IEEE P802.11  
Wireless LANs

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| Proposed 802.11bb Functional Requirements | | | | |
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Abstract

This submission proposes the IEEE P802.11bb Functional Requirements as derived from the IEEE P802.11bb PAR [Ref-1] and CSD [Ref-2].

1. **Introduction**
   1. **Purpose**

This document proposes requirements for solutions addressing functionality to be provided by the IEEE P802.11bb amendment, referred to as the TGbb Functional Requirements.

* 1. **Scope**

The scope for deriving functional requirements is set by the IEEE P802.11bb PAR [Ref-1] and CSD [Ref-2].

The functional requirements as stated in this document cover the following aspects of IEEE P802.11bb:

1. System performance
2. Optical safety
3. Supporting wavelength bands
4. Coexistence and interoperability
5. Compliance to PAR
   1. **Notation**

Requirements are identified by a preceding unique number in the format of “TGbb R*n*” , where *n* is an integer number representing the ID of the requirements.

1. **Functional Requirements**
   1. **System performance**
      1. **Throughput**
2. IEEE 802.11bb amendment shall provide all modes of operation of achieving minimum single-link throughput of 10 Mb/s and at least one mode of operation of achieving single-link throughput of at least 5 Gb/s, as measured at the Medium Access Control (MAC) data service access point (SAP).

Note: A single-link is defined as a link between an access point and a single station in the downlink.

* + 1. **Security**

1. IEEE 802.11bb amendment shall address the security of the transition between the new light communication (LC) Physical Layer (PHY) and the existing IEEE 802.11 PHYs as well as the security implications in supporting Fast Session Transfer.
   1. **Optically Safety**
2. IEEE 802.11bb amendment shall provide optically safe working conditions.
   1. **Supporting wavelength bands**
3. IEEE 802.11bb amendment shall define operations in the wavelength bands between 380 nm and 5,000 nm.
   1. **Coexistence and interoperability**
4. IEEE 802.11bb amendment shall support mechanisms that enable coexistence with other systems in the wavelength bands between 380 nm and 5,000 nm including IEEE 802.15.13 systems.
5. IEEE 802.11bb amendment shall support interoperability among solid state light sources with different modulation bandwidths.
   1. **Compliance to PAR**
6. The 802.11bb amendment shall comply with the PAR [Ref-1] and the CSD [Ref-2].
7. **References**
8. 11-17-1604-10-00lc-a-par-proposal-for-light-communications
9. 11-17-1603-09-00lc-a-csd-proposal-for-light-communications