Businesses look to VoIP solutions

October 22 2005

Like the party line and the Telex, the traditional phone network at your office may be next to go, as more firms adopt Voice over Internet Protocol technologies to both expand features and reduce long-term costs.

Unlike long-standing PBX phone systems currently installed in most businesses, VoIP systems are digital systems capable of tying into other computer services. A standard telephone handset, capable of placing and receiving calls as well as paging, voicemail and conference calls, can be expanded for other uses such as synching with PDA devices, recording phone calls to a server and displaying custom information such as stock quotes under VoIP systems.

Under VoIP, a phone system and its functions become more like programmable software. Companies can choose to add to or modify the underlying VoIP software, thereby changing the capabilities of the system beyond that of the traditional PBX at a lower long-term cost.

"I think it's the absolute future," said Charlotte Oliver, a network administrator who implemented a VoIP system for her company this past year. "Companies can do anything if they put the development money into it."

Despite the expanded features of VoIP systems, there are still some wrinkles to iron out, especially since users now have to treat their phone handsets more like small computers on a network.

"Now each phone is like a node and it effectively doubles the size of your network," Oliver said. "There were training issues such as users rebooting their phones and getting used to IMS (Intern Messaging Service), which sends voicemail messages to e-mail and people accidentally deleting their voice mails."

For others, the switch from a conventional PBX phone system to VoIP went as smoothly as they could have desired.

"I had wired everything with category five network cable in trying to look ahead," said Walt Shenberger, an IT Manager. "I unplugged the old phones, plugged in the new phones, plugged these into a powered Ethernet hub and it was up and running. Most of the users set up their voicemail on their own without any input from me, so that was intuitive. The only real noticeable shift was the need to dial 9 for an outside line."

Despite estimates that half of this year's new business installations will feature VoIP technology, obstacles to its adoption as a communications standard remain.

"The new functionality is compelling if you're buying a new system, but hard to see if you're junking a perfectly valid system," said Marvin Sirbu, professor of engineering and public policy at Carnegie Mellon University. "Some companies use conventional handsets and phone lines that go into a box in a closet that convert the signal to telephony and allows them to use the traditional handsets with VoIP technology's extra features.

"I think in the long run, VoIP will be the dominant form of voice traffic for residential or business. This will take a decade or so. The last hand-cranked telephone wasn't taken out of service until 1974," said Sirbu, adding that traditional limitations fall by the wayside with the new technology. "One of the things that's possible in a VoIP system is to

rethink voice quality. In a VoIP setup, there's no reason not to support the 4 kilobit voice standard and not encode a higher quality standard."

"Depending how old the business is, the PBX systems are paid for already after five years," said Tim Bajarin, principal analyst for Creative Research Inc. with regard to hesitation as to switching over to VoIP systems. "If this has been spent and paid for, they need a legitimate incentive to make the switch, which is cost per call. The average costs for VoIP are lower than PBX and carriers don't want to give up the land line PBX systems unless they have to.

"Whether the phone carriers like it or not, they realize that the Internet will be the new backbone," said Bajarin. "While they'd like to slow down the adoption of VoIP, they need to provide it to mainstream business and consumer users as well. Within the next 10 years, virtually all of the communication we do through businesses will be through a broadband Internet backbone."

"Features and software tend to be major drivers. There are dozens of features that are doable over VoIP that were previously difficult to do with PBX systems," said Michael Robertson, CEO of SIPphone Inc., makers of the Gizmo Project VoIP client. "What you can do now is quickly outstripping what you can do with a PBX system."

Technological changes are never easy, especially in office environments where the chief demand is for the device to work as well as whatever preceded it. But after the uneasy transition periods, the change may bring something just that much better.

Copyright 2005 by United Press International