Between rising ticket prices and sophisticated home media centers with big-screen TVs that cover an entire wall, sports fans have never had more incentive to simply enjoy the big game at home. Plus, so many venues lack a Wi-Fi network that can truly deliver a fully-immersive interactive fan experience.

So in order to attract more fans and push the interactive experience to the next level, the 2015 Rugby World Cup in England wanted to do what no other large traveling sports tournament, including the Olympics, had ever done. The Rugby World Cup wanted to provide a dependable, fast and secure Wi-Fi experience at every official fan zone.

Each of the 14 venues hosting matches had a dedicated fan zone that accommodated between 5,000 and 20,000 fans on match days. To cover the wireless demand, Rugby World Cup needed a dependable network that could thrive in a live, constantly changing environment not only for the fans, but the sponsors and vendors, too.
To provide a one-of-a-kind Wi-Fi fan experience, Rugby World Cup partnered with Horizon Communications Technologies. As a telecommunication leader in infrastructure design, installation and management, Horizon operated in both the US and the UK.

Setting up the various networks required 140 access points spread out between the 14 fan zones and two controllers centrally located in London. For the job, Horizon used three different types of Samsung access points: the Samsung WEA403E with 6db patch antennas, the Samsung WEA412I with built-in internal antennas and the Samsung WEA453E with external omni-directional antennas. The two controllers were Samsung WEC8050 WLAN controllers.

Installing the access points at each venue required waiting until the sites were set up by the Rugby World Cup organizers. Since most of the access points were installed on the fan zone marquees, Horizon had to wait until just a few days prior to the opening matches to install the networks.

"Logistically, it was a very difficult plan to execute," said Mike DeGraw, CEO of Horizon. "The fan zones were in parks and parking lots which aren't traditionally easy to set up."

Another issue Horizon faced was the setup of each fan zone. Often the actual layout of the fan zone differed from the plans put down on paper, requiring Horizon to design the network at the time of installation.

“When we execute our installations, we usually have the opportunity to test,” DeGraw said. “We didn’t get to do that. We had to do a lot of field engineering on site. Once we turned up the network, that was it. The people were in there the next day.”

In addition to the on-the-fly and last minute field engineering, Horizon was challenged with inclement weather, a three-hour Wi-Fi blackout when a power surge blew out a switch and damaged cables when fans pushed a fence, and the cables attached to it, out of the way.

The Samsung Solution:
Field Engineering in a Live Environment

Quick Profile:
AS USED BY HORIZON COMMUNICATIONS AT THE RUGBY WORLD CUP

SAMSUNG WEA403E ACCESS POINT

• 802.11ac – 3x3 MIMO
• Delivers data rate of up to 1.3 Gbps
• Dedicated security monitoring module
• Samsung’s AirMove technology ensures seamless handover among APs
• Self-organizing network (SON) allows high level of quality management and reduces design cost
The Results: Samsung and Horizon Score!

Between the food, drinks, souvenirs, carnival rides, concerts, rugby-themed activities and the matches on giant screens for the fans to enjoy, the Rugby World Cup Fan Zones were an overwhelming success thanks in large part to the fast and dependable Wi-Fi network provided by Horizon Communications Technologies. More than 92,000 devices logged into the network to search for match content, access promotional information and process mobile transactions.

“It was a first-of-its-kind both from the size of the sporting event as well as the technical architecture,” DeGraw said. “And with the unique layout of each fan zone and the always-live environment, we couldn’t predict what was going to happen from one minute to the next. But we met our goals and we’re happy with the results.”

Despite the challenges, Horizon accomplished what no other telecommunications company had done before. Using Samsung equipment, they provided a fully functional Wi-Fi network in a chaotic, live environment and set the standard for all other world-traveling tournaments to strive for.

Quick Profile:

**SAMSUNG WEA412I ACCESS POINT**

- 802.11ac – 2x2 MIMO
- Delivers data rate of up to 867 Mbps
- Samsung’s AirMove technology ensures seamless handover among APs
- Self-organizing network (SON) allows high level of quality management and reduces design cost

**SAMSUNG WEA453E ACCESS POINT**

- 802.11 – 3x3 MIMO for outdoor use
- Delivers a data rate of up to 1.3Gbps in 5GHz band
- Provides secure and high speed Wi-Fi connectivity in outdoor environments