



KB Home Responds Quickly to Business Cycles with Cisco IP Communications

Background

KB Home is one of the largest and most successful homebuilders in the United States and France. The company recently reported record revenues of \$5.03 billion in 2002, the first time the company has exceeded \$5 billion, reflecting an increase of 10 percent from 2001. KB Home has domestic operating divisions in some of the fastest-growing areas of the country, including Arizona, California, Florida, Georgia, Nevada, New Mexico, North Carolina, and Texas.

The company prides itself on two core values: a commitment to quality craftsmanship and superior value. To maintain these values, KB Home continually looks for innovations in business processes and technology—especially important in the building industry where business cycles demand speed and flexibility.

KB Home recently implemented a Cisco® IP Communications solution that enables the company to deploy voice services at new offices quickly and reduce operational expenses as well. Cisco IP Communications is a comprehensive system of enterprise-class solutions—including IP telephony, unified communications, IP video/audio conferencing, and customer contact solutions—that provide the foundation for effective, integrated

communications and substantial cost savings. With the new system, KB Home has eliminated PBXs and voice mail systems in each new office. The company now runs voice over its existing data network and deploys advanced communication services at new facilities at a pace unimaginable in the legacy world. KB Home estimates that IP Communications has reduced the company's total cost of ownership (TCO) by 25 to 40 percent.

Challenge: Respond to Boom and Bust Cycles

Change is constant in the building industry as the amount of building activity responds directly to economic cycles, mortgage rates, and demographic changes. When market conditions are right, KB Home must respond quickly by expanding operations and opening new offices to serve new markets.

When it relied on legacy phone systems, it was not unusual for KB Home to open a new office and then wait 6 to 12 weeks for the phones to be installed.

"We'd have to call up to five different vendors and bargain for the earliest installation time," says Andrew Harrod, network manager for voice and data at KB Home. "We had little control and, because it took so long, IT was always seen as the bottleneck in the organization."



Cost was also a factor. When KB Home opened each new office, it had to allocate large capital costs for both a PBX switch and a voice mail system. Operating costs were also considerable as each office needed to contract with a third-party vendor to handle the continuous adds, moves, and changes of staff phones. With an average-size office requiring two visits a week to handle the changes at \$250 per visit, according to Harrod, KB Home estimates conservatively that it was spending \$2000 month on these costs for a typical office.

The Solution

KB Home implemented a Cisco IP Communications solution that currently supports over 1800 IP phones in 13 KB Home offices throughout the southwestern and southeastern United States. The company initially implemented a distributed system with a Cisco CallManager system in each office. Cisco CallManager software is the heart of the Cisco IP telephony system as it provides the essential call-processing services to route voice calls across the IP network.

In 2001, KB Home made a strategic decision to centralize its IP telephony system at the UUNET colocation data center facility in Torrance, California. The system consists of three Cisco CallManager systems arrayed in a redundant cluster and linked with a fully redundant Cisco Unity™ voice mail system. Each office is redundantly connected over dual Frame Relay WAN links to the centralized Cisco CallManager cluster in failover mode.

“The decision to centralize IP telephony was leading edge at the time,” says Harrod. “We projected strong growth in the coming years and knew that we would need to open many new offices. By centralizing, we avoided having to install new CallManager servers in each office, which saves time, capital costs, and the expense of making visits to each of the offices.”

Another important part of the solution was the company’s bold decision to utilize a Lightpointe Free-Space Optics (FSO) wireless system to connect two of its buildings in Las Vegas that are about a mile apart. One building houses a 250-seat call center that is used to service mortgage loans for KB Home Mortgage, the mortgage-processing arm of KB Home. The other building houses mortgage back-office support personnel for imaging documents and other work. The plan was to put the IP telephony servers, PSTN gateways, and WAN connections in the building with the call center. KB Home would then capitalize on these resources to provide voice services to the other building through a direct fiber connection.

“There was an occupant between the buildings who wouldn’t let us lay the fiber,” says Harrod. “So the only other option was to re-engineer the entire solution, which would’ve been costly and time consuming. But the wireless solution has been awesome, working flawlessly. And there’s a lot of IP voice traffic crossing over that wireless connection.”

Results: Dramatic Increase in Deployment Speed

According to Harrod, the speed of deployment is one of the greatest benefits of the Cisco IP Communications system. “We recently opened a new office and we were able to deploy 200 phones in less than a week,” says Harrod, “from the time the order was placed to the time they were on the desks and functioning. And that is unheard of in a legacy PBX environment where it takes from 6 to 12 weeks and requires coordination with an outside company.”

IP Communications has also enabled KB Home to standardize the installation process and thereby make it repeatable. The company developed a matrix so that when it needs to open a new office it reviews the matrix and automatically knows that a 20-person office gets a particular switch or router, for example, and a certain number of

phones. And training is already arranged so that a trainer comes in before the phones arrive and helps users set up their voice mailboxes and their phones. Once the phones arrive, the users are set up and ready to go. "We've made it a very repeatable process and that makes it quick and low cost," says Harrod.

The other savings has been in moves, adds, and changes. "We've been able to deploy 13 offices without adding any extra staff," says Harrod, "and we've cut third-party contracts."

Employees no longer need to wait for third-party contractors to move the phones. Instead, users can unplug their phones and take them to their new offices and simply plug them in. Any other changes in the system are made by the network operations engineers who run voice as though it were another application on the network.

Future

Because the phones are based on IP and use the XML programming language, third-party vendors can develop new applications that will run directly on the phone—unlike hard-wired analog phones. Currently, KB Home uses the company directory application that is available on the phones out-of-the box and is considering new applications in the near future.

"The directory application is great because we've been able to eliminate written phone lists, which are always out of date," says Harrod. "Also, the number you need is always right on the phone. We have plans down the road to use XML and add new applications to the phone like a real-time stock ticker showing instantaneous mortgage rate changes. This would allow KB Home Mortgage to capture current rates right on the phone rather than having to launch a Web browser."

As its phones evolve into information appliances, KB Home sees a continual increase in their value as they deliver timely information from the network or the Internet directly to desktops. And with greater integration of its once separate voice and data networks into a single IP-based infrastructure, other productivity enhancements—such as unified messaging or the use of remote call center agents to augment centralized agents—promise to improve KB Home's ability to deliver greater home value to millions of new homebuyers.



Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

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