**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title |  | |
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| Re: |  | |
| Abstract | Meeting notes on the 802.15 SG 100G January 2014 Plenary meeting | |
| Purpose | Meeting Minutes | |
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**Minutes of the January 2014 SG 100G**

The SG 100G meeting took place on 20-22 January 2014 in the time slots Monday AM2+PM1, Tuesday AM1+AM2 and Wednesday AM2. Additionally a joint meeting with IEEE 802.1 and IEEE 802.15 TG 10 was held on 22 January 2014 at the time slot Wednesday PM1

Meeting was called to order at 10.30 am on 20 January 2014. The patents statement was mentioned and no patent contributions were discussed. The November 2013 meeting notes and the December 2013 Telco notes of the SG 100G were approved.

Call for contributions/Changes of the agenda or for any other business, no discussions followed.

5 contributions were presented:

**Contribution #1 :** Thomas Kürner, TU Braunschweig (Germany), “Information on Fronthauling/Backhauling”; (Document **15-14-0025-02-0thz**)

Wireless backhauling/fronthauling is one of the potential applications for a standard on 100G. This documents contains information to answer some questions in doc. 15-13-0692-01-0thz, which have been raised during the discussion on doc. 15-13-0636-01-0thz.

**Contribution #2 :** Hiroyo Ogawa, NICT (Japan),“ Application of RoF-based terahertz fronthauling using optical sub-harmonic IQ mixer to mobile/wireless access systems”; (Document **15-14-0022-00-0thz**)

The aim of this contribution is to provide technologies to configure terahertz mobile/wireless access systems. The Radio over Fiber (RoF) based terahertz fronthauling which utilizes ultra high frequency responses of an optical sub-harmonic IQ mixer is proposed and discussed.

**Contribution #3 :** Cai Yunlong, Huawei (China), “The Challenge of Phase Noise in 100 Gb/s Express “; (Document **15-14-0021-00-0thz**)

The phase noise can severely degrade the performance in QAM\_OFDM system. In this contribution, the model and the residual error rate of phase noise ist discussed and reviews publications of the millimeter oscillators. Finally 60GHz standard phase noise profile is compared with the possible 300GHz/100Gbps one.

**Contribution #4 :** Rick Roberts, Intel (USA) et. al. , “100 Gbps Optical Wireless Tutorial “; (Document **15-14-0016-00-0thz**)

This contribution discusses several implementation options to achieve 100 Gbps, switched point-to-point wireless.

**Contribution #5 :** Jochen Antes, Universität Stuttgart (Germany) , “High Data Rate Wireless Communication using a 240 GHz Carrier “; (Document **15-14-0017-02-0thz**)

The architecture, implementation and performance of an active MMIC-based 240 GHz frontend for multi-gigabit wireless communication is presented. Using this frontend, indoor transmission experiments show the feasibility of data rates up to 30 Gbit/s. In a long-range outdoor transmission, a distance of 1 km with data rates up to 24 Gbit/s is achieved.

**Tasks completed during the meeting**

1) Working **Drafts for PAR and 5C** have been finalised for submission to the Working Group (Documents **15-13-0522-04-0thz** and **15-13-0523-03-0thz**). To support the technical claims made in the 5C the living document with references has been updated (to appear as Document **15-13-0561-02-0thz**)

2) Work on the **Technical Expectation Document** (TED). The content of the TED has been discussed and updated (Document **15-11-0745-13-0thz.**

3) Working on the living document on Study Group items (Document **15-13-0692-02-0thz)**

4) The wish of the group is to establish an IG THz and beyond to discuss applications out of scope of SG 3d 100G. This IG should be established after the transition of the SG to the TG.

The meeting was adjourned on 22 January 2014 at 5.07 pm.

**Attendees:**

Thomas Kürner, TU Braunschweig

Rick Roberts, Intel

Yunlong Cai, Huawei

Masashi Shimizu, NTT

Jae-Young Kim, NTT

Frederik Beer, FAU/IIS

Ken Hiraya, NTT

Mial Warren, TriLumina

Paul Nikolic, 802 Chairman

Bob Heile, WG Chairman 802.15

Akifumi Kasamatsu, NICT

Makoto Yaita, NTT

Jochen Antes, Universität Stuttgart

Hiroyo Ogawa, NICT

Jean Schwoerer, Orange

Art Astrin, Astrin Radio

Alan Willner, USC

Woo-Jin Byun, ETRI

Tim Harrington, ZEBRA

Shu Kato, Tohoku University