



SMALL CELL FORUM

Solving the HetNet puzzle

# Enterprise wireless connectivity: different needs, different challenges



Mark Keenan reports from the Enterprise Round Tables held at SCWS World in London, May 2017

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When I was asked to moderate a closed session of major enterprises at SCWS World to discuss wireless connectivity challenges, the conversation ranged over a lot of scenarios.

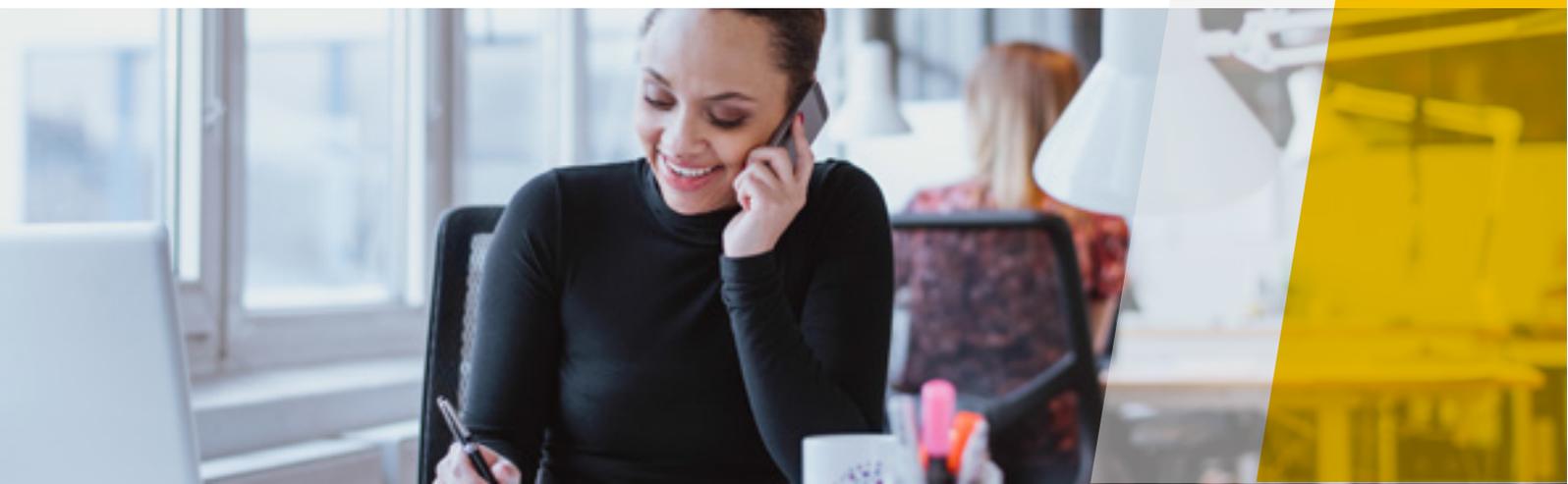
This is hardly surprising, given that the backgrounds of the various attendees differed a great deal. Only two were members of the wireless industry. One was a representative of a company deploying small cells in hotels. The other was David Orloff who was there not only as chair of Small Cell Forum but also in his capacity as chair of the [Enterprise Advisory Council](#), which was formed to build stronger ties between the enterprise communities and cellular groups. The others included representatives of airports, hotel chains, venue owners, suppliers of serviced office accommodation, and builders and owners of apartment blocks.

What they had in common was an interest in the potential of wireless for their businesses, customers

and visitors – and an awareness that developing a wireless business case that works offers challenges. But it soon became clear that they are not always the same challenges.

Wi-Fi services, which are often controlled in-house and can deliver permission-based information that can be used to know, understand and better serve customers, have an important part to play in a number of enterprise connectivity scenarios. Cellular, however, can allow the sort of seamless coverage, and voice calls – while a user is travelling from home to street to venue, say – that end users favour. In addition small cells are easier to install than Wi-Fi. However, this means multiple boxes for multiple frequencies. Multi-frequency small cells exist but they're in their early iterations at the moment.

Most of the attendees were at the SCWS event to find out more about small cells. For them, small cells are, potentially, a more cost-effective solution than alternative mobile systems – notably DAS. In addition





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the concept – a box, a router, ports – is familiar from Wi-Fi, with the bonus that people can use their mobile phones.

But whatever you employ, delivering any wireless system to large numbers of end users – in stadiums, say – isn't a simple task. You would think that most project development would include wireless access of some sort from the outset. Apparently not. One attendee suggested that many new builds for stadia or venues add on cellular – or Wi-Fi, PMR or TETRA – capability at a late stage, with little thought to issues like power, cabling and shared infrastructure, and lower resulting user satisfaction.

Again this should mean careful planning from an early stage. However, for many building projects, suggested one attendee, education is probably needed, to prevent the habit of waiting until the final brick is laid before saying: "What are we going to do about wireless?" And wireless really is essential in new-build apartments and offices. As an expert on managed workspace noted: "If we do not deliver good wireless services we're not going to have tenants. We're creating a work environment for them here – and they have to have access to wireless technology."

The hotel chain representative noted that the dwell time of customers is much shorter in his business, but they still want to be able to use their mobile devices. And yet the construction of many hotels isn't conducive to radio signals. Thus it becomes quite an expensive exercise to ensure wireless coverage, he pointed out. This, of course, is the sort of problem we at Real Wireless deal with. We assess options, costs, lifetime outlay and other relevant factors – including managing airspace.

This was another big concern – particularly of the representatives of stadium owners and airports. For BAA in Heathrow, for example, Real Wireless wrote an airspace management policy that worked and

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helped the airport avoid radio interference from different competing sources. It's not clear whether that example has been widely followed elsewhere.

Another hurdle to wireless connectivity relates to ownership. One attendee noted that budgets are tight in the building of apartment blocks, so many developers will simply sell on a finished building without wireless capability. Thus the wireless issue becomes someone else's problem.

And it may remain a problem, I believe, until wireless becomes like water or electricity – a utility included from the start of any building project.

To be clear, the session's attendees all agreed that wireless is an essential in their businesses and that its use can only grow. But they also agreed that creating a business case that allows them or others to invest in wireless infrastructure brings its own challenges. And, as was made clear at this session, with so many major enterprises trying to accommodate wireless for a variety of business needs, every challenge will be different.

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