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App On Prem, Platform On Host
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The Premises:
Synapse Group, Stamford, CT

The Potential:
Moving 800-number IVR infrastructure from on-
prem to host, increasing percentage of self-resolved calls, while keeping in-house control of application changes.

The Payback:
Half a million dollars a year in saved operating expenses alone.

The Pieces:

- Telera's (Campbell, CA - 408-626-6800) voice hosting infrastructure
- SpeechWorks' Automatic Speech Recognition (ASR) engine

The Plot:
The Synapse Group is a Stamford, CT, company that boosts magazines' circulation through varied means of promotion, including direct mail. Their five outsourced customer service centers handle a lot of "When did I order this subscription?"-type calls. Three years ago, they installed an on-premise, traditional IVR in their data processing center in Wakefield, MA. It resolves those calls by capturing a caller's credit card number and pulling up a file, and jogging callers' memories through template recordings and concatenated data fields.

By early 2000 they had outgrown the touchtone IVR, even though it was handling 70% of calls. "We initially did not involve speech recognition, but we quickly became convinced that the technology had come to the point where it was worth trying," says Barry Elvin, vice president of operations at Synapse.

The other big change was to use a voice host's speech recognition engine and telephony hardware. AT&T and MCI both pitched network-based IVR, but Elvin wanted the application in house, where scripts, prompts, and databases could be constantly changed without huge fees or delays. "As a marketing company we are constantly tinkering with scripts, call structure, offers, and subscriptions. We make dozens of changes a month. Getting changes made with any of those network-level IVRs is like an act of Congress. This was where the Telera model started to make tremendous sense. I had total control over development and implementation of all the scripts."

As noted elsewhere, Telera maintains its voice servers at several POPs along the Qwest network, terminating 800-number calls inside its own VPN and therefore stopping clients' long-distance meters

from ticking all through hold times and IVR execution. Says Elvin: "Although they're not a carrier, their presence at the Qwest POP sites puts them in a position to offer low-cost entry into the platform. I am paying for transaction minutes, but not for LD charges at that point. It is also a redundant solution, where I didn't have redundancy before.

"Because we outsource our call center business, we were paying AT&T a lot to reroute escalated calls," says Elvin. "When I had my own platform, I would publish an 800 number and I would have a long-distance charge into my platform. And because I needed to be able to reroute calls in case my IVR went down or was being serviced, I had an up-front allocation rerouting charge to bypass the platform and send calls back into the network for redirection into the call centers." AT&T charges Synapse a per-call fee for this "front-end" allocation, and a per-call fee to be able to do the actual routing, whether that rerouting is actually performed on that particular call or not.

Aside from insurance against IVR shutdown, allocation charges accrue against calls that must be resolved by human operators. "Because we knew that certain people would never be able to resolve using IVR, we had to be able to transfer calls back out into the network, and then to our centers. We didn't want to have to pay for two ports, to take back and transfer, every time this happened about 30% of the time.

"Up till you could terminate 75%, it was cheaper to pay on every call than to pay on a per-transfer basis. And then because we had multiple call centers on the back end, and we did not build the logic into our scripts to allocate, we paid a third and final allocation charge to get the transferred calls allocated evenly among the centers. We were paying a hefty tariff on every call.

"In the Telera model, Telera is acting as reseller and we were able to negotiate a reasonable per-minute rate, based on volume, that allowed me to reduce my LD and my operating costs and eliminate virtually any capital investment. I eliminate the first two charges on every call to my 800 numbers and I have a redundant IVR platform without investing capital to buy the hardware and build the IVR centers myself."

When calls must be routed to a call center that does not use Qwest, Telera shoves the call out over MCI or AT&T, and Synapse pays for that leg. But Elvin now pays for that "secondary" allocation charge only when he uses it, and says that work on a scripting solution within the IVR platform should eliminate that fee, as well.

Elvin estimates a savings of $1 million over two years, in operating costs alone.

Synapse writes its VoiceXML scripts using Telera's scripting tool, but the apps reside on their own servers. The applications are served to Telera's browsing platform in real time, using IP transport, across a Telera-provisioned VPN.

"Because we were an early adopter, our concern was, 'How well does it work across a VPN?' We spent a lot of time looking at that very carefully, and I have not seen the latency problems I was afraid of," notes Elvin. "If the engineering holds up the way Telera says it will, we'll actually be able to downsize some of our data pipes." Being cautious, Elvin says they nearly doubled Telera's own recommendation of a 2-T1 VPN to primary and backup locations.

The main speech recognition tasks in Synapse's application are credit card (used as their customer ID) and magazine name. In its touchtone IVR, Synapse had seen credit-card entry as the biggest stumbling block to self-service: Users would fat-finger three times, or choose to zero out immediately. But curiously, speech rec has also stumbled on credit card; just as they do when entering via touchtone, people tend to mutter and grumble under their breath, confusing the

recognizer. "When we started, we were really shocked. We were only getting 50% recognition. We are working with SpeechWorks to tune the application to accommodate people's spoken behavior."

As of early April, Synapse has gotten its completion rate on speech-enabled, Telera-terminated calls up to 71 to 72%. The 35% of self-service calls still on the old touchtone system are doing slightly better: 76%. All traffic will be moved to Telera, where speech input is slightly bettering touchtone (callers can use DTMF with Telera if they prefer), and Elvin says his goal is 90% successful completion. "We're encouraged and excited. We have a good set of developers who love working with the engine."

Telera's platform uses Dialogic DM3 IP Link Internet Telephony hardware, D/480SC-2T1 voice processing and network interface hardware, and Antares speech processing hardware. Elvin chose SpeechWorks for core engine. Elvin said that the fact that SpeechWorks software loaded directly onto the IVR server, available to all IVR ports at all times, answered his concern about latency. He also chose it for name and address recognition, which was further along at SpeechWorks, he says, at the time.

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