**P802.15.3d**

**Submitter Email:** [bheile@ieee.org](mailto:bheile%40ieee.org)**Type of Project:** Amandment to IEEE-Standard 802.15.3 **PAR Request Date:** tbd **PAR Approval Date:PAR Expiration Date:Status:** Unapproved PAR, PAR for a New IEEE Standard

**1.1 Project Number:** P802.15.3d

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

**2.1 Title:** IEEE Standard for Local and Metropolitan Area Networks Part 15.3: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for High Rate Wireless Personal Area Networks (WPANs) Amendment: 100 Gbps Physical Layer

**3.1 Working Group:** Wireless Personal Area Network (WPAN) Working Group (C/LM/WG802.15)

**Contact Information for Working Group ChairName:** Robert Heile **Email Address:** [bheile@ieee.org](mailto:bheile%40ieee.org)**Phone:** 781-929-4832

**Contact Information for Working Group Vice-ChairName:** Richard Alfvin **Email Address:** [alfvin@ieee.org](mailto:alfvin%40ieee.org)**Phone:** 585-781-0952

**3.2 Sponsoring Society and Committee:** IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

**Contact Information for Sponsor ChairName:** Paul Nikolich **Email Address:** [p.nikolich@ieee.org](mailto:p.nikolich%40ieee.org)**Phone:** 857.205.0050

**Contact Information for Standards Representative Name:** ??? **Email Address:** [????](mailto:gilb%40ieee.org) **Phone:** ?????

**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** tbd

**4.3 Projected Completion Date for Submittal to RevCom:** 05/2016

**5.1 Approximate number of people expected to be actively involved in the development of this project:** 30

**5.2 Scope:** This amendment defines a wireless switched point-to-point physical layer for IEEE Std. 802.15.3 operating at PHY data rates typically in the range of 1 Gbps at the low end and up to 100 Gbps or more at the high end in bands from 60 GHz up to and including optical wireless at a range as short as a few centimeters. This amendment defines modifications to the Medium Access Control (MAC) layer needed to support this new physical layer.

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

**5.4 Purpose:** The purpose of the project is to provide a standard for low complexity, low cost, low power consumption, and high data rate wireless connectivity among devices. Data rates will be high enough to satisfy a set of consumer multimedia industry needs, and to support emerging wireless switched point-to-point applications in data centers, wireless backhaul/fronthaul intra-device communication and kiosk downloading.

**5.5 Need for the Project:** In data centers wireless links will make frequent reconfiguration easier and more cost-effective. In the case of backhaul and fronthaul, wireless solutions will reduce costs for the case when installing a fibre network is not cost-effective. In the cases of kiosk-downloading and intra-device communication, a guaranteed minimum data rate is required. No wireless standard fulfilling these requirements exists.

**5.6 Stakeholders for the Standard:** Chip vendors, radio frequency (RF) and optical component manufacturers, equipment manufacturers, enterprise infrastructure providers and wireless 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?:** No

**7.2 Joint Developments it the intent to develop this document jointly with another organization?:** No

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

5.2: *In this context the term switching is used to describe the switching of the physical beams from one antenna to another antenna. Fronthaul is the link between the PHY control unit of a base station and a remote radio unit.[*