

PERFORMANCE METRICS IMPORTANT TO PUBLIC-SAFETY LTE

Urgent Communications

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An interesting report has been released from **Signals Research Group**, which independently measured the performance of HSPA chipsets and found significant performance differences between chipsets and devices. While public safety isn't relying on HSPA, the trend is expected to play out in the LTE market also, which means those public-safety entities running LTE networks need to pay attention to the types of devices and chipsets operating on their networks.

That's because the performance of devices are becoming significantly more important to the performance of the network. Poorer performing devices on high-speed broadband networks not only create user dissatisfaction, but they make networks inefficient, which has an impact on network costs, according to Nigel Wright, vice president with testing firm Spirent. Signals Research used **Spirent's testing equipment** for its independent tests.

"In the past, it was sufficient to have certified devices running on the network, but operators today have spent a tremendous amount optimizing their networks," Wright said. "If higher adaptive technologies like HSPA+ are interacting with the network all the time and the interaction doesn't go well, it is costing operators money, if they have millions of poor performing devices on the network."

Will Strauss, founder and principal analyst with **Forward Concepts**, said the performance gaps have to do with the maturity of the HSPA+ standard, and LTE chips will follow the same path.

"Standards are still in flux, and that is one of the problems," Strauss said. "Some of the companies did not engineer LTE or HSPA DSPs with enough horsepower to enable higher data speeds."

North American operators are extremely interested in the performance of chipsets. Verizon Wireless, AT&T and T-Mobile have established their own end-to-end testing of devices and chipsets. They discuss devices with vendors and bring chipmakers into the conversations, as well, said Steve Allpress, chief technology officer and vice president of modem software with LTE baseband supplier **Icera, which is set to be**

acquired by Nvidia.

What does that mean for public-safety LTE operators? They can no longer rely on their device makers selling them a device that simply meets the specifications. There are too many performance variables with the LTE standard. Will they have to go the route of the operator and test devices themselves? With this in mind, some sort of performance testing of LTE devices should be subject to an independent evaluation for public safety, perhaps by the **Public Safety Communications Research** (PSCR) program in Colorado. It's not only important for cost reasons, but freezing video on a device could be a matter of life and death.
