Preparing for a Pandemic (Part 2)

Don Van Doren, Vanguard Communications
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In last month's column we began a discussion of the implications of a potential avian flu pandemic, and some steps that businesses might take to alleviate some of the impacts. We are focusing on the ability of IP to support remote workers, including call center agents. Last month, we discussed augmenting legacy TDM-based solutions with IP-enabled functionality. This month we review additional solutions approaches that use IP to provide remote agent capabilities. Several companies' products are mentioned. These are just examples of some of the capabilities available, and no endorsement is implied.

Background. Most experts agree that at some point in the next year or two, it's highly likely that the current bird flu virus will mutate into a form that can be transmitted from one person to another. Once that happens, the forecast is for it to spread rapidly across the globe. If (a big "if") the virus retains its current virulence, the impact in the USA could be as much 2,000,000 deaths and a 5% GDP reduction, according to a Congressional Budget Office report issued in December.

Many advisory and research organizations are issuing guidelines and suggestions for how individuals and businesses should prepare for this upcoming possibility. Many of the measures involve minimizing physical contact with others. Businesses will need to plan for continuing operations with many people working from home or smaller offices for extended periods of time, and for the increased numbers of customers themselves wanting to do more things remotely – over the net or through contact centers.

The impact is that companies should review plans for supporting remote workers, adding contact center agents, reviewing back-up capacity, and considering new processes and systems to handle a shift in how customers will want to do business with you.

Connecting Remote Agents. One of the great advantages of IP for contact centers is that agents in a home office or remote branch location can seamlessly be part of a virtual center environment. There are several choices to get agents connected. In some solutions, the audio path is the PSTN while the controls are through a softphone on the agent's desktop. The audio is either established on a call-by-call basis, or through a nailed-up connection back to the central switch.

Many suppliers now provide remote agent solutions using IP for the audio path. Of course, what's needed in these cases is a way to have the agents connected over a sufficiently robust broadband link. The choices are to use a QoS engineered private network, or the public internet. Getting VPN links to all agent locations may be difficult or expensive in some locations. (Will the EEOC view as discriminatory the hiring of remote agents based on

communications access? Stay tuned!) Using the public internet ushers in potential security and quality headaches.

Most suppliers now offer IP audio path solutions. Interactive Intelligence, for example, can deploy a SIP proxy server (their "Business Continuity Server") in branch locations connected to the main centers using an xDSL or MPLS network. If the link happens to break, the BCS can continue as a standalone processor, if there are local phone lines coming to that location. Avaya, Cisco, Nortel, Siemens, and most of the other suppliers offer similar solutions.

CosmoCom offers all IP-based solutions, and has customers with systems that can quickly accommodate remote and home-based agents on a when-required basis. One example is Trade-Van in Taiwan which provides a range of information services for transportation companies including cargo clearance, global logistics, insurance, tax filing, and other services. The company must maintain 24/7 availability for calls, faxes, emails, and other communications. But Taiwan is frequently pummeled by typhoons. While the call centers themselves and equipment there are secure and operating, transportation systems are disrupted, and agents can't get to the center.

The CosmoCom system allows agents to access the system anywhere they have a computer, USB headset, and an xDSL connection. To prepare for a potential disruption, the company equipped agents' homes with ADSL IP links. The system allows for voice, chat, email, and voicemail interaction. And, since the management, administration, and real-time monitoring tools are web-based, supervisors can function from home as if they and the agents were together in the center. The system has been activated five times in the last few years to keep operations humming when typhoons prevented employees from getting to the offices. It could be used in a similar way to cope with health-related closures.

Alternative Approaches. For some companies, the existing infrastructure isn't provisioned in a way to easily enable these kinds of approaches. But there are still several options available. We have seen situations where a company has a perfectly adequate, legacy switch that is being used for administrative functions. But it would be too costly to upgrade the hardware to provide remote agent or home agent functionality, either in TDM or IP mode.

One solution is to add a new system just to accommodate the contact center requirements. This approach also brings enhanced functionality to the contact center operations – frequently better call routing, multi-media capabilities, and more flexible reporting. These systems can be designed to route calls to any DID number, whether to the agent's existing desktop phone, to a number at the agent's home during an emergency, or to a cellular phone. In addition, some product features, such as Avaya's "Extension to Cellular", enable multiple phones to ring simultaneously for an inbound call, allowing answering wherever the agent happens to be.

Another approach is to use a hosted solution from a company specializing in hosting or (increasingly) from an outsourcer. Sitel, for example, uses Avaya switching and Cisco network equipment to create a global private network. Many of Sitel's customers haven't established their own internal IP-based networks. Rather, when opening a new location, they take advantage to Sitel's infrastructure. In some cases, hosting providers like Sitel can configure their solutions to accommodate home-based agents.

Five9 is a hosted solutions provider that recently provided rapid remote agent capability in response to hurricane Rita. A Houston-based services company knew that its contact center would have to be evacuated, but that its customers would be needing assistance throughout the storm and during the following cleanup period. Within a day, a new configuration was established. The company's phones were forwarded to the Five9 data center. The call center agents scattered to relatives' homes or hotels further inland, where they logged into Five9 using available internet connections and a PC with a USB headset. While this isn't a typical way that hosting companies work, the fact that a workable solution using the public internet could be provisioned quickly was a powerful demonstration of the flexibility and responsiveness of this type of solution. Of course, this answer will work best in situation where access to customer data is either not needed, or can be made available through a web browser interface.

As with the Taiwan company discussed earlier, this application was weather related. But a similar approach could be deployed in the event of a health care crisis.

What about Voice Quality? One of the challenges in using the public internet for the audio path is that the voice quality can be compromised in ways that are beyond the control of the company using it. Carriers don't currently have good QoS answers for the public internet. However, there are several companies that have been developing ways to improve the perceived quality of voice conversations over the internet. This bit of alchemy uses propriety encoding algorithms that compensate (in varying degrees) for packet loss, jitter, latency, and a variety of other hurdles that voice packets encounter on the unmanaged internet.

CrystalVoice is one example of a company offering such "acoustic QoS" capabilities that are capable of traversing firewalls to provide an path through the internet featuring improved quality. For the remote agent application, software would be installed at the company site and in the remote agent's systems. Calls would come into the company switch from the PSTN as usual. There, they go through whatever routing decisions are normally made. If the routing decision is to a softphone accessed over the public net, the voice packets transmitted between the switch and the agent would be encoded using CrystalVoice's proprietary algorithm. Techniques such as this one will benefit any of the approaches that rely on the public internet by improving the voice quality.

What's actionable? The examples discussed above showed systems designed for weather disruptions, road warriors, and work-at-home agents. But many of these approaches could be readily adopted to deal with a public health emergency as well.

No one really knows the extent of the impact that this coming flu will have. What's clear, however, is that the reaction of people based on their perceptions will be at least as important as the reality of the situation. Companies ought to start now to think through their situation. If this turns out to be as bad as the worst predictions, then the ability to deploy remote and home-based agents for extended periods of time may be critical to a company's ongoing success.

My suggestion is, first, determine what you need to do to set up and support remote agents. Is it feasible with your existing telephony equipment? Is there an easy upgrade that you will need anyway that includes this functionality? If not, could this be a contributing trigger to

prompt rethinking your current telephony infrastructure? Second, if you're comfortable with the existing platforms, but don't have remote agent capabilities, should you establish some backup outsourcing or hosted solutions?

The predictions are that if the virus mutates to a person-to-person form, it will spread rapidly. Therefore, you need to have plans in place for how you will react, if it comes and especially if it is as devastating as some are predicting. Depending on the nature of your business, that planning might include getting equipment in place, and ready to be deployed.

Even if this pandemic turns out to have a modest impact, your planning and preparation will have helped establish a more flexible, robust infrastructure for the future.

Don Van Doren is president of Vanguard Communications, an independent consulting firm that helps clients achieve their business goals through better customer contact solutions. Contact Don at dvandoren@vanguard.net or visit Vanguard at www.vanguard.net.