ANDREW®
A CommScope Company

World Cup Excellence Exhibited in Indoor Communications Systems

Paul has traveled to the opening round match of an international football tournament, cheering on his beloved team as it faces off against a formidable opponent. During the first intermission, he tries to call his cousin Michael back home in London to complain about the last yellow card.

When he clicks the "Send" button, nothing happens. His call won't go through. Paul sees other fans around him on their mobiles, chatting away gleefully with their mates. Paul slumps back down into his seat waiting for the match to resume.

Above: Andrew engineers test the newly-installed ION-M system at an operator's dedicated BTS in the Allianz Arena, Munich. Left: A football enthusiast sends a photo to a friend.

What happened here, besides a wireless operator possibly losing a customer the next time Paul purchases a mobile phone plan? What happened is the mistake of not having the necessary wireless signal coverage and capacity to ensure that Paul's call, and those of thousands of other fans, went through. What also happened is a missed opportunity for increased revenue by charging international roaming fees or for minutes used. What happened are mistakes due to poor planning and improper network infrastructure.

Fortunately, there were not too many Pauls at the 2006 World Cup tournament in Germany, thanks to the foresight and investment of most wireless operators serving the region. To ensure proper capacity, most German operators contracted Andrew Corporation to design, supply, and install single- and multi-carrier indoor systems in nine of the 12 stadiums used for the Cup, as well as in several of the host cities' metro rail systems. Andrew's solution was its ION™-M fiber-based distributed antenna system, a flexible, high-power coverage and capacity system supporting the GSM 900 and 1800 MHz bands, and the UMTS (W-CDMA) frequencies. ION-M's basic architecture involves fiber optic and coaxial cables, master and remote units, and other subsystem products that receive and transmit signals from dedicated operator base transceiver station radio equipment to customer handhelds throughout the indoor facility, and vice versa. Removing in-building calls off the macro-network, ION-M provides the signal capacity required to support hundreds of mobile phone users placing calls at once.

"The international prestige of the World Cup required a world-class solution to ensure that spectators and working journalists enjoyed full network coverage," said Andrea Casini, vice president of Europe, Middle East, Africa sales, Andrew Corporation. "With Andrew's support, mobile operators in Germany seamlessly handled huge spikes in network traffic during the matches, with customers staying in contact with friends and family during the games, making the spectator experience that much more enjoyable."

Wireless is no longer a 'best effort' service. Consumers expect fixed line-like reliability and voice quality. They expect calls and emails to go through when they press the send button. Smart wireless operators know this, and make plans to ensure customers get what they want, when and where they want it. So when Paul wants to call Michael to talk about England's penchant for penalties, he can. And when Sasha calls her husband after landing in Paris from a trip abroad, she can. And when Omar wants to download a video clip while waiting for the train, he can. The number of locations to cover with indoor systems may seem lengthy, but with Andrew's help, wireless operators can provide the network infrastructure needed to support in-building calls cost-effectively.