



Implementation of VoIP And IPTV Reality Check

By Greg Heifner ■ *Orbital Data Net, Inc.*

I don't get an article finished before it is pointed out to me that I am one day late in reporting the most recent developments! Just a few weeks ago, Sprint set a new industry first by carrying live Internet traffic across its network at 40 Gb/s. Using the newest CISCO router, the CRS-1 and Strata-Light's OC-768c optical transport system enabled them to do this feat, but even then they used new multiplexing technology developed by Ciena to generate this throughput. At the core, the CISCO CRS-1 router (code named the BFR... you figure out what that means...) shows the future capability of the circuits we use for the Internet. But remember, these are trials to prove the technology. A long way from what you and I will use in our business's and homes in the next few years.

video codec technology from Tandberg, they believe the next wave in VOD television is adapting video conferencing technology into a consumer product that will deliver video to your television across the Internet, or a wide area network on a campus or business location. They are convinced that you the consumer will accept this product, even though the far simpler business of videoconferencing across the general Internet is not an exact science, even now, despite the government and industry having spent millions on furthering development over the past decade. Also remember, these video conferencing (VTC) business sites have connectivity options that a home subscriber would find unavailable or too costly. So how is this going to revolutionize television viewing? I guess

soft switching and bandwidth tools are already in place. Yes, some of these systems work very well, in very well designed and maintained networks. But it is not universal, and many problems have materialized. I have heard stories of up to 10% of the VoIP phones shipped have had to be returned to some manufacturers. Quality control seems to have been an issue. Many sites have reported problems with call clarity and enhanced system such as voice mail not working. While all of these issues can be solved, it takes time, patience and technical personnel that know how to clear problems like this.

Most business users of VoIP only use the VoIP circuits for internal corporate communications across their own internal networks and do not use it for customer or outside connectivity because it has proven unreliable. For internal communications, they are leveraging an asset within their own corporate network. As time goes on, these networks are slowly working out the bugs and fine tuning the middleware that will ease these problems, but beware, in the real world, the technology has issues. At this point, it is not as reliable as your conventional phone system that has matured over decades. Now you are using a data system that has to be tightly managed to work with VoIP and even worse, IPTV if and when that arrives. This becomes a totally new ballgame, something that the packet switching environment we call the Internet is not designed to do very well, but by using devices that allow store forwarding of video and various levels of video compression, it is within

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The "bleeding edge" is just as it sounds: A great place to get scalped by the newest technology. What sounds good is sometimes hard to implement.

A perfect example of this is IPTV and VoIP technologies.

Microsoft has been talking about IPTV on its developer website for a while now. Using Media Player 9 and

we will see this work when Gigabyte networks get rolled past the curb into your apartment or home. Just don't hold your breath. Consistent e-mail is still a challenge to some smaller private networks. Voice and video are far more difficult to deliver consistently.

VoIP developers would have you believe that the phones, middleware,

feasibility today. But, feasible does not mean you want to necessarily install it at your new apartment complex right this minute unless you are certain your network is robust enough to deliver these types of services and that you have solved your issues surrounding phone interconnects outside your property.

Businesses and institutions that manage existing IP-enabled PBXs are way ahead of the game. This is where the majority of the success cases from VoIP are issuing. The VoIP networks on college campuses, for example, are far easier to develop VoIP strategy and deploy than a facility that is running a smaller network with less capable equipment and personnel on site. Smaller operators need to find partners in this technology or be patient and wait for other telecommunication companies to get their acts together and start to offer QOS (quality of service) and managed



system continues to work, making VoIP an attractive but risky technology.

Provisions of the 1996 Telecommunications Act are nearing their expiration dates. There is no guarantee that phone companies will even continue to

in the networks they roll out into their properties will find themselves perfectly placed to embrace these new offerings. Those that do not pay attention to the quality of their internal data network had best set this one out.

Who will win in the long run is the product/technology that provides the highest quality of service and experience to the end consumer because, trust me, the consumer really doesn't care how it is done, they just care how well it works and what it costs. But if dial tone is not present when they lift the receiver, you the property manager had better have a clear-cut path to restore it. ■

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bandwidth routines as part of their overall VoIP strategy. Phone companies will simply have to do this because it is the only way they can counteract the reduction in basic phone revenues they face. They have to provide managed services that will generate revenue or watch everyone else walk off with their voice business.

Cable operators have the exact same challenges in tightening the controls on their networks to allow the type of experience consumer's demand of their phone services. When it works, like the Comcast system my brother-in-law uses in Phoenix, a very attractive and competitive service is offered. Most of the time, it is plain old reliability that puts operators out of the VoIP game. At the same time, the traditional phone

lease services of any kind to outside organizations that could raise the levels of competition. Much is to change in the very near future, especially with VoIP and other streaming services. While it seems pretty certain that the government is reluctant to tax or otherwise squash VoIP, it is also uncertain as to who will control the networks that carry such services.

It may be a long while before voice, video and data integration works itself out and we see a more "seamless" system. Until then move cautiously, Microsoft wants to be your video provider, the cable operator wants to be your phone company and the Bell's are wanting to be everything to everyone and maintain their core revenues. Private operators that are willing to invest

About the Author

Greg Heifner is one of the early pioneers of satellite communications, he was instrumental in the technology that our industry uses, as well as helping to develop the relationships our industry has with video programmers. He is an "unabashed nerd" and had devoted his life to technology in its various forms. He is now the founder and CEO of Orbital Data Net, Inc., which provides broadband and video solutions to the military, state governments, educators and business nationwide. He may be reached at 573-445-8101 or greg@orbitaldata.net.