Solution Overview

Challenge:
Williams Communications needed a scalable, standards-based switching solution to offer their customers reduced voice costs and new, innovative VoIP services quickly and globally.

Solution:
Williams is deploying Sonus Network's GSX9000 carrier class GSX9000 Open Services Switch and Sonus's intelligent PSX6000 Softswitch across its throughout its planned 33,000-mile, 125-city fiber optic network.

Services:
Williams will provide an array of new VoIP services, including 1+ dialing, 800 services, credit card and calling card services, unified communications, Internet offload, voice-activated email and IP fax. Williams Communications will implement the GSX9000 throughout it's national footprint.

LIGHTING THE WAY

Williams Communications Drives Revolutionary Voice and Data Services with Sonus Networks' Open Services Architecture

"We chose this solution for its unique ability to deliver operational savings and enable new revenue streams...we also like the fact that Sonus is growing along with us as our network grows..."
Matt Bross, Williams Communications

Not many brand-name companies have the vision to rededicate their business mission, but that's exactly what Tulsa-based Williams Communications began in January 1998. Three years after selling its nationwide data network to WorldCom, the 9,000-employee, $1.7 billion telecommunications giant returned to wholesaling bandwidth on its nation-wide fiber-optic network. Always striving to offer leading-edge services to customers such as Regional Bell Operating Companies (RBOCs), local exchange carriers, switchless resellers, competitive local exchange carriers (CLECs) and Internet service providers (ISPs) among others, Williams today is taking the next step in its evolution by converging voice and data services using a powerful new voice-over-packet infrastructure.

Williams' new voice-over-packet capability is based on Sonus Networks' GSX9000™ Open Services Switch — the first and only "any-to-any" voice-over-packet central office switch. The scalable, standards-based GSX9000 system translates voice calls into data packets, providing single source connectivity for both voice and data services. Driven by Sonus' PSX6000™ SoftSwitch, the GSX9000 provides pinpoint call control and intelligent routing for virtually any voice and/or data application. The GSX9000's compact, more efficient architecture further allows Williams to significantly increase call capacities at half the cost of circuit switches. Centralizing control of the network in the PSX6000 will enable Williams to introduce new services faster and more cost-effectively than ever before.

"With prices and profit margins for basic voice services coming down, Williams needs a way to offer our customers reduced voice costs and new, innovative services quickly and globally," said Vanessa Horn, product manager of VoIP for Williams. "Sonus' technology makes that possible in the most timely and cost-effective way. Now, for example, we can offer a solution to our traditional voice customers—the emerging VoIP and VON providers, as well as provide our ISP customer voice alongside data services."

Sonus Networks GSX9000

The Sonus GSX9000 Open Services Switch was conceived and built from the ground up as a carrier-class solution, and is the first product to meet the most stringent demands of public carrier networks for interconnectivity, capacity, reliability, scalability, and voice quality. The GSX9000 is designed to offer voice quality equal to or better than that of today's PSTN, with minimal delay and integrated G.168 echo cancellation. Its comprehensive SS7 capability supports the standard 1+ dialing customers are used to, eliminating the cumbersome multi-stage dialing required by most other packet voice solutions. The GSX9000 features unparalleled scalability and density offering minimum configurations for small carriers, up to systems that can support 100,000+ simultaneous calls for the world's largest carriers.

A WEALTH OF NEW GENERATION SERVICES

Beginning with three initial installations early this year, Williams intends to deploy the GSX9000 throughout its planned 33,000-mile, 125-city fiber optic network by the end of 2002, reaping substantial cost savings along the way.
"We're expecting better than 50 percent savings in capital costs, compared to using circuit switches, and a similar savings in operational costs," said Paul Savill, vice president of network planning at Williams.

Initially, Williams will use the Sonus solution to deliver 1+ dialing, 800 services, and credit card and calling card services. By the end of the year, Williams will begin offering innovative new services enabled by the Sonus Open Services Architecture™ which is an open interface to Application Service Provider solutions. With this open interface, they may begin to offer services including: unified communications, which lets a user access voice, email, and fax messages at a single source, such as a phone, wireless device, pager, Web portal, or voice mail. With unified communications employees at any level of a company can respond more quickly and effectively to customers, co-workers and suppliers. Additionally, the Sonus solution can also be the foundation for employing for applications such as call centers, Internet offload, voice-activated email and IP fax.

The Sonus architecture will also allow Williams to introduce an array of attractive phone service options. These include the integration of home, cell, and office phones, call forwarding, simultaneous ringing of several phones for one person and routing of calls according to call recipients' schedules. Williams also may offer country blocking, a security and cost-saving application companies can use to preclude employees from making unauthorized international calls.

Several other Sonus-powered services will allow Williams' customers to use their networks more efficiently, based on network call volumes and customer requirements. Using destination routing, for example, Williams will allow its carrier customers to route calls more rapidly and cost-effectively based on network call volumes — a capability not possible using circuit-switch technology. The packet-based network will also be able to block specific sources from connecting to specific destinations, or to ensure that calls from a specific source are routed to a specific gateway or trunk route.

Carrier termination is another win-win service Sonus can provide for Williams and its customers. With carrier termination, the carrier can take calls and then pass them on to Williams, who will in turn terminate the calls. In this way, carriers can offer new, advanced, and competitive services to their customers without having to invest in the necessary research, equipment, and expertise. Williams will have already made those investments. For end-user customers, the addition of new services would be entirely seamless.

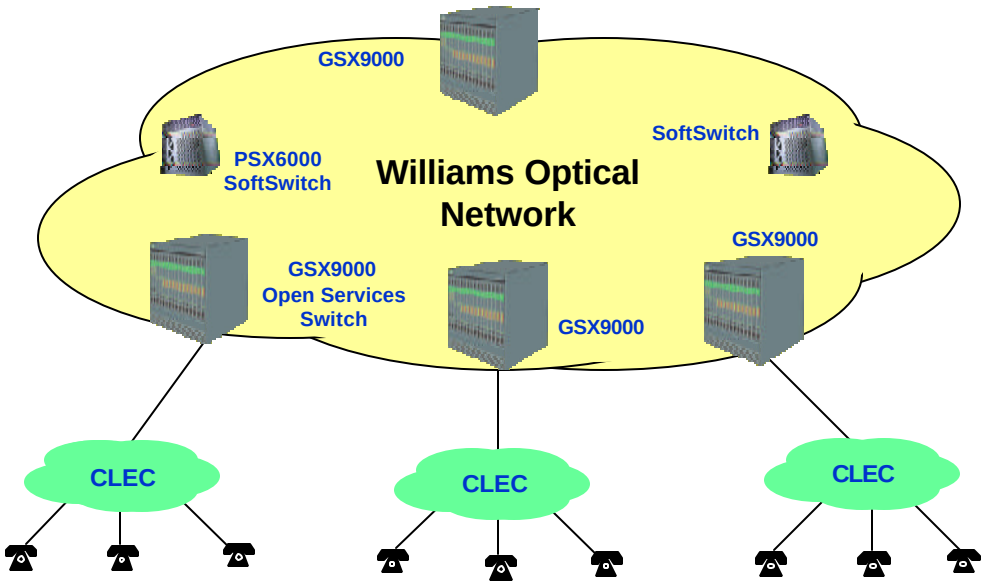
"Sonus has given us the potential for a limitless array of services to help our business," said Horn. "We're now able to tailor our approach to specific customers, and to establish stronger relationships that will fuel their growth as well as ours."

REVOLUTIONARY TECHNOLOGY AND SAVINGS

Williams' migration to Sonus' platform was driven by a need to provide more cost-effective, next-generation services to enable their customers to become more competitive and profitable. However, Williams' top priority was finding a scalable solution designed to carrier standards, that delivers toll-quality voice, system redundancy and the capability to handle extremely large call volumes.

The company turned to a number of vendors, but selected Sonus for several reasons. In addition to providing the only solution available immediately, Sonus offered the toll-quality voice that Williams' customers would expect. Because the Sonus solution proved to be standards-based and open, Williams has the flexibility to develop their own applications or use third-party developers.

"We conducted a thorough investigation of competitive solutions and selected Sonus' GSX9000 Open Services Switch, working in conjunction with the Sonus PSX6000 SoftSwitch, as the cornerstone for our next-generation voice network," said Matthew Bross, senior vice president and chief technology officer for Williams Communications. "Above all, we chose this solution for its unique ability to deliver operational savings and enable new revenue streams. But we also like the fact that Sonus is growing along with us as our network grows, working to make their boxes fit our requirements."



Integrating Sonus SoftSwitch Technology

Working in tandem with the GSX9000 switch, the Sonus PSX6000 SoftSwitch provides call control and intelligent routing functions in the voice over packet network. The SoftSwitch also delivers interoperability across heterogenous environments supporting a variety of signaling protocols, including SS7, MGCP, H.323 and SIP. Additionally, the SoftSwitch provides critical service creation tools for developing enhanced communication offerings. The SoftSwitch provides an interface to service providers and third party vendors for the development of these offerings. In addition to the PSX6000 SoftSwitch, Sonus also offers an SS7 Signaling Gateway, known as the SGX2000. Working in conjunction with the PSX, the SGX provides critical SS7 voice services.

"Sonus has given us the potential for a limitless array of services to help our business. We're now able to tailor our approach to specific customers, and to establish stronger relationships..."

Vanessa Horn, Williams Communications

The Sonus solution enables new revenue streams ina number of ways. First, it makes possible services that were simply not feasible with a circuit-switched architecture. Second, it lets Williams bring new services to market much more quickly and easily, because they can be implemented at the software level, through the SoftSwitch, rather than at the hardware level. Thirdly, these applications can be purchased "off-the-shelf" allowing Williams not to be tied to a single development vendor. The fact that one SoftSwitch may control many GSX9000 gateways adds to the efficiency. The SoftSwitch further enables Williams to integrate the Sonus GSX9000s with their existing circuit-based switches, and applies new applications and services to the legacy traffic.

In addition, the Sonus GSX9000 offers greater density, lower power consumption and much quicker installation and turnaround time — a few weeks instead of nine months. "It's the kind of quick-to-install solution we need in a high-growth environment," said Savill. "It's also a very dense solution that lets us distribute our network's switching fabric out to smaller locations. That decentralization helps the robustness and reliability of the network."

"There are so many great new services we can offer, and there will be more in the future that no one has even thought of yet. We want to be able to turn them over to our customers as soon as they're ready," said Bross. "With Sonus' GSX9000 Open Services Switches and SoftSwitches carrying our voice traffic, we know we can do that."

About Williams Communications Group, Inc.

Williams Communications Group, through its subsidiaries, operates North America's only exclusively carrier-focused fiber-optic network and is the largest independent source of end-to-end integrated business communications solutions - data, voice or video. Based in Tulsa, Okla., Williams Communications has 9,000 employees primarily in North America, with offices in Europe and Asia and investments in South America and Australia. Approximately 85 percent of WCG stock is held by Williams (NYSE:WMB) which, in 1985, became the first energy company to harness its core competency as a builder of networks to enable competition in the communications industry. Additional information is available at www.williams.com and www.williamscommunications.com.

About Sonus Networks

Sonus Networks, Inc. is delivering a new class of carrier solutions that enable the movement of telephony to converged packet networks, and the development of a new generation of innovative voice and data services. The Sonus Packet Telephony suite and Open Services Architecture (OSA) cut the time-to-market for competitive new service products from years to weeks, allowing carriers and third-party developers to sustain and expand marketshare, and build important new revenue streams. Its highly scalable products fully interoperate with and extend the life and utility of today's public network. Additional information is available at: http://www.sonusnet.com.

Sonus Networks
5 Carlisle Road
Westford, MA 01886
USA

1.978.692.8999 TEL
1.978.392.9118 FAX
www.sonusnet.com

SONUS SUCCESS STORY

xxxx.xxxxxxx