IEEE P802.15

**Wireless Personal Area Networks**

|  |  |  |
| --- | --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title |  | |
| Date Submitted | December 2013 | |
| Source | [Thomas Kürner] [TU Braunschweig] | [t.kuerner@tu-bs.de](mailto:t.kuerner@tu-bs.de) |
| Re: | n/a | |
| Abstract |  | |
| Purpose |  | |
| 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. | |

**CALL FOR 100G APPLICATIONS**

The 802.15 Study Group 100 G (100 Gbit/s over beam switchable wireless point-to-point links) is issuing this “Call for 100G Applications” as a means to invite your contribution to the evolving definition, description, of research and development of technology and markets associated with 100 Gbit/s over beam switchable wireless point-to-point links and applications. Your input will help the Study Group better gauge the preparation of the PAR and 5C documents. This “Call” would cover research and development, products and applications that are targeting 100 Gbit/s over beam switchable wireless point-to-point links using millimeter and sub-millimeter as well as optical wireless communication systems.

In 2008 IEEE 802.15 created the THz Interest Group (IG THz). The focus was primarily concerned with THz communications and related network applications operating in the THz frequency bands between 275 – 3000GHz. Applications considered in the IG THz included component to component, board to board, machine to machine, human to machine and human to human, (indoor and outdoor) wireless communications. These applications cover multiple categories with varying requirements. As envisioned, these ultra-high data rate wireless communications would overall employ wireless modulation methods of limited complexity, omni and/or directional antenna systems, and would typically offer very high data transfer rates in multiples of 10 Gbps, and up to possibly 1 Tbps, for parity with future fiber optic capacities. Ultra-high data rate wireless systems could support transmission distances ranging from the very short (few centimeters or less) to relatively long distances of several kilometers.

In July 2013 the IG THz has been upgraded to a study group with the scope of determining the validity of a standard on “100G (100 Gbit/s over Beam switchable wireless point-to-point 40/100 Gbps links)”. Potential applications of interest include wireless data centers, wireless intra-device communication and wireless backhauling/fronthauling. Although, the focus of the IG THz has been the frequency range beyond 275 GHz, in the SG 100G the frequency range considered will be much broader and includes 60 GHz and optical wireless communications as well. Hence, the wave length of interest for the PHY will be millimeter-wave or shorter. The recommendation of the study group may be to start a completely new standard or may be to an amendment to an existing standard, e. g. 802.15.3.

The subject material provided from this “Call for 100G Applications” will be evaluated for inclusion and support in the PAR and 5C documents written in the 802.15 SG 100G. The final goal of this process will be to set up a Task Group to create a standard on 100 Gbit/s over beam switchable wireless point-to-point links.

The 802.15 Study Group 100G greatly appreciates your opinion and response to the questions below. Your input will help us support the industry’s standardization efforts on wireless 100G.

Please provide an IEEE document following the links below:

**IEEE “Call for 100G Applications” Subject Material Presentation:**

All submissions should be provided in softcopy, written in MS Word and/or MS PowerPoint, following the IEEE 802.15 approved templates available at

<http://grouper.ieee.org/groups/802/15/pub/Download.html>.

Please note, that according to IEEE 802 policy all submitted information will be publically exposed and it is the responsibility of the contributor to not provide data that would be considered confidential.

Please obtain a valid 100G document number then upload your contribution to the document server at <https://mentor.ieee.org/802.15/documents>.

For further questions and comments you may also contact

Prof. Dr.-Ing. Thomas Kürner

Chair of 802.15 Study Group 100G

Institut für Nachrichtentechnik

Technische Universität Braunschweig

Schleinitzstr. 22

D-38092 Braunschweig

Tel.: +49 531 391 2416

Fax: +49 531 391 5192

E-Mail: [t.kuerner@tu-bs.de](mailto:t.kuerner@tu-bs.de)

**RELEASE DATE: December 13, 2013**

**DUE DATE: Presentations at January 2014 and March 2014 meetings**

The presentation agenda will be set at the opening sessions of the January 2014 and March 2014 SG 100G meeting.

Here is a quick reminder regarding the Call for Applications for contributors who are less familiar with the IEEE 802 process:

* Any standards activity whose aim is to produce a Standard, Recommended Practice, or Guide shall submit a PAR to the IEEE-SA Standards Board within six months of beginning work
* Study Group – a group formed to investigate a project and produce a PAR
* PAR – Project Authorization Request – the charter for a standards project, a document that authorizes work on a project.
* Five Criteria (5C) – In IEEE 802, the basis for determining whether to forward a PAR, an explanation how a proposed PAR meets the following five criteria:
  + Broad Market Potential
  + Compatibility
  + Distinct Identity
  + Technical Feasibility
    - Includes Coexistence of IEEE 802 LMSC wireless standards specifying devices for unlicensed operation (unless it is not applicable)
  + Economic Feasibility