Forging a Trail through Jungle of Voice-over Internet Protocol (VoIP)

Kathryn E. Jackson
ResponseDesign
http://www.ResponseDesign.com

Some contact center people have concluded that VoIP is riskier and less reliable than their current voice technology. They recommend against it because it's still too bleeding edge. They attend meetings and emphasize their pronouncement by waving of a list of pros and cons—which in reality consists mostly of cons.

They tell their associates that they won't get the call quality they have right now – that packets of voice may be lost or dropped and that latency is still a problem. They scare people by telling them that calls may sound like they are going through the old satellite network—reminding them what it was like having to wait two or three seconds before hearing people on the other end, and then ending up talking right over them.

These naysayers talk about how even best friends find their nerves frayed and tempers short when the beginnings and endings of sentences are repeatedly thrashed and garbled—and how this is not the best thing for building relationships with new business partners. They are also quick to remind others that with latency also comes 'jitter,' which makes speech choppy and difficult to understand.

Other VoIP survivors gladly discuss how they haven't realized the cost savings they were looking for. And justifying a forklift upgrade when they still had so much money for their old switches on the books is difficult. Many will tell you that the deployment of VoIP was more difficult than anticipated. That's a huge drawback.

Have you recently talked to any of these VoIP victims? If so, welcome to the club. It's still a jungle out there. Some basic myths continue to persist regarding the use of VoIP in the contact center today. In this article, I'll use my research machete to forge a path through the VoIP jungle. I'll provide you with several trail markers that will help you determine how and when VoIP could be implemented in your contact center.

Let's add a little balance to the survivors' list of woe.

What is VoIP?

"VoIP" means that both the voice and data components of a customer contact are carried over the same network. In our traditional voice network (the one we have all been using since the conception of the contact center) the voice is "circuit switched"—carried along a dedicated connection between two points. The voice element travels separately from the data— nothing but voice travels along this circuit-switched network.

VoIP uses a packet-switched network just like the one that data professionals have been using since the beginning of the contact center. With VoIP, voice and data are sent over the same network. Both the voice and data are segmented into small pieces called

packets. During one customer call, hundreds of little "voice snippets" are interspersed among hundreds of customer information (and other data) packets and they are all travel down the same packet-switched network "pipe."

What are the Promises of VoIP?

The promises of VoIP excite us—they are now fueling its growth and popularity. They include:

Saving money: While the bypass of toll charges was the initial draw to VoIP services, its proponents now point to a decrease in overall management costs as the primary way of saving money. Management costs decrease simply because IP is easier to manage.

1. When network moves, adds and changes (MACs) are necessary, an IP network offers simplicity and therefore substantial savings. When employees move, they simply pick up their IP devices (commonly a telephone) and move. All their user definitions follow them around in their device. No major re-cabling or re-defining the user in the switch is required.
2. Companies do not have to expend their resources to run two or more networks because with VoIP—they run just one.
3. Companies can leverage in-house computer expertise and don't have to depend on a vendor's costly service and expertise for feature upgrades and fixes.

Improving user productivity: Users have access all forms of messages—voice, mail, e-mail, fax and video mail—from a common mailbox. Research indicates that this single feature alone delivers an approximate 25-minute-per-day increase in productivity per employee.

VoIP handles customer contacts more smoothly. Agents can use it to transfer customer contacts and related electronic records to another agent much more efficiently.

Enriching customer relationships: IP-based contact centers allow agents and customers to collaborate using live, integrated Web-based voice, video, and data conversations. Agents have full customer intelligence—they can see all customer interactions in real time and services for each customer can be tailored in real time.

Is it "All or Nothing?"

No, it's not all or nothing. You don't need to move to a complete VoIP solution all at once. Since you have made a significant investment in your traditional telephony-based contact center, you may want to implement a phased transition strategy that uses your existing infrastructure to move to a complete VoIP network.

For example, you may want to roll out VoIP in new sites rather than continuing to invest in proprietary legacy equipment. Or, you can integrate new IP equipment as legacy equipment leases expire or as expensive equipment upgrades are required.

Evaluating "If" and Then "When"
Evaluate the following factors to determine whether or not you should consider moving to VoIP:

Are you expanding rapidly?
Traditional contact centers rely on separate telephone and data networks (meaning two distinct systems are in place to service customers) and maintaining these two networks is costly. Adding new traditional centers and agents takes longer and requires significant capital investment and ongoing support costs.

Do you need to be distributed?
VoIP allows you to decentralize your contact center and spread agents out over various time zones. You could also use VoIP to support remote, seasonal and temporary agents working from home, or outsourced agents abroad.

Do you need to have a cost-effective 360-degree view of the customer?
Typically, customer contact details are housed in silos. A customer may talk with an agent on Monday, chat on Tuesday, and send an e-mail on Wednesday. Synchronizing all of these contacts for a 360-degree view of the customer is difficult and expensive with legacy systems. With a converged voice and data network, you can expand your customer's media offerings, keep your infrastructure costs down, and still have a 360-degree view of your customer's experience.

Do you need to be nimble?
The old "voice as a separate network" paradigm is built on circuit-switched networks that typically require expensive switching equipment at each location. Because much of this is proprietary technology, adapting to changing business requirements or integrating with other platforms is difficult. "Turning on a dime" is impractical and nearly impossible in this legacy environment.

VoIP-based contact centers allow for easier and faster expansion or contraction according to seasonal or customer demands.

Ask yourself the following questions to determine when it might be the right time to move to VoIP:

Does it make fiscal sense? How much are you still carrying on your books for your legacy systems? How much longer will these systems be carried? Has your investment in legacy technology begun to depreciate?

Is your infrastructure outdated and does it require a substantial investment just to bring it up to current technology? If so, many companies can make the case for forklift upgrades without recrimination.

Are you moving to or building a new contact center? If you are moving to or building a new contact center and if your current technology is close to obsolescence, it is probably a good idea to look at VoIP.

But What About the Other "Arguments"

Let's face it, Don had some good points. Let's address them one by one.

The technology is still too bleeding edge. According to all the research that is out there, VoIP is still not quite in its prime. However, it is no longer bleeding edge. VoIP is the future. We are simply in that "iffy" technology transition where there are still some inherent risks in adoption. User acceptance of VoIP is on the upswing. While it will be many years before all voice traffic is on the packet-switched network, the migration is under way.

What about the quality of voice over a packet-switched network? Do we have to sacrifice quality with VoIP? Early demonstrations of using the Internet to transmit these voice packets proved that the congestion and high latency of the Internet make it less than ideal for quality telephone calls. However, suppliers are now developing IP-based networks with higher Quality of Service (QoS) standards and they are much more successful at transmitting voice.

What about the reliability factor? The PSTN (public switch telephone network) is a workhorse—and is highly reliable. As a dedicated network, it carries only voice traffic and does so with great efficiency and little failure.

Supporting mission-critical services requires service providers to achieve the same "five nines" (99.999%) level of network availability that is currently supported within the traditional public switched telephone network (PSTN) infrastructure. It is obvious that as VoIP moves up in the service chain, achieving the PSTN–level availability will be crucial to meeting customer expectations and to growing VoIP revenues.

In order to understand what these "five nines" and "uptime" figures mean to you as the user, consider the following:

Percentage of uptime	**Network Availability**
90.000% Uptime = "One-Nine"	(Up to 36 days of downtime per year)
99.000% Uptime = "Two-Nines"	(Up to 3.7 days of downtime per year)
99.900% Uptime = "Three-Nines"	(Up to 9 hours of downtime per year)
99.990% Uptime = "Four-Nines"	(Up to 53 minutes of downtime per year)
99.999% Uptime = "Five-Nines"	(Up to 5 minutes of downtime per year)

While we may not currently be able to achieve a "five nines" reliability on a converged network, we can still experience reliable service. For a comparison, ask your data network people what the uptime is for your LAN or WAN. Although you will probably find that its reliability is not "five-nines" quality, you still rely on it every day.

I don’t mean to tell you that I think differences in reliability are “OK,” today it is simply part of the trade-off and something we have to come to grips with until the VoIP network is as “safe” to us as the PSTN.

So, what can you conclude from all this?

1. VoIP is not a simple solution for any contact center in today’s environment; however,
2. Each contact center team has to carefully consider the viability of a migration strategy to VoIP if it does not did not want to ultimately limit its future competitiveness.

Therefore, I would encourage you take this information and start forging your own unique trail through the VoIP jungle.