

Once you approve and submit the following information, changes may only be made through the NesCom Administrator.

Draft PAR Confirmation Number
Submittal Email: bheile@ieee.org
Type of Project: PAR for a New Standard
1.1 Project Number: P802.15.7
1.2 Type of Document: Standard for
1.3 Life Cycle: Full
2.1 Title of Standard: PHY and MAC standard for short-range wireless optical communication using visible light
3.1 Name of Working Group: Wireless Personal Area Network (WPAN) Working Group(C/LM/WG802.15) Contact information for Working Group Chair Robert F Heile 11 ROBERT TONER BLVD SUITE 5-301 North Attleboro, MA 02763 US bheile@ieee.org
3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks(C/LM) Contact information for Sponsor Chair: Paul Nikolich 18 Bishops Lane Lynnfield, MA 01940 US p.nikolich@ieee.org Contact information for Standards Representative:
4.1 Type of Ballot: Individual
4.2 Expected Date of Submission for Initial Sponsor Ballot: 2010-07
4.3 Projected Completion Date for Submittal to RevCom: 2010-11
5.1 Approximate number of people expected to work on this project: 150
5.2 Scope of Proposed Standard: This standard defines a PHY and MAC layer for short-range optical wireless communications using visible light. The visible light spectrum extends from 380 to 780 nm in wavelength. The standard is capable of delivering data rates sufficient to support audio and video multimedia services and also considers mobility of the visible link; compatibility with visible-light infrastructures; impairments due to noise and interference from, e.g., ambient light; health and other environmental effects; and a MAC layer that accommodates visible links. The standard will adhere to any applicable eye safety regulations
5.3 Is the completion of this standard is dependent upon the completion of another standard: No If yes, please explain:
5.4 Purpose of Proposed Standard: The purpose of this standard is to provide a global standard for short-range optical wireless communication using visible light. The standard will provide (i) access to several hundred THz of unlicensed spectrum; (ii) immunity to electromagnetic interference and noninterference with RF systems; (iii) additional security by allowing the user to see the communication channel; and (iv) communication augmenting and complementing existing services (such as illumination, display, indication, decoration, etc.) from visible-light infrastructures.
5.5 Need for the Project: Visible light is drawing great interest as a new communication medium due to the following recent developments. Firstly, solid-state light sources are rapidly replacing conventional ones in signaling, illumination and display infrastructures. It thus becomes possible to carry communication data on such light sources. Secondly, the visible band is free from frequency regulation and RF interference so that it is well suited to RF crowded or RF restricted environments. Thirdly, the unique feature of visibility can enhance the physical-layer security and offer intuitive usage. Given the growing expectation of ubiquitous connectivity in all settings and environments, the need for unlicensed, high bandwidth, easy to use wireless communications technology has never been greater. Potential applications include secure point-to-point communication, indoor Location Based Service (LBS), secure point-to-Multipoint communication (office, hospital, airplane), Intelligent Transportation System (ITS), information broadcast, and etc. A visible light communication standard will provide economic opportunities to equipment manufacturers, component suppliers, service providers, and infrastructure operators.
5.6 Stakeholders for the Standard: Mobile Communications Device Manufacturers and Users, Location Based Services Suppliers and Users, component suppliers, other service providers, infrastructure operators.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes

If yes, state date: 2008-09-08

If no, please explain:

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

If yes, please explain:

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

If yes, please explain:

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

Explanation:

Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 International Standards Activities**a. Adoptions**

Is there potential for this standard to be adopted by another organization? Do not know at this time

Organization:

Technical Committee Name:

Technical Committee Number:

Contact person Name:

Contact Phone:

Contact Email:

b. Joint Development

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

Organization:

Technical Committee Name:

Technical Committee Number:

Contact person Name:

Contact Phone:

Contact Email:

c. Harmonization

Are you aware of another organization that may be interested in portions of this document in their standardization development efforts? Do not know at this time

Organization:

Technical Committee Name:

Technical Committee Number:

Contact person Name:

Contact Phone:

Contact Email:

8.1 Additional Explanatory Notes: (Item Number and Explanation)

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