802.11ac Impact on WLAN

Frequently Asked Questions

Standards, Clients, Compatibility and Regulations

Q: **Is there any impact from the new standard under development—802.11ad?**

A: The target market for the .11ad standard does not apply to a general purpose WLAN deployment. While the standard anticipates that data rates will be significantly higher, this technology will be associated with HD video and machine-to-machine applications with much shorter range due to its operation in the 60 GHz spectrum.

Q: **I assume that 802.3at PoE will be mandatory?**

A: With improvements in silicon technology, it is likely that first generation 802.11ac products will work using standard 802.3af power.

Q: **Will DFS cause problems with 80/160 MHz channels?**

A: If no DFS channels are available—in North America, there are only two 80 MHz channels and no 160 MHz channel available. This reduction in available channels is a real challenge for standard microcell solutions. Meru's single-channel architecture (SCA) is designed to address this challenge. Even with DFS support, channels reliant on DFS may experience disruption due to positive detection events of weather radar, etc. This will prove challenging for vendors who rely on additional channels for coverage.

Q: **I'm in manufacturing in the U.S., and we have several plants with heavy machinery. Will the 802.11ac technology be able to manage RF noise generated by manufacturing equipment better than the current technology?**

A: For the most part, 802.11ac will manage interference in a manner similar to 802.11n. However, as the data rate goes up, the impact of interference becomes more significant, and the management of the signal-to-noise ratio (SNR) more important. In noisy RF environments, you may not be able to use certain data rates because of higher SNR, but lower SNR will support better data rates than on previous standards.

RF Coverage, Beamforming, and Network Designs

Q: **Do the benefits, bandsteering, and beamforming depend on the client?**

A: Beamforming requires support by the client. Bandsteering is client independent, though it only impacts clients that are dual-band capable.

Q: Will Meru offer WAN bridging functionality and associated external mounting/antennae solutions?

A: At this time there is no plan to offer a WAN backhaul capability for remote sites. Our 802.11ac solution will be capable of supporting a wireless bridging function.

Q: Does .11ac propagate at further range than .11n? I have heard some vendors say so.

A: Since 802.11ac leverages much of the same technology as 802.11n in the 5 GHz band, we expect enterprise networks to have ranges similar to existing 802.11n deployments in the 5GHz band. However, with broader use of beamforming and the introduction of 256-QAM, it is anticipated that you can expect better performance/data rates at similar distances.

Power

Q: I've heard that a mobile .11ac device uses less energy and saves battery, but still increases performance compared to .11n. Is this true?

A: There is the potential for battery savings with 802.11ac due to the improved performance at range. The client will spend less time on the air, and that translates to lower power requirements. The exact battery savings will be dependent upon the mobile device manufacturer's optimized design. For many of these designs, however, power requirements for the LCD display are far greater than what is required for the Wi-Fi radio, and will have a bigger impact on battery life.

Vertical and Business Drivers

Q: What price range will AP332i or AP332e sell for to a public K-12 school?

A: The MSRP is set at $1,195, but please contact your VAR or Meru rep for appropriate pricing for your institution.

Q: How do we arrange for a pilot demonstration?

A: Provide us with your contact information, and we will be happy to collaborate with you on a pilot when the .11ac access point becomes available.

Meru 802.11ac Solutions

Q: When will Meru introduce the first 11ac product for enterprise?

A: We have not yet announced a specific date for our 802.11ac product shipment. Most leading analysts expect enterprise vendors like Meru to start shipping their 802.11ac products in mid to late 2013.

Q: Will the investment protection plan be available in EMEA?

A: Yes.

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