



# The 2006 FIFA World Cup Germany™

## Mobility and the Competitive Advantage

### Challenge

To provide ultra secure around-the-clock voice and data communications for over 20,000 on-the-move end-users in a rapidly changing, high-visibility environment.

### Solution

Creation of a fully integrated fixed and wireless converged global communications network, engineered to support a multi-vendor infrastructure and multiple mission-critical applications with maximum security and reliability, and fully supported by a team of expert resources.

### Value Created

- Journalists and photographers were able to wirelessly transmit stories and photographs in seconds from anywhere in the stadium.
- Advanced network hardware capabilities kept key officials and engineers connected and in-touch wherever they happened to be.
- With play-by-play statistics being transmitted over wireless networks from pitch side, an estimated global football audience of 10 million on-line fans were able to follow each match in near real-time.
- End users enjoyed continuous high performance communications with a measured network availability of 99.99%.
- Over 80% of the voice calls made by the FIFA, Local Organizing Committee and volunteer staff traveled over the FIFA converged network – at zero incremental cost.

### How can you recognize a world-class football player?

Being successful in a highly competitive sport like world football requires many things – skill, determination, long hours of practice, strong coaching and perhaps a spot of good luck now and again. Whether goalkeeper, striker or defender, all world-class players share a common trait – *they are highly effective in what they do.*

There was certainly no lack of highly effective players during the FIFA Confederations Cup 2005™. Throughout sixteen challenging matches, standout players like Riquelme, Borgetti, Ronaldinho and Ballack helped the Argentinean, Mexican, Brazilian and German teams establish competitive advantage and move up through the ranks.

In the highly challenging world of business, establishing a competitive advantage is just as essential as it is for players on the pitch. For companies of all sizes, superior communications technology is a fundamental enabler of business effectiveness and performance. When equipped with the right communications capabilities and tools, an enterprise can stay closely connected with customers, partners and suppliers – fundamental requirements for sustained competitive advantage.

As Official Convergence Communication Provider for the 2006 FIFA World Cup Germany™, Avaya was one of a handful of providers that proved themselves able to meet the uncompromising performance standards of the Fédération Internationale de Football Association (FIFA).

Since becoming a trusted FIFA World Cup™ partner in 2001, Avaya has helped bring the excitement of the world's most popular sport to an estimated total global audience of 30 billion fans. For the men and women of Avaya, the non-stop action doesn't end at pitch side – creating and operating the world's largest, converged voice and data network has its share of world-class challenges and excitement. Join us for a quick behind-the-scenes look at life on the road to the 2006 FIFA World Cup Germany™.

## Mobility Solutions that Satisfy the “Need for Speed”

For many enterprises, immediate access to information is essential to competitive positioning and business survival. Few industries experience this need as intensely as the press. With the advent of Internet portals and on-line versions of newspapers and periodicals, the public’s expectation for near-instantaneous availability of information is at an all-time high.

The global community of football fans shares this same expectation and FIFA needed to ensure that game play details and action photographs were available to fans as quickly as possible. Doug Gardner, Managing Director of the Avaya FIFA World Cup Technical Programme, knew the right technology solution for the job.

*“Over 5,000 accredited journalists and photographers covered the FIFA Confederations Cup 2005, and that number increased to over 20,000 for the 2006 FIFA World Cup Germany competition.”*

*“With photographers capturing all of the game action, journalists providing play-by-play updates, and pitch side analysts transmitting match statistics to various web sites, FIFA needed to give these key stakeholders the ability to immediately send off their content from wherever they were in the stadium. To enable this, our Avaya Global Services engineers and security specialists designed and deployed a Wireless Local Area Network (WLAN) that gave the press complete mobility within the stadium – essentially, complete ‘freedom from wires’.”*

Avaya Wireless Access Points are at the heart of the mobility solution. Engineered to the 802.11 open industry standard,

the Wireless Access Points allow approved mobile communication devices such as wireless laptops to securely access the Internet over FIFA’s global converged communications network. Each of the FIFA Confederations Cup 2005™ and 2006 FIFA World Cup Germany™ stadiums were equipped with the WLAN (also known as Wi-Fi) technology.

## Increased Efficiency for Photographers

The use of Avaya network hardware made a big impact on the members of the press that cover FIFA events. In sports photography circles, John Sibley of London-based Action Images has received world-wide acclaim for his ability to capture the excitement and drama of football on camera. For Sibley, the Avaya Wireless Access Points means greater efficiency and freedom of movement.

*“I have been specializing in football photography since 1991, and have had the opportunity to cover matches at every level, and on every continent. In addition to having a front row seat to some breath-taking games, one of the great things about covering FIFA competitions is the way that technology has made me much more efficient.”*

*“Historically, photographers covering the FIFA World Cup typically used conventional film cameras. When we wanted to quickly publish a picture on the Web or transmit to a newspaper or magazine, we’d have to take the film out of the camera and hand it to an assistant. The assistant took it to the stadium’s media centre, developed it, scanned it and then uploaded the picture to the destination. This was a time-consuming process taking anything up to 45 minutes.”*

*“Now, most FIFA World Cup photographers are using digital cameras. When I capture an image and need to transmit it quickly, I just transfer the image to my wireless laptop, and then upload the file over FIFA’s Wi-Fi network. The whole cycle can be performed in less than 60 seconds. Fans can now see the photographs in near real-time.”*

## Enhanced Productivity for Journalists

Before FIFA installed the Avaya wireless network hardware, journalists would write their stories or updates, then try to find an unoccupied DSL connection in the stadium’s International Media Centre to transmit their content.

By using wireless laptop cards, information could be transmitted from anywhere in the stadium. For journalists, this meant higher levels of efficiency and productivity.

For the 2006 FIFA World Cup Germany™, Avaya also provided WLAN coverage in several of the hotels where FIFA officials stayed. With Wireless LANs, key FIFA stakeholders could securely access the same network assets they would typically use back at their Zurich headquarters – from anywhere in the hotel.

In addition to improving the effectiveness of mobile workers by enabling “office away from the office” capabilities in hotel environments, Wireless LANs were also used to improve end-user and executive efficiency and productivity at corporate sites and campuses. Whether indoors or outdoors, Wireless LANs gave workers quick, easy and untethered access to the enterprise network.

## Single Number Reachability

During the month-long FIFA championship, the intensity and excitement of the game play tends to grab all the headlines. It would probably surprise most fans that the same fast pace and non-stop action went on behind-the-scenes for well over a year. Rigorous preparation was an essential ingredient for delivering a flawless event, and for the key members of the FIFA planning teams, staying in continuous touch from start to finish was an absolute necessity.

Michael Kelly, Head of IT Solution at FIFA, typically found himself in the centre of the action. *“During the FIFA Confederations Cup 2005, the FIFA event network delivered network performance with uptime that was measured at 99.99% – and that was with a total network load of more than eight trillion bytes of converged voice and data traffic. Getting that kind of performance doesn’t happen without an extraordinary amount of upfront team collaboration and interaction.”*

Another tool that helped the FIFA and Avaya technology team stay in close touch was the Avaya EC-500 application. This is a feature enabled by Avaya Communication Manager – on the Avaya IP media servers that made up the majority of the converged voice infrastructure for the FIFA IT Solution.

*“The EC-500 feature allowed individual members of the team to be reached by a single telephone number wherever they were”, added Kelly. “Calls to my office, for instance, could be ‘extended’ to any mobile phone, along with key capabilities like call transferring and conferencing that I would normally use on my office phone.*

*“If I was not able to take the call, my office voice mail took the message – there was no need to have separate voice mailboxes for the office and the mobile phone. When you have to connect with someone and time is of the essence, one-number reachability can really make a difference in terms of team effectiveness and productivity.”*

## Secure and Cost-Effective “Anywhere” Connections

For the 31 days of official match play, the 2006 FIFA World Cup Network carried a record volume of converged voice and data information equivalent to more than 100 million books – and at an uncompromising “four-nines” level of reliability. To deliver that type of world-class performance in the most cost effective way, Avaya recommended that the FIFA IT Solution utilize VPN (Virtual Private Network) technology as a primary component for network connectivity.

Karsten Hobbie, the chief Avaya network architect for the FIFA IT Solution, explained. *“One of our challenges was how to best connect all of the locations and highly mobile workers – stadiums, hotels, Local Organizing Committee offices and the temporary FIFA headquarters, as well as staff members that were traveling – in a way that let us carry encrypted, high-speed voice, video and data traffic at a fraction of the cost of a traditional, leased line network.*

*“FIFA decided that the Avaya VPN Service would be the ideal approach. The Avaya VPN solution has two main components – a VPN Service Unit, which is hardware and associated software that integrates transparently into any network, and a VPN Client, which is Microsoft Windows™*

**“The [Avaya] EC500 feature allowed individual members of the team to be reached by a single telephone number wherever they were... When you have to connect with someone and time is of the essence, one-number reachability can really make a difference in terms of team effectiveness and productivity.”**

— Michael Kelly, Head of IT Solution at FIFA

*compatible software for the end-user’s laptop or PC that allows them to securely connect to the FIFA Network.”*

*“The VPN solution was an outstanding success – not only from the standpoint of reducing FIFA’s network connectivity costs between fixed locations, but also from the standpoint of all the key stakeholders that used the solution for their mobile connections. Once the word got out on how well the Avaya VPN performed and how easy it was to use, the number of individuals requesting the software skyrocketed.”*

## Enhancing Productivity for Mobile Users

Plans were made to enhance the FIFA network with Avaya Modular Messaging, an advanced IP messaging solution engineered to open industry standards and protocols.

Andrea Rinnerberger, Head of the Avaya FIFA World Cup Programme, elaborated.

*“With this enhanced messaging solution, FIFA stakeholders had a single interface to voicemails, emails, directories and more, allowing them to check, store and manage their messages from any phone or via their laptops or PCs. Users truly had anytime, anywhere access to their communication tools.”*

## Presence Management

Plans were also made by the Avaya team to enhance their laptop-based clients with Presence Management (Presence) network hardware. Presence is a much talked-about productivity-enhancing capability that utilises Avaya Communication Manager and a Converged Communications Server together with the open industry standard known as SIP (Session Initiation Protocol) to alert team members on each other’s current status, such as “available by mobile phone” or “in executive meeting - do not disturb.”

*“It’s all about using the power of Avaya network hardware to unlock the productivity and effectiveness of mobile and remote workers”, adds Rinnerberger. “As far as mobile communications solutions are concerned, we wanted to empower the key FIFA stakeholders with always available communications that gave them the ability to reach the right person from wherever they might be.”*

## Learn More

For more information on how Avaya Intelligent Communications can take your enterprise from where it is to where it needs to be, contact your Avaya Client Executive or a member of the Avaya Authorized BusinessPartner program, or visit **“Do Your Research”** at [www.avaya.com](http://www.avaya.com).

All statements in this Case Study were made by Michael Kelly, Head of IT Solution at FIFA; Andrea Rinnerberger, Head of the Avaya FIFA World Cup Programme; Doug Gardner, Managing Director of the Avaya FIFA World Cup Technical Programme; Karsten Hobbie, the chief Avaya network architect for the FIFA IT Solution.

## APPLICATIONS

- Avaya Communication Manager
- Avaya Modular Messaging
- Avaya Extension to Cellular (EC500)
- Avaya INTUITY® AUDIX® Messaging Solution
- Avaya IP Office

## SYSTEMS

- Avaya S8700 Servers
- Avaya G650 Media Gateways
- Avaya AP8 Wireless AccessPoints
- Avaya C36X Edge Data Switches
- Avaya SG20X and SG5X Security Gateways

## SERVICES

- Avaya Global Services

## ABOUT FÉDÉRATION INTERNATIONALE DE FOOTBALL ASSOCIATION (FIFA)

No other sporting event captures the world’s imagination like the FIFA World Cup™. Ever since the first tentative competition in Uruguay in 1930, FIFA’s flagship has constantly grown in popularity and prestige. Today, the FIFA World Cup™ holds the entire global public under its spell. After all these years and so many changes, however, the main focus of the FIFA World Cup™ remains the same - the glistening golden trophy, which is the embodiment of every footballer’s ambition. For more information, please visit [www.fifa.com](http://www.fifa.com).

## ABOUT AVAYA

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness.

For more information please visit [www.avaya.com](http://www.avaya.com).