

## Michigan Country Club Upgrades to IP Phone Solution

Oakland Hills Country Club installed a new SIP Trunking solution to support advanced communications features.

EXECUTIVE SUMMARY
<b>OAKLAND HILLS COUNTRY CLUB</b> <ul style="list-style-type: none"> <li>• Private Country Club</li> <li>• Bloomfield Hills, MI</li> </ul>
<b>BUSINESS CHALLENGE</b> <ul style="list-style-type: none"> <li>• 15-year-old unsupported PBX</li> <li>• Employees lacked individualized voice services</li> </ul>
<b>NETWORK SOLUTION</b> <ul style="list-style-type: none"> <li>• SIPconnect service</li> <li>• Call manager solution and IP phones</li> </ul>
<b>BUSINESS RESULTS</b> <ul style="list-style-type: none"> <li>• High-quality voice over IP</li> <li>• Lower capital and operating expenses with converged solution</li> <li>• Easily add new features and functions</li> </ul>

### Challenge

Founded in 1916, the Oakland Hills Country Club is located in Bloomfield Hills, 20 miles northwest of Detroit. Among the world's top 10 golf courses, it counts among its members some of the most influential leaders in Michigan. Despite its exclusive pedigree and prestige, Oakland Hills Country Club bases its success on grace and hospitality, insisting that staff and management strive to create an atmosphere of quiet elegance; for example, cell phones are not allowed on the grounds.

Despite its reserved appearance, Oakland Hills Country Club required a reliable and full-featured communications system to handle peak inbound call volume for such tasks as setting tee times. As well,

phones must accommodate the wide range of hospitality services typically offered by golf facilities, including large catered events, pro shop and teaching center, and more.

A seemingly insurmountable barrier to implementing an affordable solution was Oakland Hills Country Club's reliance on an outmoded PBX (private branch exchange) system that was no longer supported by the manufacturer; when cards failed or other spare parts were required, the club had to purchase them at online auctions.

**“We would buy all the cards we could at online auctions to keep the phones operating.”**

—Marty Agnello, Controller, Oakland Hills Country Club

There were other challenges as well. During a US\$16.25 million renovation project that began in January 1999, in-wall wiring was upgraded to a blend of both Cat3 (phones) and Cat5 (networking PCs). Any new solution would have to contend with this mix.

Second, the club had existing contracts with a number of phone service providers. Though the goal was to reduce these monthly recurring telephone costs, it was imperative to maintain and honor the terms of these contracts.

Finally, the deployment had to be completed during the 2007/2008 winter season in time for the club's reopening in the spring.

## Solution

Oakland Hills Country Club Controller Marty Agnello initiated a conversation with Farmington Hills-based Preferred Data Systems (PDS), which has served as the club's data networking system integrator since 2003 (and is a Cisco® Small Business IP Telephony Certified Partner). Initial discussions involved the comparative advantages of voice over IP (VoIP) versus time division multiplexing (TDM) technologies (a technology invented by Alexander Graham Bell).

Both Agnello and PDS agreed that current and future technologies would be based on the principle of convergence, which involves collapsing data, voice, video, and other IP-based traffic networks onto a single, unified network infrastructure to save the capital and operating expenses required to build and maintain separate networks. As well, future services should be easily and quickly deployed over next-generation networks, for ongoing lower total costs of ownership. The choice was clear: upgrade the current phone system to a VoIP solution built on a converged network.

Meanwhile, IP managed service provider Cbeyond was making a name for itself in the Detroit market for its innovative voice and data services delivered over a 100 percent Cisco network. Its lead product in this category is BeyondVoice II with SIPconnect, which permits businesses with a PBX to connect to the Internet with a "pure" VoIP connection, minus translating protocols, with two bonded, fast and reliable T1s over a managed circuit.

PDS worked closely with the technical experts at Cbeyond (the first Cisco-certified interoperable SIP service provider available) to deploy a BeyondVoice II with SIPconnect service that included 16 trunks and two analog ports (for paper-based fax machines and credit card readers), offering the ability to easily handle up to 16 simultaneous calls into the Country Club's "Concierge Area". There, a pair of Cisco Unified CallManager Attendant Consoles handles calls around the clock.

PDS installed the Cisco CallManager Express 2851 Voice Router as well as 80 Cisco IP phones. In the process, PDS and Cbeyond were able to retire two copper POTS (Plain Old Telephone Service) lines by porting them to Cbeyond, plus reduce the number of phone lines to a small group to support such non-voice functions as time clocks, point of sale credit card machines, and fax lines.

**"Choosing SIPconnect meant that we didn't need a PRI [Primary Rate Interface] WAN Interface Card [WIC], which saved \$1000."**

**—Marty Agnello, Controller, Oakland Hills Country Club**

Agnello was especially pleased that Cbeyond was able to connect its SIPconnect service directly to the Cisco CallManager Express 2851 Voice Router. "Choosing SIPconnect meant that we didn't need a PRI (Primary Rate Interface) WAN Interface Card (WIC), which saved \$1000," he says.

A unique challenge of this VoIP deployment was the existing cabling infrastructure, a mix of Cat5, Cat3, and fiber that would have required locating and "toning" out each connection. Fortunately, an advantage of Cisco VoIP is its ability to utilize a single cable for voice and data traffic. Though Cat5 is the preferred cable type, PDS was able to re-purpose the Cat3 connections by re-terminating both ends of the cable for RJ45 jacks, which allowed a simple plug-in to any Cisco switch.

## Results

The solution was deployed beginning in November of 2007 and concluded in time for the March 2008 opening. Disruption to other club activities was kept to a minimum, as was the installation's impact on the building and grounds.

"We were excited about the savings," says Agnello. "But we're especially appreciative of the reliability and ease-of-use of this new system. Everyone has a voice mailbox, and going forward, we can easily accommodate such functions as video conferencing and faxing directly to PCs with Cbeyond's Fax to Email product."

With the old system, moves/adds/changes/deletes (MACD) could be a costly and time-consuming affair. "We had to call a phone consultant every time we changed a phone," says Agnello. A key business benefit of IP phones is, unlike with TDM, users simply move the phone, plug it into the new Ethernet jack, and it works. "The savings in MACD alone have been substantial," says Agnello.

**"...we're especially appreciative of the reliability and ease-of-use of this new system."**

— Marty Agnello, Controller, Oakland Hills Country Club

Voice quality was not overlooked. As an end-to-end, "pure" IP connection, the new service eliminated any need to convert IP to a digital signal, resulting in a "cleaner" connection with less overhead. The system that the club deployed not only easily scales up to 48 lines, they are all delivered over the same, single Ethernet connection.

### PRODUCT LIST

- Cisco Unified IP Phones or SMB Specialized
- Cisco Unified CallManager Attendant Console
- Cisco Call Manager Express 2851 Voice Router
- 80 Cisco IP phones

Key to a successful deployment was the Cisco reputation. In the planning stages, Oakland Hills Country Club was deeply concerned about the reliability and stability of its suppliers. The club's concerns were allayed when it learned Cbeyond is a Cisco Powered member and, with PDS, built the solution over a 100 percent Cisco Network. "Cisco

really provided a lot of confidence in the solution," says Agnello, "not just that they'd be around, but they also have a pretty solid reputation for support. They're the 'big boy' on the block. But, it was also important to us to have a local point of contact, which was why PDS as a certified Cisco partner was the logical choice to install the system."

In fact, a second success factor was the added value provided by the Cisco SMARTnet<sup>®</sup> maintenance warranty program. Under the terms of the SMARTnet program, Cisco IP phones are replaced the next day. If a router should fail, the club will have a replacement router onsite in 4 hours, 24 hours a day. For Oakland Hills Country Club, this service was viewed as investment protection.

## Next Steps

A characteristic of an all IP converged network is its ability to integrate virtually any new service that a business may require, usually through software upgrades. An example of its versatility occurred only weeks after the VoIP implementation.

When the grounds crew saw the Cisco IP phones that the staff was using, they also demanded the ease and functionality of these phones. PDS ran a point-to-point wireless system (using rooftop-mounted dishes) about 100 yards to the Grounds Department, and connected their existing analog phones via an FXS (foreign exchange subscriber) interface, at a substantially lower cost and less disruption than trenching.

### For More Information

To find out more about the Cisco IP Telephony solution, go to <http://www.cisco.com/go>.



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