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IEEE task force approves power boost over Ethernet

Task force draft for 24 watts is given the go-ahead, meaning businesses will be better able to take advantage of the freedom of expansion PoE provides

By Ephraim Schwartz

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Convergence took on a new meaning last week when the IEEE 802.3at task force approved the third draft of the PoE (Power over Ethernet) Plus specification, which will converge power lines with Ethernet over an Ethernet cable.

Shepherded by the Ethernet Alliance, an industry consortium for the promotion of Ethernet technology, the draft calls for up to 24 watts of electricity over Ethernet cable. Up until now, the PoE standard allowed for 14 watts of power, not enough to handle newer technologies like IEEE 802.11n, whose access points require the higher wattage.

Also, the latest generation of security cameras, which use color and have tilt, pan, and zoom capabilities, require more than 14 watts, as do VoIP phones.

Even with the limited power output, enterprise companies have already been buying up the dual mode cables, according to a Gartner report.

Fourteen percent of all switch ports sold worldwide last year included PoE, while Cisco sales for the technology were as high as 30 percent of all sales. At Nortel, a whopping 40 percent of all its switch ports were powered.

The benefits are fairly obvious, according to Brad Booth, chairman of the Ethernet Alliance and a senior principal engineer at AMCC (Applied Micro Circuits Corp.). "If you build out wireless networks, you can power the access points via PoE," he said.

Powered APs will give network managers the ability to put access points where it might have been impractical before this due to the difficulty of adding electrical wiring.

In addition, running power over a CAT V cable eliminates the need for extra wiring and costs associated with installation, and PoE does not require an inspection, whereas wiring upgrades do.

The roadmap beyond PoE Plus is uncertain, Booth said, but the task force is looking at higher power output over Ethernet, although the current tactic of bundling cables together might not be viable due to the heat generated beyond 24 watts at this time.

The draft specification for PoE Plus has been sent to the IEEE 802.3 working group, and final ratification is expected in about 16 months. In the meantime, companies like Cisco and Microsemi have introduced their own PoE, believing that the current spec is fairly stable, which Booth confirmed.