IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGbb Task Group on Light Communications  TGbb November meeting minutes | | | | |
| Date: 2020-11-05 | | | | |
| Author: | | | | |
| Name | Affiliation | Address | Phone | Email |
| Tuncer Baykas | Hyperion Technologies |  |  | [tbaykas@ieee.org](mailto:tbaykas@ieee.org) |
| Nikola Serafimovski | pureLiFi |  |  | [nikola.serafimovski@purelifi.com](mailto:nikola.serafimovski@purelifi.com) |
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Abstract

This document contains the Task Group on Light Communications (TGbb) November plenary meeting minutes

**IEEE 802.11 Task Group TGbb**

**Tuesday, November 4, 2020, 9:00AM (ET)**

Attendance:34 people

1. The IEEE 802.11 TGbb meeting was called to order at by the Chair, Nikola Serafimovski (pureLiFi). Tuncer Baykas (IMU) as a temporary Secretary recorded the minutes.

1. The Chair reviewed the IEEE-SA patent policy, logistics, and reminders, including meeting guidelines and attendance recording procedures.
   * It is reminded all to record their attendance through the IMAT system.
2. The Chair introduced the overall agenda in doc. 11-20/1626r1 for the meeting.

1. **TGbb Motion** to approve the agenda for the week in document 11-20/1626r1

**Approve the proposed agenda in doc. 11-20/1360r1 for the call.**

**Motion approved.**

1. Volker Jungnickel presented 11-20/1678r2.

Group started to discuss comment resolutions.

-C: These comments are not binding but they provide guidance to the group.

Comment 1:

Accepted Resolution: Add page numbers

Comment 3:

Accepted Resolution: Group start discussion proposals such as doc. 11-20/1740r0.

Comment 7,8,9:

Rob davies volunteers to assist for their resolution.

Comment 11:

Accepted resolution: "Replace text as follows: Regulatory requirements

Wireless LANs (WLANs) implemented in accordance with this standard are subject to equipment certification

and operating requirements established by regional and national regulatory administrations. The PHY

specification establishes minimum technical requirements for interoperability, based upon established regulations

at the time this standard was issued. These regulations are subject to revision or may be superseded.

Requirements that are subject to local geographic regulations are annotated within the PHY specification.

Regulatory requirements that do not affect interoperability are not addressed in this standard. Implementers

are referred to the regulatory sources in Annex D for further information. Operation in countries within

defined regulatory domains might be subject to additional or alternative national regulations. Add IEC 60825-1 to the list in Annex D."

Comments 6,14, 19:

Resolutions will be provided later.

Comment 13:

Resolution: Check the list of excluded mandatory features and provide the relevant Clause numbers for LC that replace the Clauses which are no longer mandatory.

Comment 23:

Resolution: Reserve a TBD subsection in 31 on MAC on "PHY Mode selection".

Comment 27:

C: For a more robust PHY, design a better CRC field.

C: LC is different RF. We should stick with current chip set.

C: Please make a submission to 802.11bb.

Resolution: Please, bring a specific submission into TGbb how to solve this issue. The intention for common mode PHY in TGbb is to allow operation with any 802.11a implementation.

Comment 28:

Resolution: Please, bring a specific submission into TGbb how to solve this issue. The intention for common mode PHY in TGbb is to allow operation with any 802.11a implementation

CID 10:

C: Common mode is defined. CCA should be discussed.

C: Uplink channel can be set to idle.

C: We don’t have CCA in common PHY.

C: Propogation is Line-of-sight. In LC, other devices cannot listen.

C: AP can be listened.

C: The comment is PHY level sensing.

C: Physical CCA is not useful. Carrier detection is necessary.

C: CCA sensitivity requirements do not apply.

C: A relevant text should be added.

C: Non AP, CCA should set idle. AP should send the CCA state all non-AP’s.

Q: Will there be 2 LC networks?

A: It is possible. CCA is an open question.

Resolution: Assigned to Chong: Revise the text as follows: The measurement procedure for CCA shall be same as described in 17.3.6. Replace the radio-specific terms in 17.3.6. by terms which apply specifically to LC. Mention that CCA is sensed only in the AP, non-AP STA should always assume channel is "idle". The mechanism of channel access is described in Clause 31. Check also modifications in 32.3.2.3.9.11 and 32.3.2.3.9.13.

1. Chair called recess**.**

**Attendance**

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| --- | --- |
|  |  |
| Agrawal, Sandeep | C-DOT/Centre for Development of Telematics |
| Allegue Martinez, Michel | Aerial Technologies |
| Baykas, Tuncer | Istanbul Medipol University, Hyperion Technologies |
| BECHADERGUE, Bastien | OLEDCOMM |
| Berens, Friedbert | FBConsulting Sarl |
| Berner, Stephan | PureLiFi |
| Bims, Harry | Bims Laboratories, Inc. |
| Bober, Lennert | Fraunhofer Heinrich Hertz Institute |
| Davies, Robert | Signify |
| EMMELMANN, MARC | Fraunhofer FOKUS / SELF |
| Fridman, Roi | Vayyar Imaging |
| Gurevitz, Assaf | intel |
| HAN, CHONG | pureLiFi |
| Hiertz, Guido | Ericsson GmbH |
| Jungnickel, Volker | Fraunhofer Heinrich Hertz Institute |
| Kang, Hyunduk | Electronics and Telecommunications Research Institute (ETRI) |
| Lee, Hyeong Ho | Netvision Telecom Inc. |
| Li, Qinghua | Intel Corporation |
| Lim, Sang-Kyu | Electronics and Telecommunications Research Institute (ETRI) |
| Martinez Vazquez, Marcos | MaxLinear Corp |
| Mueller, Robert | Technische Universitaet Ilmenau |
| Nagai, Yukimasa | Mitsubishi Electric Corporation |
| Orlik, Philip | Mitsubishi Electric Corporation |
| Orlovsky, Michael | Vayyar Imaging LTD. |
| Orr, Stephen | Cisco Systems, Inc. |
| Oyama, Satoshi | Association of Radio Industries and Businesses (ARIB) |
| Riegel, Maximilian | Nokia |
| Schmidhammer, Martin | German Aerospace Center (DLR) |
| Serafimovski, Nikola | pureLiFi |
| Stavridis, Athanasios | Ericsson AB |
| Thompson, Tom | IEEE STAFF |
| van Wageningen, Andries | Signify |
| Van Zelst, Allert | Qualcomm Incorporated |
| Wendt, Matthias | signify |
| Weszely, Tamas | pureLiFi |

**Wednesday, November 5, 2020, 9:00AM (ET)**

Attendance:28 people

1. The IEEE 802.11 TGbb meeting was called to order at by the Chair, Nikola Serafimovski (pureLiFi). Tuncer Baykas (IMU) as a temporary Secretary recorded the minutes.
2. The Chair reviewed the IEEE-SA patent policy, logistics, and reminders, including meeting guidelines and attendance recording procedures.
   * It is reminded all to record their attendance through the IMAT system.
3. Approve the minutes between the September 2020 plenary and the November 2020 interim meeting, specifically: 11-20/1509r0.

Moved by Matthias Wendt

Seconded by Harry Bims

Approved by unanimous consent.

1. **Motion** to approve the agenda in document 11-20/1626r2

Approved by unanimous consent.

1. CID 34:

C: It should be stated that the solution is an implementation example.

C: Agreed.

1. CID 35:

C: In Figure 2, more explanation is necessary.

C: There could be 2 figure light vs current and current vs time.

C: Light should be positive.

C: Resolution is provided.

1. CID 36:

C: Resolution is accepted as it is.

1. Q: Should there be some specification for wavelengths.

A: Receivers should be able to aoprate 800nm to 1500 nm range.

1. CID 37:

C: Comment resolution revised.

1. CID 38:

C: Antenna term should be changed. 50 ohm single ended should be used.

C: Optical frontend is the channel interface

C: An explanation to antenna connector definition for LC.

C: Since the comment is in the definitions part, adding an editorial note is necessary.

C: Resolution is provided.

1. CID 39:

C: New resolution is provided.

1. Motion:

Group discussed how to go forward with the comment resolutions.

C: Only technical comments should be approved.

C: Find the CID’s with the proper resolutions and make a motion to resolve those.

C. Use green color for approved comments and approve those.

Q: Is there any objection to approve suggested comments?

**Motion**

Approve the technical comment resolutions in doc. 11-20/1678r3 and grant the technical editor the right to implement the changes in draft d0.3 as provided 11-20/1678r3, and grant the Technical editor an editorial licence for the remaining editorial comments.

Moved by: Volker Jungnickel

Seconded by Matthias Wendt.

Discussion:

C: I am against the motion. There are resolutions, which does are not clear.

Q: How should it improved.

C: Specify CID’s with actionable resolutions.

**Motion to amend motion**:

Modify the original wording to read:

Approve the technical comment resolutions in doc. 11-20/1678r3 and grant the technical editor the right to implement the changes in draft d0.3 as provided 11-20/1678r3, and grant the Technical editor an editorial licence for the remaining editorial comments with the exception CID 4, CID 19, CID 33, CID 39, CID 40

Moved by: Marc Emmelman

Seconded by Tuncer Baykas

Motion is approved with unanimous consent

**Motion**

Approve the technical comment resolutions in doc. 11-20/1678r3 and grant the technical editor the right to implement the changes in draft d0.3 as provided 11-20/1678r3, and grant the Technical editor an editorial licence for the remaining editorial comments with the exception CID 4, CID 19, CID 33, CID 39, CID 40

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Moved by: Volker Jungnickel

Seconded by Matthias Wendt

Y: 10

N: 0

A: 2

Motion passed.

1. Chong Han presented, doc. 802.11-20/1740r0

C: CCA should be explained in the document.

C: Everything does not need to be repeated. Just indicate the differences.

C: Check 802.11ax for guidance

C: You are going to amend clause 4.

C: If necessary pull it in to your clause and explain only differences.

C: Create a subclause for your changes only.

C: It depends on how large the changes are, if small change can be done in the original subclause. If large a new subclause can be created.

1. Chong Han presented, doc. 802.11-20/1772r0

C: Are you disabling the uplink CCA mechanism? It is very flexible.

C: We would like the OFDM resource closest to DC for random access.

C: Using CSMA and collusion detection would be better.

21: Q: When can we go to the LB? PHY layer is almost ready. Mac Layer needs more work.

C: March is too aggressive. MAC could not be specified.

C: May is possible.

Q: Are we going to go for second round of comments?

A: We can go for a second round of comments.

Q: We can aim for July.

C: Group will target July for LB.

C: Timeline document should be updated.

Nikola Serafimovski presented 802.11-18/1290r6

**Motion**

Approve the revised timeline for TGbb as indicated doc. 11-18/1290r7

Move: Marc Emmelman

Second: Stuart Kerry

Y / N / A unanimous

Group updated Timeline 802.11-18/1290r7.

Unanmious consent..

1. Group adjourned at 10:59 AM

Attendance:

|  |  |
| --- | --- |
| Allegue Martinez, Michel | Aerial Technologies |
| Au, Kwok Shum | Huawei Technologies Co., Ltd |
| Baykas, Tuncer | Istanbul Medipol University, Hyperion Technologies |
| BECHADERGUE, Bastien | OLEDCOMM |
| Berner, Stephan | PureLiFi |
| Bims, Harry | Bims Laboratories, Inc. |
| Bluschke, Andreas | Signify |
| Bober, Lennert | Fraunhofer Heinrich Hertz Institute |
| Davies, Robert | Signify |
| Fridman, Roi | Vayyar Imaging |
| HAN, CHONG | pureLiFi |
| Haskou, Abdullah | InterDigital, Inc. |
| Ikegami, Tetsushi | Meiji University |
| Jungnickel, Volker | Fraunhofer Heinrich Hertz Institute |
| Kerry, Stuart | OK-Brit; Self |
| Li, Qinghua | Intel Corporation |
| Lindskog, Erik | SAMSUNG |
| Martinez Vazquez, Marcos | MaxLinear Corp |
| Mueller, Robert | Technische Universitaet Ilmenau |
| Orr, Stephen | Cisco Systems, Inc. |
| Riegel, Maximilian | Nokia |
| Serafimovski, Nikola | pureLiFi |
| Stacey, Robert | Intel Corporation |
| Stavridis, Athanasios | Ericsson AB |
| van Wageningen, Andries | Signify |
| Van Zelst, Allert | Qualcomm Incorporated |
| Wendt, Matthias | signify |
| Weszely, Tamas | pureLiFi |