IEEE P802.15
Wireless Specialty Networks

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| IEEE 802.15.13 November to January 2018 Telco Minutes |
| Date: 2018-01-14 |
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Abstract

# This document contains the TG13 Multi-Gigabit/s Optical Wireless Communications Telco minutes from November 2018 to January, 2019.

**Wednesday, November 21, 2018**

**Attendance**:

* Volker Jungnickel (Fraunhofer HHI)
* Kai Lennert Bober (Fraunhofer HHI)
* Chong Han(PureLifi)
* John Li Qiang (Hisilicon)
* Sang-Kyu Lim (ETRI)
1. The Chjair explained the reason for the teleconference which is to further proceed of creating the draft. The current version is hardly readable. Currently there is text for the non-beacon-enabled mode while the text for the beacon-enabled mode is to be created currently. At the next meeting a readable draft will be needed in order to make comments. Line numbers can be easily added via Word.
2. John sent a new word document, based on D3.0. The structure and figures are now much cleaner, but equations are missing from the document. Volker mentioned that the 802.11 group edits drafts also in Word. Following a few simple rules makes it easy to convert the draft into Framemaker finally.
3. John will send a new document including the equations. Based on that document, further drafts will be generated and comments made. Finally, a Framemaker version will be created.
4. John will also find existing Visio files of the figures and provide those when it is possible for him. Volker has opened a Tempobox folder for both Technical Editors to exchange drafts and figures.

The telco was recessed until Nov. 27.

**Tuesday, November 27, 2018 9:30-10:30 U.K. time**

**Attendance:**

* Volker Jungnickel (HHI)
* Kai Lennert Bober (HHI)
* Chong Han (pureLiFi)
1. The Chair notified that the agenda for this telco is MAC. However, Xu is not available and the contribution for the beacon-enabled MAC should be discussed between Xu and Lennert.
2. A new mode of operation for generating MAC text is proposed: Lennert creates text (“draft”) for beacon-enabled mode and the group makes comments against it via the email reflector. Lennert will then incorporate the comments into the text and upload updated versions on mentor. This is the same way as with PM PHY and in this way, the text is expected to grow. The group agreed to proceed in this way.
3. An additional telephone conference for the discussion of MAC text is scheduled on 5. December 2018 between 9:30 to 10:30 AM EDT. The first incomplete draft for the beacon-enabled mode will be uploaded to mentor by 30. November.
4. Chong has no further updates but is waiting for the updated text from John. The working of the hosted storage provided by HHI is examined with Chong.

The telco was recessed until Dec. 5.

**December 5, 2018, 9:30 to 10:30 AM EDT**

**Attendance**

Volker Jungnickel (HHI)

Kai Lennert Bober (HHI)

Nikola Serafimovski (pureLiFi)

Chong Han (pureLiFi)

1. The Chair moved to the only point on the agenda which was discussion of the text on beacon-enabled MAC mode.
2. Lennert presented doc. 15-18/0616r1 which introduces draft text for the beacon-enabled mode.
	* The problem is that nobody except one member of the group has sent input or comments and the document so it is not yet agreed among the major stakeholders of the BE MAC
	* It was asked to focus first on the distinctive point between NBE and BE MAC
	* Lennert proposed to use one of the reserved bits 13-15 in the frame control field
	* Chong suggested to put it into the first two bits of a frame i.e. into the frame version field
	* There was a discussion what the best approach is and outcome was not quite clear. It was discussed what implications the choice would have
	* Lennert’s suggestion
		1. would eat up one bit from the reserved ones
		2. Chong feels uncomfortable with this approach
	* Chong’s suggestion
		1. might cause troubles with some WG members
		2. would mean that we switch between different frame versions, i.e. BE MAC is expected to define all frames on its own
	* The discussion was postponed to next week
	* Lennert explained that there are gaps in the definition of the beacon period and it was discussed if it is needed or not
	* CAP is organized as slotted ALOHA
	* Reservations in the CAP (as originally proposed by Xu) should be moved to the CFP
	* The proposal existing now should be confirmed by Xu
	* CFP contains uplink, downlink data, control and mgmt. frames
	* Direction of GTS should be kept
	* GTS allocation is organized via control frames
	* SIFS shall be regarded in the gap between GTSs to take turnaround time into account
	* Spatial reuse of GTS is allowed in different areas of the room
	* Synchronization to the coordinator clock via beacon frame

The meeting is in recess until Dec. 12.

**December 12, 2018, 9:30 to 10:30 AM EST**

**Attendance**

Volker Jungnickel (HHI)

Kai Lennert Bober (HHI)

Chong Han (pureLiFi)

Xu Wang (vlncomm)

1. The Chair moved to the first point on the agenda which was discussion of the updates ad commented text on beacon-enabled MAC mode.
2. Lennert presented doc. 15-18/0616r2 which introduces modified text for the beacon-enabled mode, which includes numerous comments from Xu and few changes already applied by Lennert.
	* It was discussed that not every implementation will contain multiple coordinators and maybe the beacon period concept could be removed. Xu suggested to operate the system in different modes, the default being with only one coordinator and another one where coordination is needed.
	* The group has meanwhile introduced multiuser MIMO for handling multiple optical frontends and the concept may be obsolete for this reason.
* **It was agreed that Volker asks John as he has introduced the concept long ago. It should be clarified if this is needed anymore. If not it could be removed to keep the standard simpler.**
* It was discussed if there should be control traffic for already associated devices in the CAP in their reserved slots. Lennert explained that there could be collisions for the control traffic and that’s why it should better shifted to the beginning of the CfP.
* There was a discussion about dynamic GTS and that they can be reused in space. There should be global GTS for the control traffic at the beginning of the CfP and dynamic GTS that can be spatially reused in certain regions. It was suggested that the CAP is only used to transmit association and reconnecting requests. All other frames are transmitted in the CfP.
* There was a discussion about Xu’s comment on the collision detection at the end of 5.2.3.. The intention here is to have back-off over multiple super-frames. The discussion clarified that both Xu and Lennert have in principle a very similar understanding of the topic. Xu agrees to implement the scheme in the way suggested in the draft. But he also asks to provide clarification in form of a flow chart.

The telco was recessed until Jan. 8, 2019.

**Tuesday, January 08, 2019, 9:30 EDT time**

**Attendance:**

* Volker Jungnickel (HHI)
* Kai Lennert Bober (HHI)
* Nikola Serafimovski (pureLiFi)
* Chong Han (pureLiFi)
1. John wrote an email to Volker that he has no time to support the group anymore. Any decisions can be made without him now. The draft was completely handed over from John to Chong including the graphics. All Documents and available figure sources will be kept in the network storage space provided by HHI. Chong will shortly be able to provide the updated draft.
2. For this telco, there is no new MAC text. Proposals for the non-beacon-enabled (polling) channel access are nearly complete and uploaded. Further beacon-enabled details will follow.
3. In the next meeting, a lot of obsolete features and the related text are supposed to be removed in order to simplify the draft. This should happen through comments against the existing draft, which is a cleaner version of draft 3.0 with some resolved comments already implemented. The draft will be provided by Chong a Word text shortly.

 The telco was recessed until the Interim meeting in St. Louis in January.