P802.15.4

Submitter Email: bheile@ieee.org
Type of Project: Revision to IEEE Standard 802.15.4-2011
PAR Request Date: 02-Aug-2013
PAR Approval Date: 21-Oct-2013
PAR Expiration Date: 31-Dec-2017
Status: PAR for a Revision to an existing IEEE Standard
Root Project: 802.15.4-2011

1.1 Project Number: P802.15.4
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Low-Rate Wireless Networks

Changes in title: ~~IEEE~~ Standard for ~~Local and metropolitan area networks - Part 15.4:~~ Low-Rate Wireless ~~Personal Area~~ Networks~~(LR-WPANs)~~

3.1 Working Group: Wireless Personal Area Network (WPAN) Working Group (C/LM/WG802.15)
Contact Information for Working Group Chair
Name: Robert Heile
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
Name: Paul Nikolich
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 09/2014
4.3 Projected Completion Date for Submittal to RevCom: 02/2015

5.1 Approximate number of people expected to be actively involved in the development of this project: 80
5.2 Scope: This standard defines the physical layer (PHY) and medium access control (MAC) sublayer specifications for low-data-rate wireless connectivity with fixed, portable, and moving devices with no battery or very limited battery consumption requirements. In addition, the standard provides modes that allow for precision ranging. Physical layers (PHYs) are defined for devices operating various license-free bands in a variety of geographic regions

Changes in scope: This standard defines the physical layer (PHY) and medium access control (MAC) sublayer specifications for low-data-rate wireless connectivity with fixed, portable, and moving devices with no battery or very limited battery consumption requirements. ~~typically~~In ~~operating~~addition, ~~in~~ the ~~personal~~standard ~~operating~~provides ~~space~~modes ~~(POS)~~that ~~of~~allow ~~10~~for ~~m~~precision ranging. Physical layers (PHYs) are defined for ~~–~~devices ~~Devices~~ operating ~~in~~various ~~the~~ license-free ~~868-868.6 MHz, 902-928 MHz, and 2400-2483.5 MHz~~ bands ~~–~~in ~~Devices~~a ~~with~~variety ~~precision ranging, extended range, and enhanced robustness and mobility – Devices operating according the Chinese regulations, Radio Management~~ of ~~P.~~geographic ~~R~~regions~~. of China doc. #6326360786867187500 or current document, for one or more of the 314-316 MHz, 430-434 MHz, and 779-787 MHz frequency bands – Devices operating in the 950-956 MHz allocation in Japan and~~

~~coexisting with passive tag systems in the band~~

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The standard provides for ultra low complexity, ultra low cost, ultra low power consumption, and low data rate wireless connectivity among inexpensive devices. In addition, one of the alternate PHYs provides precision ranging capability that is accurate to one meter. Multiple PHYs are defined to support a variety of frequency bands.

Changes in purpose: The standard provides for ultra low complexity, ultra low cost, ultra low power consumption, and low data rate wireless connectivity among inexpensive devices. ~~The raw data rate is high enough (250 kb/s) to satisfy a set of applications but is also scaleable down to the needs of sensor and automation needs (20 kb/s or below) for wireless communications.~~ In addition, one of the alternate PHYs provides precision ranging capability that is accurate to one meter. Multiple PHYs are defined to support a variety of frequency bands~~including – 868-868.~~6 MHz – 902-928 MHz – 2400-2483.~~5 MHz – 314-316 MHz, 430-434 MHz, and 779-787 MHz band for LR-WPAN systems in China – 950-956 MHz in Japan~~

5.5 Need for the Project: It is a requirement of the Standards Association that the Sponsor shall initiate a revision of a standard whenever any of the material in the standard (including all amendments, corrigenda, etc.) becomes obsolete or incorrect, or if multiple amendments to a base standard exist three years after its approval or most recent reaffirmation. Such is the case here where there are five completed amendments. Further since there are currently four additional active amendments in process affecting both MAC and PHY functionality, time is of the essence to complete this revision ahead of the in process amendments and not alter any functionality as a result of this revision. As a consequence the intention is to limit the revision to maintenance changes (editorial and technical corrections) to 802.15.4-2011 and incorporating the approved amendments, 802.15.4e-2012, 802.15.4f-2012 and 802.15.4g-2012, 802.15.4j-2013 and 802.15.4k-2013.

5.6 Stakeholders for the Standard: The stakeholders include manufacturers and users of telecom, medical, environmental, energy, and consumer electronics equipment and manufacturers and users of equipment involving the use of wireless sensor and control networks.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

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7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

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8.1 Additional Explanatory Notes (Item Number and Explanation): none