



KEEPING THE CARDINALS CONNECTED

With key picks in the 2006 draft and the most technologically advanced stadium in the world, the Arizona Cardinals are set to score big in 2006 both on and off the field. When the Arizona Cardinals organization set out to build its new \$450 million state-of-the-art stadium in Glendale, Arizona, they had ambitious goals. They set out to do more than build a new playing venue—they wanted to create a whole new fan experience.

The **Technology**
Behind the **Team**

Designed, deployed and managed by

Insight[®]

Insight Delivers Game-Changing Technology Solution for the Arizona Cardinals

The Cardinals' IP-converged voice and data network is claimed to be the most sophisticated IT infrastructure in the National Football League. While the Cardinals had big plans for the new venue, they only had a small dedicated team to support their day-to-day IT operations. They set out to find a partner to ensure their vision for their new facility became a reality.

Cardinals Team Up with Insight

After researching solutions providers, the Cardinals picked Tempe, Arizona-based Insight—a hometown presence with national reach that brought the expertise and resources to handle every step of this massive undertaking.

“We wanted someone who could provide the entire technology infrastructure for the stadium as well as our headquarters and practice facilities,” says Arizona Cardinals Technology Director Mark Feller. “But we also wanted someone who could support it all—in the long term.”

With Insight's help, the Cardinals' new facility will stake claim to being one of the first “pure IP” stadiums in sports. The entire network will stretch from the Tempe Training Complex to the Flagstaff Training Camp site to the stadium in Glendale and will include over 1,000 IP phones with advanced features such as video conferencing. Additionally, over 700 Sony® high-definition plasma and Philips® CRT televisions will be used for advertising and entertainment throughout the facility, and business operations will be supported by IBM® PCs and servers.

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— **Mark Feller**
Technology Director, Arizona Cardinals



IP Goes All Pro

The first question Insight had to ask was what technology made the most sense for the Cardinals' state-of-the-art stadium. According to Steve Kedzior, senior vice president of Insight's Client Solutions Organization, “The goals of providing maximum flexibility while also meeting the requirements of limited space, power and heat buildup, meant that a traditional voice and non-converged network design would not work in this facility.”

Insight's team of technical experts and engineers worked closely with Cisco Systems® in partnership with the Cardinals organization to architect a complete network, wireless and cabling solution that would enable a game-changing fan experience.

A converged wireless and wired network proved to be the best option. In addition to drastically reducing infrastructure needed to support the range of requirements, it would dramatically reduce operating and maintenance costs of the deployed infrastructure. The Cardinals began their IP migration last summer at the Cardinals Training Complex. Insight overhauled the existing network and replaced it with seamless voice, data and video communications.

In the stadium, the IP requirements for all building systems are supported by a single converged network backbone. This design provides a single core network from which these various building systems can communicate and be accessed, reducing the need for multiple points of network administration and overall administration costs.

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Total Technology Experience

Insight's team of technical experts and engineers worked closely with technology partner Cisco and the Cardinals organization to ensure on-time completion of all network, hardware and software components for the new stadium.

The Cardinals wanted to provide an advanced technology experience for all fans at the home games. Implementing a wireless network, Insight helped the Cardinals achieve its goal of providing coverage to the entire stadium. The facility now supports all major forms of wireless communication available. Fans, reporters and staff will enjoy uninterrupted cellular access as well as wireless Internet access from anywhere in the stadium. Additionally, the deployed wireless network supports public safety radio coverage throughout the facility as well ensuring fan safety, security and peace of mind.

Beyond the End Zone

While the new stadium hosts over a dozen football events each season, it will host many more non-football events on an ongoing basis. Organizations are booking the site for tradeshows, meetings, conventions and more. The Cardinals' converged network can be segmented to accommodate multiple users without compromising the Cardinals' host network, easily making this facility one of the most flexible technology spaces in the United States. With the largest contiguous event floor hosting over 1,000 IP drops in 78 pre-provisioned floor boxes, under the retractable field, plus a wireless network to offer flexibility for the rest of the facility, the Cardinals Stadium "sets the bar" for network provisioning in an event floor space.

"The IT infrastructure implemented by Insight gives us flexibility that we didn't have in the past," reported Arizona Cardinals Vice President/General Counsel Michael Bidwill. "Since the technology is now entirely IP-based and software-driven, the stadium can be customized to meet the needs of multiple users."

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— **Michael Bidwill**
VP/General Counsel, Arizona Cardinals



▼ Cardinals Stadium Solution Highlights

- Single, converged IP network design supporting building management systems, including access control, life safety, environmental control, point of sale, in addition to traditional IP voice and data
- Over 800 Cisco IP-based telephones including touch-screen models that are available in the suites and lofts
- Cisco CallManager™, Unified Messaging™ and IP Contact Center™ technologies supporting all inbound and outbound voice traffic for the facility
- Over 100 Cisco wireless access points supporting the 802.11 data coverage within the facility
- Over 99 Omni-directional antennas strategically placed throughout the facility to support 802.11a/b/g, cellular and public safety radio spectrum for the entire facility
- APC® InfrastruXure™ modular rack solution supporting all technology in the main data facility and ensuring 30-minute up-time for critical cutover to building reserve power generators
- APC NetworkAIR FM50 cooling unit supports the main data facilities cooling needs in addition to building environmentals
- 400+ high-definition Sony LCD televisions mounted in the club level, suites and lofts
- The IP network communications system is designed to host video conferencing, concierge services and optional order entry from phones at a future date
- Sumitomo FutureFLEX® Air-Blown Fiber Optical Cabling backbone and Systemax™ Horizontal Cat 6E cable systems

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