hoon Park, to release the categorization excel file and he also asked all the proposers
16. to fill in the “ProposalList” sheet by referring to the Seung-Hoon’s exemplary listing and
17. to add comments with a cell marked ‘O’ in the “MatirxStyle” sheet by referring to Billy’s exemplary comments in the row corresponding to DCN 278.
18. The group discussed about teleconferences before the next meeting in Nanjing, China. The group decided to have two teleconferences before the next meeting in Nanjing, China.
19. The Chair announced that the updated categorization excel file must be submitted by the proposer prior to the 1st teleconference.
20. After discussion about teleconference date and time, the Chair announced the following schedule:
21. Submission of “Proposal categorization”:

* By August 4.
* Email to both the 15.8 Reflector and the MAC Editor (Byung-Jae Kwak, bjkwak @etri.re.kr)

1. 1st Teleconference:

* August 6, Tuesday 8:00 PM US EDT.

1. Submission of “Enhancing and missing simulations”:

* By August 25.

1. 2nd Teleconference:

* August 27, Tuesday 9:00 AM US EDT.

The Chair also announced that teleconference system would be supported by LG.

1. The Chair asked Editors to merge all the submitted text proposals (.doc) into a draft PAC Framework Document (PFD) and to bring the merged PFD to the next meeting in Nanjing, China.
2. The meeting was recessed at 12:07.
3. The group reconvened at 13:43.
4. Attendees were asked to sign in the IMAT system for attendance.
5. The chair went over the agenda of this week once again (DCN: 15-13-0363-01-0008).
6. There were a lot of discussions about updating the Technical Guidance Document (DCN: 15-13-568-05-0008).
7. The chair announced that, since the TGD had been already approved by the group, motion must be made in order to modify TGD. Thus, several motions were made to update the TGD.
8. Motion: To update Technical Guidance Document (DCN: 15-13-568-05-0008) by adopting the equation 6 in DCN: 15-13-0407-00-0008.  
   Mover: Marco Hernandez  
   Seconder: Seung-Hoon Park  
   Vote: 5-0-2 (Passed)
9. Motion: To delete the new proposed text, “At least, the proposer must show the case when the number of dropped PD receivers is 10.”, in clause 9.4.3.2 of Technical Guidance Document (DCN: 15-13-568-05-0008).  
   Mover: Seungkwon Cho  
   Seconder: Byung-Jae Kwak  
   Vote: 8-0-4 (Passed)
10. Motion: To delete the new proposed text, “For multicast, the proposers, at the minimum, must show the case when the number of dropped PD receivers is 10.”, in section 9.4.2 of Technical Guidance Document (DCN: 15-13-568-05-0008).  
    Mover: Seung-Hoon Park  
    Seconder: Suhwook Kim  
    Vote: 5-1-5 (Passed)
11. Motion: To change antenna gain from 2.5dB to 0 dB in section 9.4.1.1 of Technical Guidance Document (DCN: 15-13-568-05-0008).  
    Mover: Michael McLaughlin  
    Seconder: None  
    Vote: No voting. Motion was withdrawn by the mover.
12. The meeting adjourned at 15:30.

The next meeting will be held during September 15-20, 2013 in Nanjing, China.