P802.15.7

Submitter Email: bheile@ieee.org
Type of Project: Modify Existing Approved PAR
PAR Request Date: 21-Jan-2011
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, Modification to a Previously Approved PAR
Root PAR: P802.15.7 **Approved on:** 10-Dec-2008

1.1 Project Number: P802.15.7
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Physical (PHY) and Medium Access Control (MAC) Layer Standard for Short-Range Wireless Optical Communication Using Visible Light

Old Title: Physical (PHY) and Medium Access Control (MAC) Layer Standard for Short-Range Wireless Optical Communication Using Visible Light

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: 200
5.2 Scope: This standard defines a PHY and MAC layer for short-range optical wireless communications using visible light in optically transparent media. 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 sources like ambient light and a MAC layer that accommodates visible links. The standard adheres to any applicable eye safety regulations

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5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: The purpose of this standard is to provide a global standard for short-range optical wireless communication using visible light. The standard provides (i) access to several hundred THz of unlicensed spectrum; (ii) immunity to electromagnetic interference and noninterference with Radio Frequency (RF) systems; (iii) additional security by allowing the user to see the communication channel; and (iv) communication augmenting and

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complementing existing services (such as illumination, display, indication, decoration, etc.) from visible-light infrastructures.	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 Radio Frequency (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. 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): Clean up verb tenses in Scope and Purpose to match what is contained in the draft.