IEEE P802.11
Wireless LANs

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| A PAR Proposal for Light Communications |
| Date: 2017-10-10 |
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Abstract

This submission includes a PAR proposal for the IEEE 802.11 Light Communications Study Group.

# PAR

**P802.11**

**Submitter Email:**
**Type of Project:** Amendment to IEEE Standard 802.11
**PAR Request Date:**
**PAR Approval Date:
PAR Expiration Date:
Status:** Unapproved PAR, PAR for an amendment to an existing IEEE Standard

**1.1 Project Number:** P802.11TBD
**1.2 Type of Document:** Standard
**1.3 Life Cycle:** Full Use

**2.1 Title:** Standard for Information technology--Telecommunications and information exchange between systems Local and metropolitan area networks--Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications-- Amendment: Light Communications

**3.1 Working Group:** Wireless LAN Working Group (C/LM/WG802.11)
**Contact Information for Working Group ChairName:** Adrian Stephens
**Email Address:** adrian.p.stephens@ieee.org
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**Contact Information for Working Group Vice-Chair
Name:** Jon Rosdahl
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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
**Email Address:** p.nikolich@ieee.org
**Phone:** +1-857.205.0050

**Contact Information for Standards Representative**

**Name:** James Gilb
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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:**November 2020
**4.3 Projected Completion Date for Submittal to RevCom:**July 2021

**5.1 Approximate number of people expected to be actively involved in the development of this project:** 50.

**5.2.a. Scope of the complete standard:**The scope of this standard is to define one medium access control (MAC) and several physical layer (PHY) specifications for wireless connectivity for fixed, portable, and moving stations (STAs) within a local area.

**5.2.b. Scope of the project:**This amendment defines a physical (PHY) layer specification and defines modifications to the medium access control (MAC) layer specification that enables operation of light communications (LC).

**TBD**

The MAC and PHY specified in this amendment:

• Enable operations in [TBD] nm to [TBD] nm band

• Enables a maximum throughput of at least [TBD] Gbps, as measured at the MAC data service access point (SAP)

• Enables fast session transfer between LC PHY(s) and radio based PHYs

• Maintains the 802.11 user experience

**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 wireless connectivity for fixed, portable, and moving stations within a local area. This standard also offers regulatory bodies a means of standardizing access to light spectrum for the purpose of local area communication.

**5.5 Need for the Project:**

**TBD**

**5.6 Stakeholders for the Standard:** Manufacturers and users of semiconductors, personal computers, enterprise networking devices, consumer electronic devices, home networking equipment, producers of industrial sensors, mobile devices, and cellular 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**

**7.1 Are there other standards or projects with a similar scope?:**

**Yes, there are two projects as follows.**

**Sponsor Organization: IEEE 802**

**Project Number: IEEE 802.15.13**

**Project Date: 2017-03 (projected)**

**Project Title: Part 15.13: Standard for Multi-Gigabit per Second Optical Wireless Communications (OWC) with Ranges up to 200 meters**

**Sponsor Organization: ITU-T SG15**

**Project Number: ITU-T G.vlc**

**Project Date: 2015-06 (projected)**

**Project Title: High speed indoor visible light communication transceiver - System architecture, physical layer and data link layer specification**

**7.2 Joint Development**

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

**8.1 Additional Explanatory Notes (Item Number and Explanation):**