





Mobile and Ready

To reflect the changing media landscape, enhance the spectator experience and increase opportunities around retail and sponsorship, venue operators across a variety of sports are installing all-embracing Wi-Fi solutions. **David Walmsley** looks at the latest venues installing Wi-Fi and asks the people selling the solutions into stadia what challenges they are coming up against.

AT THIS YEAR'S golf Open Championship, organisers the R&A allowed spectators to bring their mobile phones onto the course for the first time since 2006.

Some professionals were understandably not amused by the prospect of novelty ringtones soundtracking their backswing, but the ending of the ban reflects not just the extent to which the mobile phone has become indispensable to so many people in the years since, but also the highly significant changes that have taken place in the way these devices are used.

The advent of the smartphone, of social media, of apps and of mobile internet means the fan at the greenside was more likely to feel the urge for a quiet tweet than to bellow "I'M AT THE GOLF!!" as Ernie Els lined up his winning putt.

That's the theory, anyway. However, the ongoing reality for the large majority of sports spectators is that the likelihood of being able to connect to their social networks, share images or video from inside the stadium or check news and opinion online is roughly on a par with the odds of being invited to join the players in the pre-match handshakes. Given the pressure placed on cellular networks by large crowds in confined spaces is such that mobiles may be welcome, it is simply not going to happen, and they might as well be left at home.

"The complexity of the stadium makes it a challenging environment for technology, and so

people have come to expect their phone not to work there," says Anabelle Pinto, global market management director of Cisco Sports and Entertainment Solutions Group.

That situation is slowly beginning to change, however, albeit on a piecemeal basis beginning with the rollout of wireless connectivity to specific areas of the stadium only. For example, German football club Hamburg's Imtech Arena deployed a wireless Local Area Network (LAN) for use by media and conference facility guests in January 2010; Gillette Stadium, home of the National Football League (NFL)'s New England Patriots, announced the installation of Wi-Fi across its 6,000-capacity premium seating areas in October 2011; and in January 2012 the Indian Wells Tennis Garden appointed Ruckus Wireless to deliver Wi-Fi access for players, VIPs, officials and coaches at this year's BNP Paribas Open WTA (Women's Tennis Association) Tour event.

Venues offering full Wi-Fi access are still few and far between, however. Major League Soccer team Sporting Kansas City's new Livestrong Sporting Park opened in June 2011 with a high-density Wi-Fi network that targets each stand with its own dedicated bandwidth and isolates signals to that area to avoid the overlap and crossover that compromise connection stability and throughput. The forthcoming European football season will also see Real Madrid's

Mobile phones permitted at the Open this year - Getty Images Sport



The O2 in London is one of many venues currently installing an extensive Wi-Fi solution - Getty Images Sport

Estadio Santiago Bernabéu become the first on the continent to adopt the same network infrastructure, Cisco's Connected Stadium Wi-Fi, with more expected to follow.

All of which is good news for spectators, but why now? Technology has clearly advanced but after all both smartphones and Wi-Fi have been around for years.

"Stadiums need not just coverage but capacity also and we have spent the last four years focusing on transforming this space," says Pinto, emphasising that fitting - and particularly retro-fitting - a sports venue with a wireless network remains a complex and expensive job. Despite its 'wireless' status, for example, Livestrong Sporting Park still requires 146 miles of fibre to link up the 13 data centres through which its network runs. Those sorts of numbers underline why venues have so far been reluctant to commit.

With the venues' preferred solution of funding these kinds of projects through in-kind technology sponsorship holding little appeal to the majority of network suppliers, inertia has largely reigned. And despite trials of predecessor technologies such as Bluetooth having demonstrated consumer demand, venues tripped up on the cost of creating and delivering mobile content on the scale required says Vange Kourentis, group commercial director of stadium media specialist Sports Revolution, who are marketing and installing the Cisco solution in the UK and Europe.

"Most sports rights-holders have little money to invest in technology once they have invested in players," Kourentis told *SportBusiness International*.

"The biggest barrier this technology has

"The experience at home is outstanding, and we have to compete with that in some fashion by making sure that we create the same kind of environment in our stadiums."

faced is the mentality of 'free'," adds Cisco's Pinto. "This is an industry that is used to everyone pouring money into sponsorship; no-one wants to buy anything, they want us to provide the kit and pay to put our name on it. Unfortunately, we don't do sponsorship; we're not a consumer brand."

But in the last year several things have changed. For one, mobile has reached a tipping point at which spectators and sponsors alike expect and demand access as part of the stadium product. Throw in the fact that sport is facing increased competition from other leisure activities into the mix - even including its own in-home alternatives to event attendance - and also providers are creating new business models that make more compelling propositions for free Wi-Fi.

The most visible of these trends is the inexorable rise of mobile. According to research published by the UK communications regulator Ofcom, between 2005 and 2010 mobile voice call volumes grew at a compound annual rate of 18 per cent in Germany, 11 per cent in the UK and eight per cent in the US. In contrast, mobile data traffic per mobile connection more than doubled in all major telecoms markets between 2009 and 2010. And in 2011, 77 per

cent of smartphone users in the US accessed the internet via their handset, as did 74 per cent of UK users, 70 per cent of those in Australia and 68 per cent in France.

"The biggest factor driving change is the trend of mobility and video anywhere," says Pinto. "There are five billion mobile devices in the world and 90 per cent of spectators bring theirs to the stadium...people are saying 'I was there', 'I saw it'; they want to be able to say 'I am there', to be able to connect live. We are finding the younger generation aren't going to games or concerts because they don't want to be disconnected from their phone.

"Fans are now demanding that their phone works because they have paid a lot of money to be there, and I think the sports and entertainment industry realises more and more this is not just a 'nice-to-have', it's a 'must-have'."

The pressure is also on from sponsors who expect their sports properties to deliver the same range of interactions as all other marketing platforms, believes Kourentis: "This year we're seeing about 35 per cent of a brand's total communications budget being spent digitally, compared to about 20 per cent last year and 15 per cent two years ago.

"Most sponsors we deal with expect some type of digital direct consumer engagement. The landscape is changing rapidly and the challenge for rights-holders is to keep up with it and keep brands spending."

Alongside these forces, the impact of competition from other leisure alternatives, particularly in the home, was underlined as recently as May this year, when NFL commissioner Roger Goodell announced the league's ambition to see Wi-Fi connectivity come

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to all 31 of its stadia as a means of closing the technology gap on the TV and online football experience available in the living room.

Speaking only a month before a *Wall Street Journal* report highlighted the contrast between soaring TV ratings and a 4.5 per cent fall in average game attendances since 2007, Goodell said: "We have made the point repeatedly that the experience at home is outstanding, and we have to compete with that in some fashion by making sure that we create the same kind of environment in our stadiums."

"We want [fans in the stadium] to have access to the same information [as at home], have access to our [multi-game] RedZone, have access to highlights, be able to engage in social media, including fantasy football. When you come to our stadium we want to make it a great experience."

New Propositions

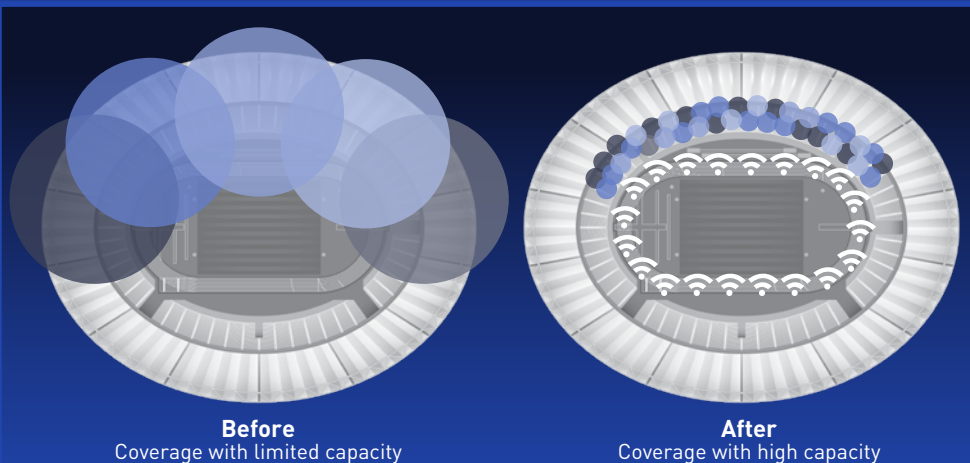
It is not just competition from TV that is driving venues and rights-holders towards the idea of Wi-Fi, though; technology providers and sports marketers are now working together to articulate new propositions that can provide the carrot of addressing stadium cost and revenue issues as well as meet the demands of spectators and commercial partners alike.

Key to achieving this has been the ability of Wi-Fi to deliver operational efficiencies and detailed customer data that can translate into opportunities to achieve measurable uplifts in revenue. On the former count, the network infrastructure on which the spectator Wi-Fi connectivity sits can also be used to control and co-ordinate everything from security and lighting to temperature control and gate access throughout the venue.

On the latter, controlling video screens in the same centralised manner enables fans to visit concession stalls and other outlets without missing any of the on-field action, while the ability the Wi-Fi network also provides to manage different platforms on a unit-by-unit basis and distinguish between individual spectators and locations enables them to create far more tailored marketing and promotional offers.

"From a location perspective, Wi-Fi enables you to pinpoint every fan in the stadium and track their behaviour," says Kourentis. "So if they know that by half-time I've normally bought two beers but that today I haven't, they might send me a coupon for 15 per cent off to encourage me to go to the bar."

This kind of micro-management has been used at Staples Center, in Los Angeles, where Cisco's wireless management of a new system of dynamic video menus at concessions throughout the venue was measured



Improving Wi-Fi Coverage and Capacity

Fans seated in the stadium are the most challenging group to accommodate with Wi-Fi due to the heavy concentration of mobile device users, the openness of the area, and the limited stadium infrastructure available for mounting access points.

In order to provide better coverage and address this specific challenge, new techniques have been adopted. The

Cisco Connected Stadium Wi-Fi solution for example, illustrated above, employs highly-directional antennas and high-performance, dual-band access points along with software algorithms that automatically tune the wireless network to the constantly changing radio frequency environment. It also uses 'CleanAir' technology that is designed to mitigate radio frequency interference.

independently to have raised the average purchase from around \$4.50 to over \$9.

"This was all managed through our Stadium Vision solution, which tells every screen what to do and when to do it, whether it's at half-time, when they want advertisements to be seen or if they need to run an offer on one stand because the line at another is too big," says Pinto. "It's providing a more intimate experience that allows you to leave your seat and still see what's going on."

Branded Applications

Wi-Fi, however, also gives venues access to fans who do not want to leave the arena during play. In Kansas City, scanning the QR code on their seat when they arrive enables spectators to use their handset to order food and drink, which is pre-paid for through their membership profile and brought to them in the stands. And matching that type of useful functionality with applications that add to the fun of the day out will be at the heart of the in-stadium mobile experience as it spreads and develops.

"Through branded applications the phone will become the visitor's portal to all the things they might want to do in the stadium as well as carry on their mobile life - entertainment to enhance their enjoyment of the matchday experience and a utility to help them do things within the stadium," says Kourentis.

"That could be buying merchandise and having it delivered to your home to avoid the scrum in the club shop; it could be making a bet, receiving stats, voting for the man of the match, and making sure that all through that content there are links to social media."

"Look at some of the stats coming out of the last Super Bowl [where Wi-Fi was available] - more content was uploaded than was downloaded in the stadium. The evidence is people think social; they are at the event and they are telling their networks."

The longer-term expectation is that the smartphone handset will take an even more central role in the stadium-going experience, acting as everything from debit card to season ticket in and around the ground. The future will certainly be mobile, and certainly be wireless as a result, but Kourentis believes the technologies that support these evolving applications will not necessarily be the exact ones we see rolling out today.

Wi-Fi will be the key platform for the next five years at least, he predicts, but adds: "We don't get caught up with the platform per se, because who is to say what happens in five-eight years from now? Beyond that, it's not about the platform, it's about keeping up with how consumer behaviour is changing and adopting the solutions that match."