IEEE P802.11
Wireless LANs

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| IEEE 802.11bd Task Group Teleconference Minutes – March – April - May 2019 |
| Date: 2019-05-10 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| James Lepp | BlackBerry | 1001 Farrar Road, Ottawa, Canada |  | jlepp@blackberry.com |
| Joseph Levy | Interdigital |  |  |  |

Abstract

These are the minutes for the IEEE 802.11bd task group teleconferences between the March and May 2019 meetings.

*Versions:*

R0 posted after March 26 meeting

R1 posted after April 9 meeting

*Special thanks to Joseph Levy for taking minutes on the April 9th teleconference.*

R2 posted after May 7 meeting

**Minutes**

**26 March 2019**

1. Announcement: <http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00050.html>
2. **Agenda:** [**http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00054.html**](http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00054.html)
3. The chair projected and read through the agenda
4. Chair asks members on the phone/joinme to email attendance record to Chair and Secretary
5. **Patents and Policies**
6. The chair displayed links to the IEEE policies.
7. There were no notifications from anyone regarding the call for essential patents.
8. **Changes to the agenda**
9. None
10. No objection to approving the agenda.
11. **Presentation 11-19/0366r2**
12. Discussion:
	1. Question about how station using 20MHz channel interacts with 11p stations using the secondarion 10MHz channel. After a secondary channel becomes idle, is access to the secondary channel fair between 11p station and the 11bd 20MHz station?
	2. In this presentation slide 5, the interval is shown as TBD. Value of timer can be chosen to ensure fairness.
	3. Question about sensitivity in the second channel, is it the same as the primary channel when the 20MHz device is sensing. There is imbalance.
	4. Comment on slide 8. The channelization shown is different from that in Europe. For example, control channel is 184. How do you propose to harmonize the rules.
	5. Might need different rules for US and EU, but is it possible to have one common set of rules?
	6. Is the decision to transmit a particular PPDU 10MHz or 20MHz at the upper layer or MAC/PHY?
	7. Discussion about whether upper layer chooses/indicates primary 10MHz channel within a 20MHz service channel
	8. Suggestion we have a high-level discussion about which application uses 20MHz. Primary channel needs to defined outside 802.11. How does DCC work with 20MHz?
13. **Presentation 11-19/0368r2**
14. Discussion
	1. Comment that DSRC applications have standardized congestion control mechanisms in SAE J2945/1 that uses a combination of message rate and power control based on measurement of neighbour number and channel busy ratio. ETSI ITS-G5 also has congestion control in Europe. It would be good to base any work here on congestion on existing technologies.
	2. Question: if the documents providing these mechanisms are available. Can you provide reference.
	3. Comment: ETSI standard is available free of cost. SAE standard has a cost to download it. There may be another source that describes the congestion control.
	4. Comment on cross-layer nature of the problem.
	5. Comment that multi-user channel access is the biggest problem in C-V2X, particularly the near-far problem. Not sure we want to replicate that here.
	6. Question about what the C-V2X OFDMA issues are.
	7. Duplex issue: can’t transmit and receive at the same time (different sub-frequency, but same timeslot). Near far issue: same resource but can only receive the near one.
	8. Comment: that good metric to measure is at the application: the age of information at the receiver or the interpacket reception gap. That’s better than PER (packet error ratio).
	9. Procedural question about strawpolls. Only have 15 attendees in the call.
	10. Suggstion that we don’t run strawpolls in the teleconference.
15. Secretary notified the group that March meeting minutes have been posted for review and approval will be at the May meeting.
16. Having reached the end of the agenda, the Vice-chair adjourned at 11:02am

*Attendance:* (collected from joinme user list and member emails)

Ronny Yonghi Kim (Korea National University of Transportation)

Onn Haran (Autotalks)

James Lepp (BlackBerry)

Bo Sun (ZTE)

Insun Jang (LG Electronics)

Hiroki Motozuka (Panasonic)

Joseph Levy (Interdigital)

Ioannis Sarris (u-blox)

Frank LaSita

Hanseul Hong (Yonsei University)

Stephen Sand (DLR)

Yujin Noh (Newracom)

Martin Schmidhammer (DLR)

John Kenney (Toyota ITC)

**9 April 2019**

1. Announcement: <http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00057.html>
2. Call to order: 6:01 PM EDT
3. The chair projected and read through the agenda
4. Chair asks members on the phone/joinme to email attendance record to Chair, Secretary, and acting Secretary - Joseph Levy (InterDigital)
5. **Patents and Policies**
6. The chair displayed links to the IEEE policies.
7. There were no notifications from anyone regarding the call for essential patents.
8. **Agenda:** [**http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00057.html**](http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00057.html)
	1. There were no additions or comments on the agenda
	2. No objection to approving the agenda.
9. **Presentation 11-19/0393r1 – by Yonggang Fang (ZTE)**
10. Discussion:
	1. Question: on slides 4-6 there is an SNR gain, where does this come from?
	Ans – The gain is from the insertion of the mid-ambles
	Questioin: With the same midamble in each period, I don’t understand where the gain is coming from.
	Ans - Will check the results
	2. Question: How do you decide which period of midamble to use? There can be multiple receivers, each with a differnet type of channel.
	Ans – We used only simple spacing fo the midamble in this study.
	3. Question: Did you use 11ac LTF fro the midamble? Was CFO/PN was considered?
	Ans – We used the 11ac LTF and CFO/PN was not considered.
11. Having reached the end of the agenda, the chair adjourned at 6:27 pm EDT.

*Attendance:* (collected from joinme user list and member emails)

Bo Sun (ZTE)

Joseph Levy (Interdigital)

Stephan Sand (German Aerospace Center (DLR))

John Kenney (Toyota ITC)

Yonggang Fang (ZTE)

Carl Kain (Noblis/USDOT)

Geroge Calcev (Huawei)

Insun Jang (LG Electronics)

Takenori Sakamoto (Panasonic Corportation)

Rui Cao (Marvell Semiconducor, Inc.)

Bahar Sadeghi (Intel)

**23 April 2019**

**7 May 2019**

1. Meeting notice: <http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00070.html>
2. Chair called meeting to order at 7:30pm EDT
3. **Agenda and Policies**
	1. Agenda displayed on the screen: <http://www.ieee802.org/11/email/stds-802-11-tgbd/msg00068.html>
	2. Chair explained IEEE patent policy
	3. Chair called for potentially essential patents. No response
	4. Chair asked participants to announce their name and affiliation before speaking.
	5. Chair verified that the secretary was on the call and taking minutes for the meeting
	6. Secretary stated he would take the minutes for this joint call with 1609 and post to the IEEE 802.11 mentor site as usual.
	7. Chair confirmed that this is indeed an 802.11bd teleconference, but the content is a joint meeting with IEEE 1609.
	8. Chair asked participants to email James Lepp (Secretary) and/or Bo Sun (chair) to indicate their attendance on the call.
4. **Presentation 802.11-19/0752r0 – Justin McNew**
	1. Presenter introduced himself as one of the vice-chairs of IEEE 1609 and introduced several other members of IEEE 1609 that are participating today.
	2. Presenter presented 802.11-19/0752r0
	3. Chair thanks Justin for the presentation, as well as all the other 1609 WG members on the call today
	4. Comment: Under desirement, would like a larger MTU – for example, bigger than 2300 bytes.
	5. Comment: Would like anything bigger than the ethernet frame limit used today. 4kb? Applications could make use of this.
	6. Question: Slide 6: Since MA-UNITDATA request has a “source address” why not just set the random MAC at the upper layer using this interface.
	7. Discussion on random MAC addresses, how they are invoked/set from upper layer or not. Also some discussion on standard vs implementation of MAC address changes.
	8. Comment: this is a good topic to discuss between 802.11 an 1609 to improve text in both the standards.
	9. Comment: Michael Montemurro offered to make a presentation to 1609 WG about recent 802.11aq amendment on topic of MAC address randomization.
	10. Participant from 1609 WG suggested to write this down.
	11. Comment: There is a mechanism in 1609.4 to invoke a MAC address change
	12. Comment: but that causes a reset
	13. Comment: that’s an implementation detail. There are other facilities available that don’t need a reset.
5. **Presentation: 802.11-19/0276r1 Michael Fisher**
	1. Presenter presented 802.11-19/0276r1
	2. Discussion about V2X vector described on slide 8
	3. Comment: Original design was to not be disrupt 802.11 and things were moved to 1609.4. However moving forward with less “magic happens here” would be good.
	4. Comment: Many of these concepts already exist in other parts of the 802.11
	5. Comment: with respect to channel busyness, 802.11bd should do the reporting, not the deciding. ETSI and 1609 have different behaviour in response to channel busyness
	6. Comment about Rapidly Varying RF environments (RVR)
	7. Presenter indicates he will make an update ahead of the May IEEE 802. This could be discussed at the June IEEE 1609 meeting as well. Something more concrete wouldn’t be ready until July.
	8. Reminder that John Kenney is the official liaison representative between 1609 and 802.11bd. He can ensure information is updated between the groups.
6. Chair thanked the 1609 experts
7. Chair adjourned the meeting at 8:45pm EDT

Attendees

Bo Sun (ZTE)

James Lepp (BlackBerry)

Jim Lansford (Qualcomm)

Joseph Levy (Interdigital)

Jim Misener (Qualcomm)

Michael Fischer (NXP)

Kevin Smith (Leidos, USDOT)

Rui Yang (Interdigital)

Jeongki ()

Takenori Sakamoto

Samer Rajab (Honda)

Insun Jang ()

John Kenney (Toyota)

Sean Maschue ()

Dongguk Lim ()

Hiroyuki Motozuka (Panasonic)

Carl Kain (Noblis, USDOT)

Roger Berg ()

Michael Montemurro (BlackBerry)

Dick Roy ()

**Notes:**

Document numbers referenced (e.g. 802.11-19/0000r0) are available on IEEE Mentor: <https://mentor.ieee.org/802.11/documents>

Next meeting:

13-17 May, 2019 Atlanta Grand Hyatt in Buckhead