

ADAPTIVE ANTENNA OF NEW TYPE FOR WI-FI HOTSPOTS



"I really liked this technique and would love to see in practice how much is improved."

John Glossner,
General Program Chair,
Wireless Innovation Conference SDR'11,
Washington, DC, 2011

TECHNOLOGY

Digital active phased array with adaptive multiuser beam-free algorithm

Such antenna does not use beams for the space division. Instead the antenna elements receive signals from all directions and a special mathematical algorithm selects desired signals with the best signal-to-noise ratio. Such technology is more efficient than the traditional beam forming. It allows operating with more users in the same time-frequency slot and improving radio channel quality.

THE MAIN ADVANTAGES

- ✓ **Increase in the network capacity**
Antenna provides a few uplink and downlink simultaneous streams over the same frequency channel without transmission speed reducing (for example, 6-element antenna provides up to 6 simultaneous full speed streams).
- ✓ **Higher communication quality**
- ✓ **Extended coverage area**
Extended coverage and higher network capacity reduce the number of the Wi-Fi hotspots resulting in the lower capital and operating expenses, and higher profitability.
- ✓ **Coverage with fewer dead spots**

SUMMARY

The cost of the network based on the proposed beam-free hotspots significantly decreases in comparison with the network based on the traditional equipment. Operating expenses is also low.

OUR PARTNER

Our partner is [Mobile TeleSystems \(MTS\)](#), one of the biggest mobile operators in Russia.

Technology video presentation: <http://youtu.be/5R3aBQPm00>

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