



GROWTH BY ACQUISITION CREATES VOICE-NETWORK MONSTER SHORETEL GIVES EDAW UNIFIED VOICE SOLUTION WITH SINGLE-SYSTEM VIEW AND REMOTE WEB-BASED MANAGEMENT

EDAW Inc. calls itself “a firm without walls,” and for good reason: The San Francisco-based company provides landscape architecture and community planning services to public- and private-sector clients spread across four continents. EDAW has expanded through acquisitions in recent years, and now has a 1,000-person workforce operating out of 15 domestic and 9 international offices.

Like other professional-services firms in this economy, EDAW is operating in a highly competitive environment, trying to attract and retain demanding clients who want more for less. The consulting business is highly mobile and voice-intensive, and it is important for EDAW to make the communication among offices and traveling employees and clients as seamless and location-transparent as possible.

Thanks to the global IP standard, creating a single data network that could accommodate newly acquired offices was relatively simple, but voice was another matter. IT director Ron Pike had inherited a patchwork of incompatible PBXs and key systems that had to be managed individually by local teleconnects and phone companies. Each site involved a separate service contract with all the associated relationship-management overhead, and service was inconsistent and slow. EDAW was completely reliant upon outsiders for the health of its voice network, and simple moves, adds and changes could take up to two weeks.

IMMEDIATE CHALLENGE: UNIFY VOICE WHILE REDUCING COSTS

“The challenge was to use the existing data network – a VPN from Qwest – to create a single phone system,” said Pike. “We wanted remote management and a single-system view, with network-wide directories and 4-digit dialing.” Essentially a data professional, he was faced with taking on all the previously outsourced voice management without adding any staff.

In 1998, EDAW decided to address its growing Tower of Babel by standardizing on voice platforms from Siemens. The company put new HiCom 150 switches in its two Colorado offices and connected them with a tie line. The administrators who were running the data networks in those offices got some training from Siemens, and assumed responsibility for simple tasks such as moves, adds and changes.

However, the internal administrators could perform only a limited set of management functions, and they had to be directly plugged in to the PBX to do so. Tapping into other switch features still meant placing an outside work order. Also, the interoffice networkability did not measure up to expectations.

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“In theory the two offices had a single voice system, but in practice it was a bit premature on the vendor’s part,” said Pike. “The tools for viewing and managing the two networks as a single system really weren’t there yet, so we were still basically dealing with standalone silos.”

Data Vendors Don’t Have the Answer

Still seeking a single voice network when the new century rolled around, EDAW considered its preferred data vendor, Cisco, which by then had an IP PBX. However, the Cisco solution required expensive upgrades to existing network hardware and staff skills:

- Existing routers on the EDAW data network would have to be replaced with new ones that could accommodate voice ports.
- To optimize performance, existing switches from other vendors would have to be replaced to create an all-Cisco environment.
- Migrating desktops to IP phones could not be deferred or phased in, and LANs would have to be retrofitted to deliver power over Ethernet.
- Failover solutions for WAN and Call Manager outages were expensive and difficult to implement.
- Creating gateways between the Cisco equipment and existing PBXs was a very complex proposition.
- The management tools and interfaces were disjointed and cumbersome, and EDAW’s staff would have to acquire high-level expertise about Cisco switches.

Intuitive Multi-Site Management

Unlike other solutions, the ShoreTel system unifies the entire voice network under a single-system image that eases management dramatically. Every part of the system – including PBXs, voicemail auto-attendants, and ACDs – is managed from the same browser-based interface. Administrators can run a multi-site network from anywhere. According to Mier Communications, a leading independent testing company, "ShoreTel has a top-shelf management application other vendors would do well to emulate."

Centralized Control Reduces Staffing Requirements

When Pike and his staff are out of the office, they can log on to the San Francisco system remotely from any Internet connection. The IT staff can easily perform administrative tasks that previously required truck rolls from the local outsource. Moves, adds and changes can be made in a matter of minutes, making ShoreTel’s entire rich feature set immediately available to new or relocated employees.

“We feel more comfortable now that we have this immediate, Web-based interface to what is happening,” said Pike. “We don’t have to call a contractor and wait for a response, because we can handle things internally right away. The ShoreTel server has a built-in testing tool and also provides us with a comprehensive call record that shows what kinds of calls are being made.”

Embedded Reliability Ensures Uptime

The ShoreTel system is based on a unique call-control architecture that distributes call processing across all the switches in a multi-site network. The switches communicate with one another as peers and can cover for each



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other when necessary. Also, any individual switch can operate by itself if it is cut off from the rest. This innovative approach creates a voice system with no single point of failure and high availability.

The ShoreTel system matches and potentially exceeds the 99.999% availability of traditional voice systems, while also offering the flexibility and economy of plug-and-play equipment replacement.

Least Cost Routing = Found Money

EDAW is now using the ShoreTel network to do least cost routing between San Francisco and the Seattle office, where Pike is based. Despite the dramatic drop in long-distance rates, there are still significant savings to be found by letting voice ride on existing IP data WANs.

The combination of ShoreTel's intuitive interface and least cost routing makes it easy to automate toll bypass across a multi-site network. Calls between offices flow over the IP backbone, and can be initiated by dialing only the recipient's 4-digit extension number. And when an individual in one office is placing an outside call to a number within the local dialing radius of another office, the call automatically gets routed over the IP network. It is completely transparent to the callers, who don't have to remember which area codes qualify for toll bypass, or punch in any commands.

THE NEXT CHALLENGE: IMPROVE PRODUCTIVITY

People are the most expensive resource of any professional-services firm, and ShoreTel is helping EDAW to boost the productivity of these crucial assets as employees explore the system. ShoreTel's self-service workgroup functionality and call management make it easy to adapt call flow to EDAW's organizational needs.

For example, ShoreTel is extending the functionality of EDAW's existing GroupWise applications. The ShoreTel client software includes a TAPI interface that can integrate the user's phone extension with any application that also supports TAPI. EDAW users can now automatically dial their phones from any contact database GroupWise can tap, such as the one in their Palm Pilot software.

Intuitive Call Handling

The ShoreTel system intuitive, real-time call handling makes productivity-enhancing features more accessible to employees. To create a conference call, the initiator simply dials by name, clicks conference, and then repeats the process to connect additional participants. There is no need to remember convoluted key combinations, or call an IT manager for help.

"Call flow issues I wasn't even aware of, we were able to accommodate quite easily," Pike concludes.

Handle Calls Once

The ShoreTel system gives users complete control over inbound calls, ranging from simple Caller ID call screening to advanced out-of-office options. Users can select from up to five call-handling modes, such as forwarding calls to an assistant or a mobile phone or pager, or sending an e-mail alert. Network-wide call redirection enables calls to follow people wherever they go, so road warriors don't have to deal with multiple numbers and duplicate calls and voicemail messages.



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When Pike does travel physically to San Francisco, his “presence” information – including phone number and user profile – automatically follows him when he logs on to the network. People don’t have to keep track of where he can be reached, because calls made to his Seattle extension ring at his temporary location. Other visiting employees can help themselves to this “hoteling” capability without impacting the IT staff.

THE ULTIMATE CHALLENGE: IMPROVE CUSTOMER SATISFACTION

ShoreTel’s powerful call handling and workgroup functionality facilitate collaboration so that far-flung resources can be instantly marshaled to address business problems. This boosts employee productivity, and ultimately improves customer satisfaction.

Through an intuitive interface, administrators can define hunt groups or wait queues for extensions that get more than their share of inbound calls. The result is more efficient call handling, which can speed the responsiveness perceived by callers. And, again, users can help themselves to many call-handling features that produce a better experience for callers.

Using ShoreTel’s real-time presence features, employees can see whether a colleague is busy before transferring a call. The call is simply dropped on the user’s name, so there is no need to remember or look up numbers and then key them in carefully. Clients calling in are less likely to get dropped, or sent to the wrong person, or end up in voicemail.

Pike said ShoreTel’s workgroup functionality was a pleasant surprise. “In particular, I didn’t expect so many people to start using the extension manager.”

Included in the Operator level of the ShoreTel client software, the extension manager can be used to monitor up to 250 extensions in a pop-up window that displays call activity details in real time. It allows drag-and-drop call transfers and simplifies call pickups and parking. Workgroups can implement this feature to monitor each other’s incoming calls and, for example, jump in and intercept a call from an important client that is about to bounce to voicemail.

ShoreTel Provides More for Less

Next on EDAW’s agenda is installing ShoreGear switches in the Atlanta and Alexandria offices, and connecting the existing Siemens switch in the Sacramento office via a ShoreGear gateway. That will give EDAW 4-digit dialing among six of its offices. Gradually, more and more of the company is being unified by the ShoreTel voice network, extending enterprise-class telephony features out to the smallest office—and even to individuals on the road.

Summing things up, Pike said EDAW is very pleased with the feature-per-dollar return from its ShoreTel investment. “It would have cost us more in licensing fees to add similar capabilities to the Siemens platforms we already had, and we would have gotten less out of them.”