IEEE P802.11
Wireless LANs

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| Minutes of the Coexistence Standing Committee (SC) July 2018 meetings |
| Date: 2018-07-12 |
| Author(s): |
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Abstract

This document contains the minutes of the meetings of the Coexistence SC during the IEEE 802 July 2018 plenary meeting in San Diego.

# Wednesday, 2018-07-11, PM1 session

At 2018-07-11T13:35-07:00 the chairman of Standing Committee (SC) Coexistence calls the meeting to order. Andrew Myles acts as chairman of the SC. Guido R. Hiertz acts as recording secretary of the SC.

At 2018-07-11T13:36-07:00 the chairman presents the IEEE-SA guidelines as contained on page 4 of 11-18/1045r3. The proposed agenda is contained in this document. At this time, 11-18/1045r3 is equivalent to 11-18/1045r2. R3 of the agenda will contain any modification that the chairman might apply to 11-18/1045r2. At 2018-07-11T13:37-07:00 the SC adopts the agenda by unanimous consent. The chairman postpones approval of the meeting minutes until the next session tomorrow.

At 2018-07-11T13:40-07:00 the chairman starts reviewing 11-18/1045r3 from page 14.

Comment: A notified body may use its judgment, potentially based on a draft Harmonized Standard, to permit products being put to the European market.

At 2018-07-11T13:49-07:00 an attendee states that the IEEE 802.11 WG chair copied ETSI BRAN submissions to the IEEE 802.11 members area. The attendee explained that he checked the number of documents and that it matched. Furthermore, the latest drafts of EN 301 893 have been copied to the members area.

At 2018-07-11T14:05-07:00 the chairman arrives at page 32 of his presentation.

Comment: I believe this is wordsmithing. The statements are essentially equivalent.

Comment: I like the new text better. With the previous text I was confused about how a device would be handled if it comes out of transmission and cannot sense the preamble.

Comment: The previous text was more about the effect. The changed text is more correct.

Comment: The more stringent we make things here, the higher the danger that we have restrictions.

At 2018-07-11T14:10-07:00 attendees debate page 33.

Comment: This is a valid point. We need to review this aspect because of puncturing coming with 802.11ax.

Comment: What does Operating channel mean?

Comment: In the context of EN 301 893 it means any channel that is occupied.

At 2018-07-11T14:15-07:00 attendees debate page 34.

Comment: What does the maximum power relationship mean?

Comment: It means the threshold is fixed per life of the device. It does not change anymore. It’s the maximum power capability.

Comment: There are bands with different transmit power. The threshold, however, is independent of the band. The threshold solely depends on the device’s maximum transmit power capability.

Comment: What if I have a high gain antenna?

Comment: Everything is related to a 0 dBi antenna. You need to reduce your threshold per dB of antenna gain.

Comment: Maybe it is better to move the 60 s text after the two options are mentioned.

Comment: The Sophia Antipolis ETSI BRAN meetings are online accessible. You can also attend from home.

At 2018-07-11T14:28-07:00 the chairman continues presenting 11-18/1045r3 from page 38.

Comment: There is an error on page 41. The preamble length is 20 µs including and not excluding the service field.

Comment: Why does ETSI BRAN have such a level of details?

Comment: I agree that this is too much. Please join ETSI BRAN discussions.

Comment: Some stakeholders decided that there needs to be an authority. Since 3GPP did not respond to 802.11’s input anymore, ETSI BRAN is the level to achieve what we want.

Comment: FCC’s basic position is to set up generic rules.

Comment: ETSI is not like this. It is very normal for ETSI to have detailed rules that can be tested.

Comment: In EN 300 328 there is a list of exemptions. Different technologies are listed there.

Comment: Yes, this is true.

Comment: Initially, EN 301 893 even allowed a fixed backoff. Now there is exponential backoff.

Comment: The coexistence issues are resolved for Europe only.

Comment: ETSI BRAN becomes a negotiating point for 3GPP and IEEE 802.11.

Comment: The two organizations did not cooperate. Maybe they will do in the future.

Comment: Through ETSI BRAN we can force 3GPP to do what we want.

At 2018-07-11T14:46-07:00 Shubhodeep Adhikari begins presenting 11-18/1295r0. Attendees discuss page 4 of the presentation.

Comment: What is the fastest switching?

Comment: This is 16 µs as done in 802.11.

Comment: In our TXOP, when you do RD what do you use?

Comment: You use SIFS.

At 2018-07-11T14:46-07:00 Shubhodeep Adhikari arrives on page 5

Comment: In EN 301 893 there are two types of equipment. We have been focusing on Load Based Equipment (LBE) only.

Comment: In our opinion, Wi-Fi should also look at Frame Based Equipment (FBE) for IoT devices.

Comment: NR-U is looking at FBE because of the simplicity. It does not have the burden of LBE.

Comment: We think there is a need for further coexistence studies.

Comment: FBE did come from conference system manufacturers.

Comment: FBE was at risk of being removed from EN 301 893. It is certainly worthwhile checking out that there are no holes in it.

Comment: 3GPP is looking into using FBE now.

Comment: We are concerned about coexistence with LBE here.

Comment: A complete system could consist of an LBE AP or eNB and clients using FBE.

Comment: That system can be very aggressive.

Comment: We need to be careful that systems designed for voice are not being misused for other use.

At 2018-07-11T15:03-07:00 Shubhodeep Adhikari continues presenting.

Comment: Now, they recognize that for power-save preambles are helpful. Now, operators recognize that this is a good scheme.

Comment: Because of the technical advantages they are looking at using a preamble.

Comment: This will solve almost all coexistence issues.

Comment. We need more participants in 3GPP here.

Comment: We have seen this as part of our studies. It also helps with the performance of LAA.

Comment: We convinced them that 802.11a preamble will not change anymore.

Comment: We want 802.11 participants to go to 3GPP for the next two meetings.

Comment: This is resulting in recommendations. This is a study item.

Comment: For the study there needs to be input from companies.

Comment. Now there are only few companies that support this preamble.

Comment: I think our expectations was that they would never accept our preamble.

Comment: There seems to be some signs of changing attitude.

Comment: Some companies want a common signal with 802.11. While others want a NR-U specific preamble.

Comment: The current proposal at BRAN is based on the fact that we come back with studies in the future.

Comment: Now, the nice thing is that if 3GPP decides to start using the 802.11 preamble they could.

Comment: This would be a game changer.

Comment: If anybody does not know how to attend 3GPP, you can approach me. You need to be a member of ETSI and have three contributions to 3GPP.

Comment: Physical bodies in the room is the only way to influence. Liaison letters do not help.

At 2018-07-11T15:13-07:00 Shubhodeep Adhikari arrives at page 6 of his presentation.

Comment: Now, the simulation scenario has at least 10 % hidden nodes. Now, that we have data from some contributor we work to further increase the percentage of hidden nodes.

Comment: We need RSSI of outdoor deployed networks. Currently, we have only one.

Comment: We have data for indoor only, now we want data from outdoor-only deployments.

Comment: We wanted 25 % of hidden nodes but 3GPP participants wanted justification/data for this.

Comment: The only data we have is from HPE for a stadium.

Comment: The other data is from Cablelabs but this data does not contain a CDF.

At 2018-07-11T15:19-07:00 Shubhodeep Adhikari presents page 7 of his presentation.

Comment: What does this mean in practice?

Comment: RAN4 and RAN1 shall not be in violation. However, for political reasons they do not admit that there is a difference.

Comment: RAN4 was not aware of band combination and removed the restrictions in the DL.

Comment: We have to wait. Companies have sent a liaison from RAN 4 to RAN1. In our opinion it is in violation of the RAN1 agreement.

Comment: There is absolutely no doubt that there is a violation here. However, the procedure is that RAN4 has to approach RAN1.

Comment: The problem is that some cellular operators want this band combination.

Comment: Don’t say to RAN4 you broke it. Just ask if them if they believe this is the right interpretation.

At 2018-07-11T15:31-07:00 the chairman declares the meeting to be in recess.

# Thursday, 2018-07-12, PM1 session

At 2018-07-12T13:35-07:00 the chairman calls the meeting of the Coexistence SC to order. Andrew Myles acts a chairman of the SC. Guido R. Hiertz acts as recording secretary of the SC.

The chairman presents 11-18/1045r5. R5 is identical to R4 that is available from the Mentor server. Any modifications will be included in R5 and then uploaded.

At 2018-07-12T12:37-07:00 attendees approve the agenda proposed in 11-18/1045r5. The chairman proposes to approve the meeting minutes of the May 2018 meeting.

Guido R. Hiertz objects to approval of the meeting minutes contained in 11-18/1061r1. Guido explains that the minutes in 11-18/1061r1 are substantially different from the minutes in 11-18/1061r0. Guido explains that 11-18/1061r1 does not track the changes over 11-18/1061r0. Guido explains that he created 11-18/1061r2, therefore. 11-18/1061r2 shows the modifications that 11-18/1061r1 applies to 11-18/1061r0. The chairman decides that the meeting minutes contained in 11-18/1061r0 will be voted on only if a vote on approving the minutes contained in 11-18/1061r1 fails.

Motion

“The IEEE 802 Coex SC approves 11-18-1061-01 as minutes of its meeting in Warsaw in May 2018”

Moved: Stephen McCann

Seconded: Amelia Andersdotter

Guido R. Hiertz requests a recorded vote.

Result of the recorded vote:

* Balkan Kecicioglu: Abstain
* Shubhodeep Adhikari: Yes
* Andrew Myles: Yes
* David Kershaw: Yes
* Amelia Andersdotter: Abstain
* Bob Baeten: Abstain
* Jeff Jones: No
* Stephan Sand: Abstain
* George Calcev: No
* Alessandro D’Acierno: Abstain
* Tim Jeffries: No
* David Boldy: Abstain
* Carlos Aldana: Abstain
* Lili Hervieu: Yes
* Pradbodh Varshney: No
* Hermanth Sampath: Abstain
* Jim Petranovich: Abstain
* Stephen McCann: Yes
* Alan C. Berkema: Abstain
* Guido R. Hiertz: No
* John Kenney: Yes
* Kiwin Palm: Yes
* Alan Zeleznikar: Abstain
* Carol Ansley: Abstain
* William Carney: Yes

Result: Yes: 8 No: 5 Abstain: 12

The minutes in 11-18/1061r1 are approved.

Comment: I ask you to take the topic of meeting minutes to the CAC.

At 2018-07-12T13:53-07:00 Shubhodeep presents 11-18/1305r0. At 2018-07-12T14:02-07:00 Shubhodeep ends his presentation.

Comment: I want to see to whom this is addressed.

Comment: We believe this issue will be faster resolved if IEEE addresses this with 3GPP.

Comment: In this document, we are just asking questions.

Comment: Is the intent to make sure that there is an absence of 802.11 systems?

Comment: There is no problem if RAN4 confirms that the absence of 802.11 systems can be confirmed.

Comment: We were told in parts of the 5 GHz spectrum in China Wi-Fi is guaranteed to not exist.

Comment: We do not ask that 802.11 systems are made absent from the spectrum. We only ask that some feature is only used if 802.11 is absent.

Comment: We refer to the specification.

Comment: It is a request for clarification.

Motion:

“The IEEE 802 Coex SC recommends to IEEE 802.11 WG that the contents of 18-11/1305r0 be sent to 3GPP RAN4 as a liaison statement.”

Move: Sindhu Verma

Second: Jim Petranovich

There is no discussion on the motion.

Result: Yes: 22 No: 0 Abstain: 8

At 2018-07-12T14:13-07:00 the chairman continues presenting from page 58 of his slide 11-18/1045r5. At 2018-07-12T14:16-07:00 a discussion begins.

Comment: In the past, we have done studies that common a preamble works better for both technologies for power and voice. We did this in 5 GHz.

Comment: There is an inclination to study a preamble in 3GPP.

Comment: My personal intuition is that a common preamble is the best to do.

Comment: But we need more studies. 6 GHz greenfield provides a good chance for us to reengage with 3GPP.

Comment: This document from Qualcomm, Nokia, and Ericsson to FM57 was not to say what the medium access would be.

Comment: Being greenfield is a real opportunity here.

Comment: There is no equipment in 6 GHz right now. If we just say use our stuff, we will not get a lot of support. This needs a lot of thoughts. We cannot just propose things. We have to rethink even if it is inconvenient for us.

Comment: The call to action still applies. Certainly, submissions are encouraged.

At 2018-07-12T14:22-07:00 the chairman continues from page 65. At 2018-07-12T14:24-07:00 Balkan Kecicioglu presents 11-18/1139/r0. At 2018-07-12T14:40-07:00 Balkan concludes his presentation.

Comment: We need to do this as soon as possible. Is January too late?

Comment: Could be. The Study Item will be done in December 2018.

Comment: The specification will not be completed at this point.

Comment: Thank you for this presentation. At earliest, FM will have a proposal ready in 2020. The 6 GHz band is entirely different from 5 GHz. With 5 GHz there was an impact on deployed technologies. My perspective is that we should avoid some of the pitfalls in the 5 GHz and be more collaborative and keep the regulatory timeline in mind.

Comment: We believe carrier sensing is fundamental. If we can agree on a common preamble between us and 3GPP this would be great.

Comment: Before any regulations is created we should look at 5 GHz. I believe it is likely that the fastest is to use the existing 5 GHz ETSI standard and use it for 6 GHz.

Comment: We know the rules in the 5 GHz. It doesn’t make sense to me to describe coexistence in the 6 GHz. It makes sense regarding friendly access and sharing.

Comment: No SDO should consider this band as a greenfied.

Comment: They just want to do what they want to do. Talking now helps us to avoid headaches.

Comment: The NR-U SI is the forum to bring in results that facilitate fair sharing. Once the Work Item begins nothing changes. As time passes it may become increasingly difficult to alter things.

Comment: I agree that we should be talking about broader medium access and coexistence. 5 GHz was entirely different context. May 2021 is the fastest we may get to an ETSI HS. I am a big fan of engaging with 3GPP.

Comment: The fixed links have absolute priority. There is no doubt about that. The next level is debating about how we share with them.

Comment: If we go for coexistence with non-3GPP technologies. Where would this be? Is this 802.19?

Comment: 802.19 is the coexistence between 802 technologies. 802.18 is the regulatory aspect of protecting incumbents like license holders.

Comment: Any studies made will help influence the regulation.

Comment: Work in FM is more political. Work in SE45 is technical. Overall the Wi-Fi side is the most active side participating at ECC. If we want to get access to the band quickly it’s important to do it collaborative and technology neutral.

Comment: Probably it’s best for 3GPP to use the Wi-Fi preamble given the overall scale of Wi-Fi deployments and attach rates.

Comment: There are many DL specifications in LAA that disagree with ETSI specifications. Inside the EU, LAA will follow ETSI rules, outside they will do what LAA mandates. If we wait there is a risk that part of the NR-U standard will apply in Europe and otherwise they divert.

Comment: Have we asked 3GPP if they want to have meeting with us?

Comment: We haven’t asked them.

Comment: If we don’t know if they want to talk with us the discussion about the timeline is less important.

Comment. The first question is if we want to meet with them. The answer is yes. The second question will be if they want to.

Comment: This time we probably want to host the meeting. Last time it was hosted by 3GPP.

Comment: In general, this should be extended to coexistence with 802.11ac, 802.11ax, EHT.

Comment: We should also ask them to talk about the things they want.

Comment: So far nobody has prepared a liaison statement.

The chairman decides that Balkan is permitted to present a document that is neither on the server nor has a DCN assigned. Jim Petranovich objects to the chairman’s decision that a document without a DCN and not available on the IEEE Mentor server should be presented.

Comment: This is not a simple issue. We have the document available for us to discuss it.

The chairman states that there is no alternative: We can either go with a black screen now and discuss it or we allow this to be put on the screen.

Comment: Why don’t we go into recess while Balkan uploads his document?

The chairman declares that the SC goes into a 2 min recess at 2018-07-12T15:08-07:00. The chairman explains that the two minutes of recess will be used to upload Balkan’s document so that it can be presented afterwards.

At 2018-07-12T15:11-07:00 the chairman declares the SC to have returned from recess.

At 2018-07-12T15:12-07:00 Balkan presents 11-18/1327r0. At 2018-07-12T15:14-07:00 he ends his presentation. The SC begins working on R1 of 11-18/1327r0.

The chairman asks a straw poll

“Are you for a group of people to clean this up and to bring this to the WG tomorrow?”

Result: Yes: 20 No: 0 Abstain: 1

At 2018-07-12T15:32-07:00 the chairman declares the meetings of the SC adjourned.