

**IEEE P802.11
Wireless LANs**

WPAN Frequently Asked Questions (FAQ)

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Abstract

The Study Group discussed and approved that a Frequently Asked Question document be written after the May Meeting in Irving, TX and prior to the LaJolla, CA Meeting. The authors of this submission envision a “rolling” document that will capture and document the on going questions and answers fielded by the WPAN SG.

Larry Ochs coordinated the responses from various members of the Study Group including but not limited to Pat Kinney, Rick LaRowe.

- Q: What is WPAN?
WPAN stands for Wireless Personal Area Network. The WPAN study group was formed to investigate the need for a supplemental wireless network standard specifically targeted to provide very low power consumption, low complexity, wireless connectivity among devices within or entering a Personal Operating Space (POS). This includes devices that are carried, worn, or located near the body.
- Q: What need or market niche does this standard address?
There is currently an unfilled market need for a means of networking devices within the POS where power consumption, cost, and size optimization constraints prohibit the use of currently available standardized solutions.
- Q: Why is another standard required in addition to 802.11?
The primary 802.11 design criteria are different from those of the WPAN. WPAN functional requirements are simpler, yet there is a much greater concern over power consumption, size, and realizable product cost. This is due to the WPAN focus on the requirements of wearable computing and peripherals.
- Q: How does this relate to HomeRF, and Bluetooth?
Both are informal consortia-based groups defining wireless networks. HomeRF could be characterized as a “trimmed down 802.11”. Bluetooth is a newer addition to the wireless space, and comes closer to satisfying WPAN requirements. In both cases, we would expect both consortia to propose technology to a WPAN working group.
- Q: Who has been involved in the study group?
A broad range of wireless industry leaders, academic researchers, semiconductor manufacturers, system integrators and end users. Individuals from more than 30 companies have thus far participated in development of the PAR including individuals from Amp M/A-Com, Boeing, Digital, MIT, Motorola, GTE/BBN, and Xetron.
- Q: Is there enough interest and product differentiation to warrant an additional standard?
Yes, the increasing adoption of wearable and handheld computing and communicating devices, and the proliferation of peripheral devices for them, has made clear the need to provide wireless connectivity. Examples of applications include Collaborative Maintenance, Mobile Worker, Medical Sensing, Data Synchronization, etc.
- Q: Will WPAN devices co-exist and be interoperable with any other standard devices such as 802.11, Bluetooth and HomeRF?
The study group will continue to investigate the issues of interoperability and co-existence. Preliminary analysis indicates that WPAN devices will gracefully co-exist in the 2.4 GHz band due to their low power and frequency agile design, however they most likely will not inter-operate with non-WPAN devices.
- Q: Will current technology enable cost effective implementation of the standard?
Yes, multiple companies have demonstrated WPAN implementations using current technology.
- Q: When are products expected to be available based on a WPAN standard?
The study group estimates that a draft standard can be ready for approval by mid-1999 and product available shortly thereafter.