

A periodic look at the competitive telecom industry...

[New Paradigm Resources Group, Inc....Explaining the Competitive Telecom Last Mile.](#)

VoIP Emerges: The VoIP Dilemma for Telcos, Cable Telcos and CLECs

The move to VoIP is now acknowledged and all the former RBOCs, most CLECs and the cable MSOs providing telephone service have announced their intent to offer VoIP. This move presents several issues for these companies. They have been providing telephone service using traditional circuit-switched equipment that now must be altered or replaced. This is not such a straight forward process as might be imagined.

The first issue they must face is what to do with their TDM, Class 5 switches. Most telcos and some CLECs seem to be moving to modify, rather than replace existing equipment. All the major TDM switch manufacturers have developed "IP-enabling" add-ons for their existing products. While this approach will allow the service provider to offer VoIP, it is not the most economic architecture. Some CLECs and cable telcos are stepping up to pure, softswitch-based networks. This is, of course, easier for cable companies which have not taken the plunge into telephone service and for new CLECs that do not have a great deal of investment in legacy networks.

Beyond the issue of switches, is the issue of network transport. Vonage has had great success in promoting VoIP over the Internet. By using the public Internet, it has minimized its network expenditures at the cost of being able to deliver only "best efforts" voice. It has generally been assumed that since the public Internet was not originally intended for real-time applications, like voice, periodic blockage in transit would produce so much latency as to result in sometimes poor voice quality. What Vonage has demonstrated is that latency is not much of a problem in the Internet backbone. Apparently the era of massive fiber deployment resulted in the creation of a great deal of excess backbone capacity.

Internet blockage appears to be primarily a "last mile" phenomenon. By riding the "free" bandwidth of subscribers to broadband cable and DSL Internet access, Vonage has been able to offer acceptable quality voice using VoIP. Some small cable companies have adopted this approach and are reselling Vonage service as part of their bundled voice, data and video offerings. Major MSOs have not yet decided which way to go ... that is, whether to use the public Internet or a managed, higher-quality IP network for transport.

Qwest, in the first RBOC offering of VoIP, is using Internet transport in Phase 1 of its rollout in Minnesota. However, it seems most likely that ILECs in general will not want to offer lower quality voice than that of their traditional landline service and will use some form of managed IP network. Qwest hints that it will go this way after Phase 1.

The dilemma for all current providers of telephone service – ILEC, CLEC and Cable Telcos – is whether to offer higher quality, more expensive VoIP over managed IP networks or lower quality, less expensive VoIP over the Internet. A decision in favor of managed networks could have important consequences for carriers like Level 3 with national IP networks.

This is the last of three installments focusing on the VoIP industry. All information in this and the upcoming installments comes *from “VoIP Finds Its Sweet Spots – You May Be Surprised Where” a Connecticut Research White Paper available from www.connecticutresearch.net.*

About Connecticut Research

Connecticut Research, Inc. of Glastonbury, CT is a consulting and publishing company that has provided insight and analysis to the telecommunications, computer and information services industry since 1986. Connecticut Research has produced numerous white papers, market studies, technology evaluations, business plans, due diligence studies, venture analyses and technical reports for its clients, which range from emerging enterprises to some of the nation’s largest communications firms.

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