IEEE P802.15
Wireless Personal Area Networks

Project	IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)		
Title	Modified TG4i PAR		
Date Submitted	11/10/10		
Source	[James Gilb] [] [San Diego, CA]	Voice: Fax: E-mail:	[858-229-4822] [] [last name at ieee dot org]
Re:			
Abstract	Modified PAR for TG4i.		
Purpose			
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P802.15.4

Submitter Email: gilb@ieee.org
Type of Project: Modify Existing Approved PAR
PAR Request Date: 10-Nov-2010
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, Modification to a Previously Approved PAR for the Revision of a Standard
Root PAR: P802.15.4 **Approved on:** 30-Sep-2010

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

2.1 Title: Standard for Local and Metropolitan Area Networks Part 15.4: Low Rate Wireless Personal Area Networks (LR-WPANs)

Old Title: Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 15.4: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Low Rate Wireless Personal Area Networks (WPANs)

3.1 Working Group: Wireless Personal Area Network (WPAN) Working Group (C/LM/WG802.15)
Contact Information for Working Group Chair
Name: Robert F Heile
Email Address: bheile@ieee.org
Phone: 781-929-4832
Contact Information for Working Group Vice-Chair
None

3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
Name: Paul Nikolich
Email Address: p.nikolich@ieee.org
Phone: 857.205.0050
Contact Information for Standards Representative
None

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 01/2011
4.3 Projected Completion Date for Submittal to RevCom: 05/2011

5.1 Approximate number of people expected to be actively involved in the development of this project: 220

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 typically operating in the personal operating space (POS) of 10 m.
Physical layers (PHYs) are defined for
- devices operating in the license free 868-868.6 MHz, 902-928 MHz and 2400-2483.5 MHz bands,
- devices with precision ranging, extended range, and enhanced robustness and mobility,
- devices operating according to the Chinese regulations, Radio Management of P. R. 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, and
- devices operating in the 950-956 MHz allocation in Japan and

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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. The raw data rate is high enough (250 kb/s) to satisfy a set of simple 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,
- 802-928 MHz,
- 2400-2483.5 MHz,
- 314-316 MHz, 430-434 MHz, and 779-787 MHz band for LR-WPAN systems in China, and
- 950-956 MHz in Japan.

Old 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 simple needs such as interactive toys, 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 or better with improved the communication range, robustness and mobility.
Multiple PHYs are defined to support a variety of frequency bands including
- 868-868.6 MHz,
- 802-928 MHz,
- 2400-2483.5 MHz,
- 314-316 MHz, 430-434 MHz, and 779-787 MHz band for LR-WPAN systems in China, and
- 950 MHz-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 three or more amendments to a base standard exist three years after its approval or most recent reaffirmation. Such is the case here where there are three completed amendments. Further since there are currently three active amendment projects 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 802.15.4-2006 and incorporating the approved amendments, 802.15.4a-2007, 802.15.4c-2009 and 802.15.4d-2009.

5.6 Stakeholders for the Standard: The stakeholders include, but are not limited to, 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