

**IEEE P802.15**  
**Wireless Personal Area Networks**

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| Project        | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)  |                           |  |
| Title          | <b>THz IG March 2012 Minutes</b>  |                           |  |
| Date Submitted | 19 July, 2012   |                           |  |
| Source         | Thomas Kürner<br>Technische Universität Braunschweig<br>Institut für Nachrichtentechnik<br>Schleinitzstr. 22<br>D-38092 Braunschweig  | Voice:<br>Fax:<br>E-mail: | +495313912416<br>+495313915192<br>t.kuerner@tu-bs.de |
| Re:            |   |                           |  |
| Abstract       | Meeting notes on the 802.15 IG THz March 2012 Plenary meeting   |                           |  |
| Purpose        | Meeting Minutes   |                           |  |
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### Minutes of the March 2012 THz IG

The THz IG meeting took place on 13 and 15 March 2012 in the Time slots Tuesday PM1, Tuesday PM2 and Thursday PM1.

Meeting was called to order at 1.30 pm on 13 March 2012. The patents statement was mentioned and no patent contributions were discussed. The November 2011 meeting notes were approved.

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

Five contributions were presented:

**Contribution #1** : Thomas Kürner, TU Braunschweig (Germany), “Review of the Results of WRC 2012”; (Document **15-12-0103-00-0thz**)

This document is a follow-up and update of doc. IEEE 802.15-10-0450-01-0thz and doc. IEEE 802.15-11-0462-00-0thz. It provides an overview on the results of agenda item 1.6 at WRC 2012, its implications for future THz communication systems operating beyond 275 GHz and discusses the next steps.

**Contribution #2**: Sebastian Priebe TU Braunschweig (Germany), “Will THz Communication Interfere with Passive Remote Sensing?”; (Document **15-12-0101-00-0thz**)

According to the current ITU spectrum regulations, active THz communication systems can be operated simultaneously in the same frequency bands from 300 to 1000 GHz as passive services as long as these services are precluded from any interference. Therefore, interference investigations become crucial on the way to a coexistent spectrum usage. Whereas the affection of radio astronomy by THz communications has been considered in doc. 15-10-0829-00-0thz, this presentation introduces thoughts on which scenarios are critical regarding remote sensing and suggests countermeasures against interference.

**Contribution #3**: Akifumi Kasamatsu, NICT (Japan) “Preliminary Proposal of Usage model for THz communication in WLAN”; (Document **15-12-0133-00-0thz**)

In this document a use case and some required items of WLAN application for THz wireless communications is proposed.

**Contribution #4**: Ho-Jin Song, NTT Corp. (Japan), “Some consideration on KIOSK downloading model of THz communications”; (Document **15-12-0135-00-0thz**)

Several use models and applications of THz communications have been proposed in the THz Interest Group. In this contribution, some considerations and information which will help to discuss the Technical Exceptions especially for KIOSK downloading models are presented.

**Contribution #5**: Sebastian Priebe, TU Braunschweig (Germany), “Performance of Antennas in THz Indoor Communication Channels”; (Document **15-12-0102-00-0thz**)

THz indoor channel modeling activities have revealed that symbol rates achievable by THz communication systems are severely limited by the temporal channel dispersion as long as no

highly directive antennas are employed (cf. doc. 15-11-0180-01-0thz). Therefore, the impact of antenna types on broadband THz channel characteristics is investigated in order to provide a basis for the specification of antenna properties. Furthermore, the affection of communication links by non-perfect antenna alignment is considered, wherefrom requirements for the antenna alignment accuracy are derived.

**Discussion and further Development of THz IG Technical Expectations Document (TED):**  
(Document 15-11-0745-05-0thz)

**Contribution #6:** Sebastian Priebe, TU Braunschweig (Germany), “Literature on THz channel modeling activities”; (Document 15-12-0146-01-0thz)

The structure and content of the TED has been discussed and updated. It was agreed that Sebastian Priebe will prepare input to the channel modeling section based on the references given in Doc.15-12-0146-01-0thz. For future contributions the authors are encouraged to provide a slide indicating which material should go into the TED.

**Discussion on the future of IG THz:**

**Contribution #7:** Thomas Kürner, TU Braunschweig (Germany), “On the future of the IG THz”; (Document 15-12-0145-01-0thz)

This short contribution discusses briefly the current status in the development of THz communication systems and points out the possible next steps towards standardization of THz communications.

In the discussion following this contribution the following points came up:

- Starting a Study Group on specific application, e. g. Kiosk Downloading, in 2012 may be feasible
- The role IG THz as a discussion forum for other applications (where other SGs can spin-off at a later stage) was discussed.
- Two major measures to increase participation in work THz communications
  - Tutorial at the San Diego Plenary
  - Extension of the Call for Applications for presentations at the July Plenary (Document 15-11-0745-05-0thz) and spreading it inside and outside IEEE 802

The meeting was adjourned on 15 March at 3:30 pm.

**Attendees:**

Thomas Kürner, TU Braunschweig

Katsuhiro Aijto, NTT Corp.

Shoichi Kitazawa, ATR Wave Engineering Labs

Rick Roberts, Intel

Philippe Boucachard, Canon Research Centre France

Ho-Jin Song, NTT Corp.

Akifumi Kasamatsu, NICT

Iwao Hosako, NICT

Hiroyo Ogawa, ARIB

Safoshi Oyama, ARIB

John Adams, Lilee Systems

Art Astrin, Astrinradio

Sebastian Priebe, TU Braunschweig

Sun Weon Kang, ETRI

Matthew Sherman, BAE Systems

Eldad Zeira, Interdigital

Chiu Ngo, Samsung

Monisha Ghosh, Interdigital

Shariar Emani, Samsung

Kiran Bynam, Samsung