

Summit White Paper: Wi-Fi Roaming Remains Challenging

But essential for today's business-critical mobile devices

Akron, Ohio, November 3, 2009 – While Wi-Fi® security has received a great deal of press, Wi-Fi mobility has not, even though many organizations struggle to provide reliable Wi-Fi connectivity to devices that are on the move. A new white paper from Summit Data Communications explains why Wi-Fi mobility is important, how it works, and why providing reliable mobility can be a challenge.

Mobility requires roaming. A Wi-Fi client connects to a network through an infrastructure endpoint device such as an access point (AP). When the client moves to a position where its connection to that AP becomes suboptimal, the client will try to switch to an AP that provides better connectivity. The process of switching from one AP to another is called roaming.

“The challenge is to maintain an active network connection while you roam,” said Chris Bolinger, the paper’s primary author. “Many business-critical applications require a persistent network connection, and a disruption of as little as 100 milliseconds can cause an application to fail. When applications fail, organizations incur significant expenses from errors and lost productivity.”

To roam effectively, a client must recognize when its current connection is suboptimal, scan the airwaves for a better AP, select the best AP, roam to it, and reauthenticate to the network. Many client devices do a poor job of selecting an AP and take a long time to reauthenticate to the network, especially when using Extensible Authentication Protocol (EAP) methods with IEEE 802.11i, the ratified standard for Wi-Fi security.

Some Wi-Fi infrastructure products attempt to play a proactive role in AP selection by steering a roaming client toward a particular AP and, in some situations, forcing a roam by severing a client’s current connection. When clients run applications that require a persistent connection, infrastructure-assisted roaming can be disruptive and cause application failures. As the white paper explains, the optimal approach is to use clients with proven capabilities for fast and secure roaming in any environment.

The Summit white paper, “Wi-Fi: The Importance of Mobility”, is available free of charge from the Summit Web site, www.summitdatacom.com.

About Summit

Summit Data Communications, Inc. is the *mobile* in today's mobile computers and other business-critical mobile devices. Summit's embedded Wi-Fi solutions provide secure, reliable connections in the challenging environments in which business-critical mobile devices operate, including factories, warehouses, ports, hospitals, and retail stores.

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