

Standards ?

802.11b-1999 - IEEE Standard for Information Technology - Telecommunications and information exchange between systems - Local and Metropolitan networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Higher Speed Physical Layer (PHY) Extension in the 2.4 GHz band

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Reaffirmed 12-6-2003

An Interpretation is available

Amendment to ANSI/IEEE Std 802.11, 1999 Edition (R2003)

Status: **Superseded**

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Scope:The project will evaluate the possibility of taking advantage of the provisions for rate expansion that are in place on the current standard PHYs. The 802.11 MAC defines... [View more](#)

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Changes and additions are provided for IEEE Std 802.11b-1999 to support the higher rate Physical Layer for operation in the 2.4 GHz band.

Scope:

The project will evaluate the possibility of taking advantage of the provisions for rate expansion that are in place on the current standard PHYs. The 802.11 MAC defines a mechanism for operation of stations supporting different data rates in the same area. The current 802.11 standard already defines the basic rates of 1 Mbit/s and 2 Mbit/s for both Frequency Hopping (FH) and Direct Sequence (DS) PHYs. The two rates are supported by having same header for both rates with length and rate information passed in the header at the lowest ("basic") rate; then the body of the packet is transmitted at the rate chosen and with the corresponding modulation method. The header structure of the two PHYs already supports passing rate information up to 4.5 Mbit/s (in 0.5 Mbit/s increments) for FH and up to 25.5 Mbit/s (in 0.1 Mbit/s increments) for DS. The proposed PAR targets further developing the provisions for enhanced data rate capability of 802.11 networks. The 802.11 MAC incorporates already the interpretation of this information and the computation of expected packet duration even if the specific station does not support the rate at which the packet was sent. The 802.11 MAC is compatible and will accommodate the higher PHY rates.

Purpose:

To extend the performance and the range of applications of the 802.11 compatible networks in the 2.4 GHz band by increasing the data rate achievable by such devices. This technology will be beneficial for improved access to fixed network LAN and internet work infrastructure (including access to other wireless LANs) via a network of access points, as well as creation of high performance adhoc networks. The purpose of 802.11a is also for higher data rates, however, that project is for operation in the 5 GHz band, whereas this project is for operation in the 2.4 GHz band.

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ICS Code: 35.100.10 35.110 35.100.20 - Physical layer
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