

# P802.15.3d

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**Submitter Email:** [bheile@ieee.org](mailto:bheile@ieee.org)

**Type of Project:** Amendment to IEEE Standard 802.15.3-2003

**PAR Request Date:** 13-Feb-2014

**PAR Approval Date:**

**PAR Expiration Date:**

**Status:** Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

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

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard for Information technology-- Local and metropolitan area networks-- Specific requirements-- Part 15.3: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for High Rate Wireless Personal Area Networks (WPAN) Amendment for a 100Gbps wireless switched point-to-point physical layer

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

**Contact Information for Working Group Chair**

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

**Contact Information for Sponsor Chair**

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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:** 11/2015

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

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 100

**5.2.a. Scope of the complete standard:** This standard defines the PHY and MAC specifications for high data rate wireless connectivity with fixed, portable and moving devices. Data rates are high enough to satisfy a set of consumer multimedia industry needs, and to support emerging wireless switched point-to-point applications

**Changes in scope:** This project standard will define the PHY and MAC specifications for high data rate wireless connectivity with fixed, portable and moving devices within or entering a Personal Operating Space (POS). A Data goal rates of are the high WPAN H enough (High Rate) Task Group will be to achieve satisfy a level set of interoperability consumer or multimedia coexistence industry with needs, other and 802.15 Task Groups. It is also the intent of this project to work support toward emerging a level of coexistence with other wireless devices switched in point-to-point conjunction applications with Coexistence Task Groups such as 802.15.2.

**5.2.b. Scope of the project:** This amendment defines a wireless switched point-to-point physical layer to IEEE Std. 802.15.3 operating at PHY data rates typically in the range of 1 Gbps to 10 Gbps at the low end, and up to 100 Gbps or more at the high end. Operation is considered in bands from 60 GHz up to and including optical wireless at ranges as short as a few centimeters. Additionally, modifications to the Medium Access Control (MAC) layer, needed to support this new physical layer, are defined.

**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 are 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 communications and kiosk downloading.

**Changes in purpose:** ~~The purpose of the project is to provide a standard for low complexity, low cost, low power consumption, (comparable to the goals of 802.15.1) and high data rate wireless connectivity among devices within or entering the Personal Operating Space (POS). The Data data rates rate are will be high enough, 20 Mbps or more, to satisfy a set of consumer multimedia industry needs, for and WPAN to communications support. The emerging project wireless will switched also point-to-point address applications in Quality data of centers, Service wireless capabilities backhaul/fronthaul required intra-device to communications support and multimedia kiosk data types 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 fiber 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 currently exists today.

**5.6 Stakeholders for the Standard:** Chip vendors, radio frequency (RF) and optical component manufacturers, equipment manufacturers, enterprise infrastructure providers and wireless operators.

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### 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):** 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.