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## Can Start-ups Shake up the Mobile Infrastructure Market?

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Should start-ups try and break into the network infrastructure market or should they leave it to the big boys? Entrepreneurs smell opportunity as a capacity crunch looms, but are their noses deceiving them? The line-up of finalists for the GSMA's Mobile Innovation Awards Grand Prix in Barcelona this week suggests that start-ups do indeed have plenty to offer in the mobile networks space. Of the ten start-ups pitching to the venture capitalists and operator executives on the panel of judges, four were touting technologies designed to make mobile infrastructure more efficient and less costly. Moreover, one of the four, Ubidyne, won the competition outright.

The telecoms industry is spending \$280 billion a year on infrastructure, while the major companies, such as Google and Yahoo!, collectively spend less than one tenth of that on research and development, Hugh Bradlow, Chief Technology Officer of Australian telco Telstra, noted in his keynote speech before the start-ups began their presentations.

Bradlow argued that this huge disparity means that operators should receive more than 10% of the revenues generated by mobile applications (some

developers argue that operators should settle for 10% citing the example of the revenue-share terms for services hosted through NTT DOCOMO's i-mode platform). Of course, operators also earn revenues from mobile data subscriptions, but there is a broad consensus that these access charges alone won't be sufficient to generate enough revenues to sustain the ongoing network investment that will be needed to support flat-rate data plans and the associated proliferation of mobile apps and mobile Internet services.

### **Major cuts in network costs**

Of course, the other way to square the circle would be to reduce the cost of building out network capacity, which is where several of the finalists in the GSMA's Mobile Innovation Grand Prix come in. Ironically, Bradlow used his keynote to steer would-be entrepreneurs away from the infrastructure market, arguing that most of the network problems are well-understood and that the big equipment vendors will soon emulate any breakthroughs a start-up is able to make in this space. Instead, he pointed entrepreneurs towards the location, sensor networks, augmented reality, social networks and apps segments.

However, Bradlow acknowledged that infrastructure companies have put in a strong showing in the Grand Prix. Made up of the winners of feeder competitions run by the GSMA, RIM and Qualcomm, the short list included Electro Power Systems, which has developed a "self-recharging fuel cell" to provide backup power for base stations, and Siklu Wireless, which has developed a wireless backhaul solution, which it says can provide bandwidth of 1 Gbps for less than \$5,000. The finalists also included Altobridge, which says its local switching technology can make it commercially viable to provide GSM coverage in remote regions, such as islands in the Pacific Ocean, on ARPU's of just \$5. The eventual winner, Ubidyne, has integrated a base station's radio technology into its antenna to reduce energy wastage and operating costs. The Germany-based start-up says that Vodafone is field-trialing the antenna in a live base station in Italy.

### **Lighting a fire under the big guns**

The big network vendors are almost certainly working on similar technologies, but that doesn't mean these start-ups won't have a significant role to play. It is a truism that start-ups can move quicker than corporate giants and, despite the major network vendors' protestations that they are nimble and quick, that truism probably still holds true.

Moreover, given the scale of the challenge of creating mobile networks that can cope with the exponential growth in demand for bandwidth, it is in mobile operators' interests to give these start-ups some support and airtime so as to step-up the pressure on the leading equipment vendors to innovate more, particularly around cost-reduction. And there is anecdotal evidence that operators are doing that. Ubidyne, for example, claims that five of the top 10 mobile operators have issued request for quotations (RFQs) for next generation base stations that stipulate that the antenna should have embedded radio technology.