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Tests wrap up on next-generation networks for IPTV and more

IP Multimedia Subsystem seen as common way to converge services

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October 29, 2008 (Computerworld) WALTHAM, Mass. -- For nearly two weeks, dozens of network engineers have been holed up in a lab in this Boston suburb, working around the clock and slurping coffee as they crunch numbers to further the cause of network interoperability.

They have been joined by engineers in China and the U.K. as they perform more than 1,000 different tests over five service providers' network links among three continents using about 225 network devices and end-user gadgets provided by 22 vendors.

Their work would put to sleep the average person using a cell phone, PC or TV, but they are ultimately hoping to make all kinds of networked devices, wired and wireless, talk to one another when using an array of [emerging services, such as IPTV](#).

The common system at the heart of the testing is the [IP Multimedia Subsystem \(IMS\)](#), which is designed to enable "the true convergence of services," said Mark Wegleitner, senior vice president of technology at [Verizon Communications Inc.](#), the company hosting the tests, which started Oct. 20.

IMS was first tested at a [similar event in 2006](#), but the current tests look not only at IPTV services, but also several others, including location-based services that rely on Global Positioning System data tied with user presence information on mobile devices, and service-oriented architecture, with tests designed to study the integration of IMS with Web-based services.

With three days of tests remaining, Roger Ward, president of the MultiService Forum, said in a videoconference appearance from London that there have been "no showstoppers found yet."

In fact, several participants at today's open house for analysts and journalists repeated what is often said about interoperability -- that although technology obstacles can eventually be overcome with engineering prowess, the politics of getting all the equipment vendors and service providers to work together can be a thorny, political process. Of the 22 companies that participated, [Nortel Networks Corp.](#) was one of the largest equipment makers, although the largest vendor, Cisco Systems Inc., was not part of the Global MultiService Interoperability testing event.

In general, Jim McEachern, vice president of the MSF, said the testing is not about discovering what is possible, "but how easy [the interoperability] is."

Naseem Khan, a principal member of the technical staff at Verizon, said the testing had determined that one difficulty with IPTV is creating an interface between TV set-top boxes and IMS so that an end user can select the various television services he has subscribed to.

One vendor, [NEC Corp.](#), brought a complete range of IMS gear, including a software version of the set-top box. NEC is already provisioning IMS for KDDI, a service provider in Tokyo, said Veli Sahin, NEC's senior director of business development for carriers.

NEC also tested for IP packet loss over IPTV. MSF officials said testing showed that even one half of 1% of packet loss in a video stream can make the video quality unacceptable to end users.

For [Nokia Siemens Networks](#), interoperability testing is vital to the wide adoption of IMS, which is seen as a cost-effective architecture for network operators, said Matthias Glanz, head of next-generation voice and multimedia product management at [Nokia](#).

"IMS means convergence into one network of all the parallel networks that operators now have," he said.

Glanz said that one way IMS interoperability will help is with live video chat over wireless devices. Technically, the capability for video chat exists today, but only between two compatible handhelds over a single carrier's wireless network, he said. "You need the ability to reach more devices and roam across networks," he said.

The testing process under way this week will continue, with another major event scheduled two years from now. Organizers might want to find a way to spread out the hundreds of expected tests, instead of cramming them all into a single two-week period, several officials said.

"We should not lose sight of the endgame of this process, which is that the user has a consistent ease of use for, say, video service at home and on the cell phone and across all the services they take from us," said Susan Miller, CEO of the Alliance for Telecommunications Industry Solutions in Washington.