The Latest Wasn't The Greatest When The Lights Went Out

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NEW YORK -- Don't tell Lyle Franks that he needs the latest technology.

Around 5 p.m. EDT on August 14, Franks was slowly making his way down a darkened stairwell in a 16-story building in Westchester, N.Y. In between flights, he tried unsuccessfully dozens of times to call his pregnant wife to see how she was faring in what would become one of the worst power outages to hit the United States.

And then he felt a vibration.

His BlackBerry messaging device, a handheld unit that uses transmission technology developed in the late 1980s, had just alerted him to an incoming message. His wife had sent him an e-mail from her BlackBerry, saying she was okay.

"I don't know what I would have done without the BlackBerry," Franks, a day-trader, said days later. "Without it I wouldn't have been able to get in touch with anyone. It's what we all want cellphones to be."

For the second time in less than two years, e-mail messaging devices like Research In Motions Ltd.'s (RIMM) BlackBerry and Good Technology's GoodLink proved to be reliable devices for those trying to locate loved ones and co-workers during a widespread emergency.

As millions from New York to Detroit struggled to communicate over cellphones and traditional land lines, thousands of others were having more success using the handheld wireless e-mail messaging devices. The devices are more reliable in emergency situations because many carriers have the messages sent over data-only networks where capacity is largely infinite.

These networks, like Cingular Wireless' (X.CIW) 10-year-old Mobitex network, take data and basically run it through a virtual blender. The individual pieces are sent across the network in packets and are reassembled when they come out the other end. This allows greater amounts of information to be carried simultaneously.

By comparison, many voice networks rely on groups of circuits to carry messages. In order for a call to work, a circuit on one end has to be linked with a circuit on the other end. No information besides the one phone call can pass along this circuit while the call is in progress. Each network has enough circuits to handle the average amount of calls on an average day, with some room for error. However, when the number of calls triple and quadruple as they did during the blackout and other emergencies, like the terrorist attacks of Sept. 11, 2001, there aren't enough circuits to go around.

"It's not a question of reliability in the technology of a cellphone versus the technology of a BlackBerry but it's a question of the networks the information runs on," said Shiv Bakhshi, research manager for wireless infrastructure for International Data Corp., an information technology research firm. "The nature of
data allows the networks to handle more information."

A second reason for the increased reliability is the fact that the transmission of
data can be slowed but transmission of voice must always be real-time. For
example, if an e-mail message is sent on a network which is being inundated with
messages, the e-mail message may take a few minutes longer to reach its
destination than it normally would have. That can't happen with voice. Imagine a
phone call where the party on one end says something and it doesn't reach the
other end until a few minutes later.

"A telephone call is immediate, not so with data," Bakhshi said. "Data networks
can tolerate delay not error. Voice networks can tolerate error but not delay."

Still, some wireless messaging device users did lose service during the blackout.
Just as cellphones and land line phones require electric power to keep the circuits
active, wireless messaging devices have base stations which run on electric power.
These base stations are used to transmit data from one point to the next. If there
was a problem with the back-up generators and batteries at these stations, the
e-mail messages would have been delayed. With BlackBerries, for example, if an
e-mail message is not received and passed on by a base station after a certain
period of time, the message is aborted and the sender of the message is notified,
said Mark Guibert, vice president of marketing for Research In Motion.

To limit failure, the network has a built-in fail-safe.

"If a base station goes down, the data is automatically sent to another base station
to be transmitted," said Clay Owen, a spokesman with Cingular Wireless. "As
long as the next base station is close enough, the information will be transmitted."

Owen said Cingular' Mobitex network ran smoothly during the power outage
despite an increase of roughly 25% in messaging data traffic.

Other carriers, like AT&T Wireless Services Inc. (AWE) and Nextel
Communications Inc. (NXTL) reported similar results.

Keith Schlingheyde, a financial services executive, said during the blackout he
was able to receive work-related messages from Milwaukee on his GoodLink
while driving the darkened streets of Connecticut.

"To have absolutely no power and to still be able to contact people is incredible," he said. "(The devices) really are a must-have."

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