

# Small cells go large to help meet data demand

Paul Sandle, Reuters

(Reuters) - Small-cell radio equipment that boosts network coverage is providing big opportunities for telecom operators as they face growing demand for smartphone Internet access in busy streets, shopping centers and stadiums.

The devices - small radio nodes which provide network coverage over a range of between 10 and 200 meters - have been used by businesses and consumers to provide a signal in areas of poor coverage for years.

Now operators are using them to bolster public broadband networks and ease pressure on traditional base stations, as they struggle to meet exploding data demand from customers wanting to access the Internet via smartphones and tablets on the go.

Nicola Palmer, chief technology officer of Verizon Wireless, said the U.S. carrier would deploy up to 300 4G small cells this year and "a lot more in 2014".

"I view small cells as a complement to the rest of the network especially in areas of intense demand such as business districts or shopping malls, but they won't replace the traditional mobile tower," she said at the Mobile World Congress trade show in Barcelona.

Small cells, which are around the size of a shoe box, can be clustered in streets between tall buildings - canyons where mobile reception can be poor - and where demand is high.

Telecoms consultancy Informa predicted the deployment of public small cells would generate 2016 revenues of \$16.2 billion, creating an opportunity for network gear providers like Ericsson, Huawei and [Nokia](#) [1] Siemens Networks, which make them.

"Public access small cells in busy urban areas are set to be one of the defining mobile network trends in the coming years," said analyst Dimitris Mavrakis in Barcelona.

"The vendors who succeed in this space are going to win the lion's share of small cell revenues."

The installed base of small cells was set to grow from almost 11 million today to 92 million in 2016, with a total market value of over \$22 billion, Informa said.

Telecoms gear maker Alcatel-Lucent said as demand for data soared, the capacity of the main network would run out of steam, and small cells would be part of the solution.

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"It's no longer an 'if small cells', in fact in my mind it's no longer a 'when small cells', it's here and now," said Michael J. Schabel, the company's vice president of small cells.

Companies including AT&T and Vodafone UK as well as Verizon, have announced plans to roll out more small cells in their networks, as consumers increasingly expect a seamless data service.

Mike Flanagan, chief technology officer for network software firm Arieso, said the networks were coming under pressure from a small group of users who consume a huge amount of data, often for video or gaming.

He said one percent of all subscribers consumed more than half of all the data being transmitted in the network.

"So when you employ these small cells, don't think of a uniform ubiquitous small-cell coverage across a certain area, like Soho in London," he said.

"Instead look at it as a surgical placement of small cells precisely where they are required to satisfy the demand of those extreme one percent of users."

He said the technology was now able to detect where that demand was located down to the individual building.

"If the network operator can just satisfy the demands of one percent they've doubled the effective capacity of their whole network."

(Additional reporting by Leila Abboud; Editing by Helen Massy-Beresford)

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