IEEE P802.15

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title |  | |
| Date Submitted | December 2013 | |
| Source | [Dietmar Eggert] [Atmel] | [dietmar.eggert@atmel.com](mailto:dietmar.eggert@atmel.com) |
| Re: | n/a | |
| Abstract |  | |
| Purpose |  | |
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**CALL FOR Ranging Applications**

The 802.15 Study Group Ranging (Ranging support under 15.4 standard operation) is issuing this “Call for Ranging Applications” as a means to invite your contribution to the evolving definition, description, of research and development of technology and markets associated with ranging capabilities associated/combined with wireless data communication and related 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 ranging capabilities along with wireless communication systems for different applications.

Today there are various different radio based distance measurement technologies utilizing the different radio bands in different ways, which come with a variety of characteristics like propagation loss, acquisition speed, and accuracy providing different robustness to interference and in multi-path environments, power consumption. Experiences with many actual deployments of wireless networks for sensing and control applications have shown a significant need for addition of location awareness to support a straight forward process for setup/installation and operation of networks throughout their entire life. Additional services require seamless access to scalable radio based distance measurement technologies enabling the network to understand the actual distance between individual nodes, along with the actual position of individual network nodes, which may be extended towards the ability to track individual nodes.

The group may work on the integration of existing and new radio based distance measurement techniques/technology with different characteristics under one umbrella to address the needs of a wide range of application and enable interoperability of products by different suppliers using the same technique/technology. In addition there shall be focus on the definition of an effective ranging operation mode and related MAC extensions, which enhance the definition of PHY specifications to enable radio based distance measurements. In this regard the study group may enable the seamless integration of various radio based distance measurement technologies with wireless data communication and network technology to provide scalable RTLS support for various applications extending location awareness from outdoor to indoor.

The subject material provided from this “Call for Ranging Applications” will be evaluated for inclusion and support in the PAR and 5C documents written in the 802.15 SG Ranging. The final goal of this process will be to set up a Task Group to integrate existing and new radio based distance measurement techniques/technology with different characteristics under one umbrella to address the needs of a wide range of application and enable interoperability of products by different suppliers using the same technique/technology.

The 802.15 Study Group Ranging greatly appreciates your opinion and response to the questions below. Your input will help us support the industry’s standardization efforts to enable ranging capabilities in combination with different PHY’s along with a consistent interface for the applications.

Please provide an IEEE document following the links below:

**IEEE “Call for Ranging 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 Ranging SG 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

Dr.-Ing. Dietmar Eggert

Chair of 802.15 Study Group Ranging

Atmel

Königsbücker Strasse 61

D-01099 Dresden, Germany

Tel.: +49 351 6523 400

Fax: +49 351 6523 199

E-Mail: dietmar.eggert@atmel.com

**RELEASE DATE: December 30, 2013**

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

The presentation agenda will be set at the opening sessions of the January 2014 and SG Ranging 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