**IEEE P802.15**

**Wireless Personal Area Networks**

|  |  |
| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | Draft liaison statement to ITU-R WP1A (Copy to WP5A, WP5C, WP7C and WP7D) |
| Date Submitted | March 2015 |
| Source | Akifumi Kasamatsu, Norihiko Sekine, Iwao Hosako, and Hiroyo OgawaNICT4-2-1, Nukuikita, Koganei, 184-8795, Tokyo, Japan | Voice: + 81 42 327 6876Fax: +81 42 327 7938E-mail: kanno@nict.go.jp |
| Re: |  |
| Abstract | This contribution proposes a draft liaison statement to ITU-R WP1A. The documents reflects the changes made bei TG3d during the November 2015 meeting of TG3d |
| Purpose | To respond ITU-R WP1A regarding the frequency range in which TG3d is interested, as well as the information on compatibility study results by TG3d. |
| Notice | This document has been prepared to assist the IEEE P802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15. |

|  |  |
| --- | --- |
| **Radiocommunication Study Groups** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
|  |  |
| Received:  |  |
| **xx March2016** |
| **English only** |
| Institute of Electrical and Electronics Engineers, Inc. |
| draft liaison statement to working party 1A ON NEW REPORT ITU-R SM.2352-0 |
| Copy for information to Working Parties 5A, 5C, 7C and 7D |
| Technology trends of active services in the band above 275 GHz |

**1 Source information**

This contribution was developed by IEEE Project 802®, the Local and Metropolitan Area Network Standards Committee (“IEEE 802”), an international standards development committee organized under the IEEE and the IEEE Standards Association (“IEEE-SA”).

The content herein was approved for submission by the IEEE 802.15™ Working Group for WPAN, the IEEE 802.18 Radio Regulatory Technical Advisory Group, and the IEEE 802 Executive Committee, in accordance with the IEEE 802 policies and procedures, and represents the view of IEEE 802.

**2 Discussion**

WP 1A informed to IEEE that since the bands 275-325 GHz are identified for the passive services by No. **5.565** of the Radio Regulations (RR), the studies are needed to review RR No. **5.565** for use of these bands by active services in the future. WP1A further informed to IEEE that since the band 252-275 GHz is also allocated to the mobile and fixed services, the additional contiguous bandwidth of 23 GHz could be utilized for terahertz communications discussed within IEEE 802 group. IEEE is also invited to provide information on spectrum requirements and technical and operational characteristics of their systems operating in these bands or other bands for sharing studies to Working Parties 5A and 5C.

IEEE 802 has initiated the sharing study between passive and active services. Although the results are still discussed by IEEE 802.15™ Working Group, IEEE 802 would like to inform ITU-R WP1A the links to the input contributions attached as attachments 1 -3 in annex 1 as related to the sharing issues for information only.

IEEE 802 has reviewed the frequency range 252-275 GHz as well as 275-325 GHz and agreed to conduct studies on theses frequency bands for terahertz applications which utilize a contiguous bandwidth of 73 GHz.

On 16 March 2016 IEEE 802.15 TG3d has issued a call for proposals targeting at an amendment to IEEE 802.15.3 for a switched point-to-point links operating at the frequency bands 252-325 GHz. The links to the call for proposal including the supporting documents are included in attachments 1-5 of annex 2. Since all the detailed technical and operational characteristics will be fixed only after completion of the amendment, IEEE 802 TG 3d has issued a Call for Contribution in its September 2015 meeting to request further contributions on technical details on technical and operational characteristics from current research projects in these frequency ranges. The call and the responses are summarized attachment 1-3 in annex 3. Please note that IEEE 802 is also interested in other higher frequency ranges above 325 GHz especially for but not limited to close proximity and intra-device terahertz applications.

If IEEE 802 has made significant progress in the technical studies in these frequency ranges, the results above 325 GHz as well as in the frequency range 252-325 GHz will be informed accordingly.

**3 Summary**

We applaud the efforts of the participants in WP 1A for undertaking this work and giving IEEE 802 the opportunity to respond to the terahertz related matters.

|  |  |
| --- | --- |
| **Contact**: Thomas Kürner Michael Lynch | **E-mail:** Kuerner@ifn.ing.tu-bs.de MJLynch@MJLALLC.COM  |

**Annex 1: Sharing studies with passive services presented within the IEEE 802.15 Interest Group THz in the period 2010 to 2012**

**Attachment 1:** Doc.: IEEE 802.15-15-10-0829-00-0thz

<https://mentor.ieee.org/802.15/dcn/10/15-10-0829-00-0thz-sharing-between-active-and-passive-services-at-thz-frequencies.ppt>

**Attachment 2:**  Doc.: IEEE 802.15-15-12-0101-00-0thz

<https://mentor.ieee.org/802.15/dcn/12/15-12-0101-00-0thz-will-thz-communication-interfere-with-passive-remote-sensing.pdf>

**Attachment 3:** Doc.: IEEE 802.15-15-12-0324-00-0thz

<https://mentor.ieee.org/802.15/dcn/12/15-12-0324-00-0thz-interference-between-thz-communications-and-spaceborne-earth-exploration-services.pdf>

**Annex 2: Call for Proposals and supporting documents**

**Attachment 1:** Call for Proposals

<https://mentor.ieee.org/802.15/dcn/15/15-15-0936-04-003d-tg3d-100g-call-for-proposals.docx>

**Attachment 2:** Application Requirements Document

<https://mentor.ieee.org/802.15/dcn/14/15-14-0304-16-003d-applications-requirement-document-ard.docx>

**Attachment 3:** Technical Requirements Document

<https://mentor.ieee.org/802.15/dcn/14/15-14-0309-20-003d-technical-requirements-document.docx>

**Attachment 4:**  Channel Modeling Document

<https://mentor.ieee.org/802.15/dcn/14/15-14-0310-18-003d-channel-modeling-document.docx>

**Attachment 5:** Evaluation Criteria Document

<https://mentor.ieee.org/802.15/dcn/15/15-15-0412-13-003d-evaluation-criteria-document.docx>

**Annex 3: Call for contributions addressing information on spectrum requirements and technical and operational characteristics of systems operating in the band 252 to 325 GHz and adjacent bands for sharing studies**

**Attachment 1:** Call for contributions

<https://mentor.ieee.org/802.15/dcn/15/15-15-0733-01-003d-call-for-contributions-for-the-response-to-itu-r-wp1a.docx>

**Attachment 2:** Response from H2020 iBROW

<https://mentor.ieee.org/802.15/dcn/16/15-16-0034-00-003d-input-from-the-horizon-2020-ibrow-project-to-the-tg3d-call-for-contributions-to-the-response-on-the-liaison-statement-from-itu-r-wp1a.docx>

**Attachment 3:** Response from BMBF-VIP-Terapan

<https://mentor.ieee.org/802.15/dcn/16/15-16-0082-01-003d-input-from-the-terapan-project-to-the-tg3d-call-for-contributions-to-the-response-on-the-liaison-statement-from-itu-r-wp1a.docx>