

Coverage Extension and savings on cellular infrastructure

A solution with the VEGA antenna in Miramar – Cordoba, Argentina

Miramar Beach

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Cordoba - Miramar town beach at the Ansenzuza salt lagoon

[Original Post](#)
Posted by:kion_com_ar

BTS Miramar-CO043
CDMA 850MHz

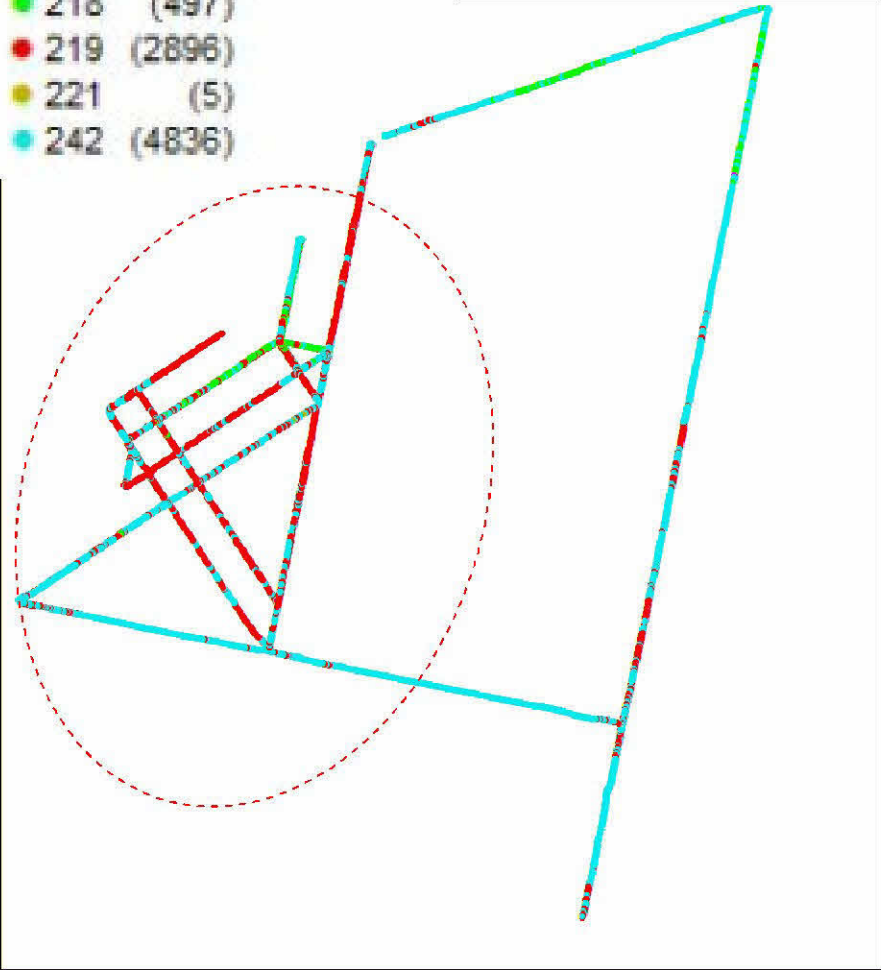
BTS to target area – 4 Kms.

Plots of Best Server by Sector

Best Server Scanner 850MHz

- 213 (4)
- 218 (497)
- 219 (2898)
- 221 (5)
- 242 (4836)

Major Servers by rank
 Frec. 242: 48.7% of samples
 Frec. 219: 35.2% of samples
 Frec. 218: 6.03% of samples



Before adding VEGA antenna

Best Server Scanner 850MHz

- 219 (8)
- 224 (563)
- 227 (119)
- 230 (29)
- 241 (1028)
- 242 (28652)
- 248 (32)

Major Servers by rank
 Frec. 242: 94.15% of samples
 Frec. 241: 3.38% of samples
 Frec. 224: 1.85% of samples



After adding VEGA antenna

Signal Level with Panel and VEGA antenna

Rx Level Sub
[dBm]

- -71 to -83 (674)
- -83 to -93 (2563)
- -93 to -104 (5001)

Levels were lower than -93 dBm which could not guarantee indoor coverage

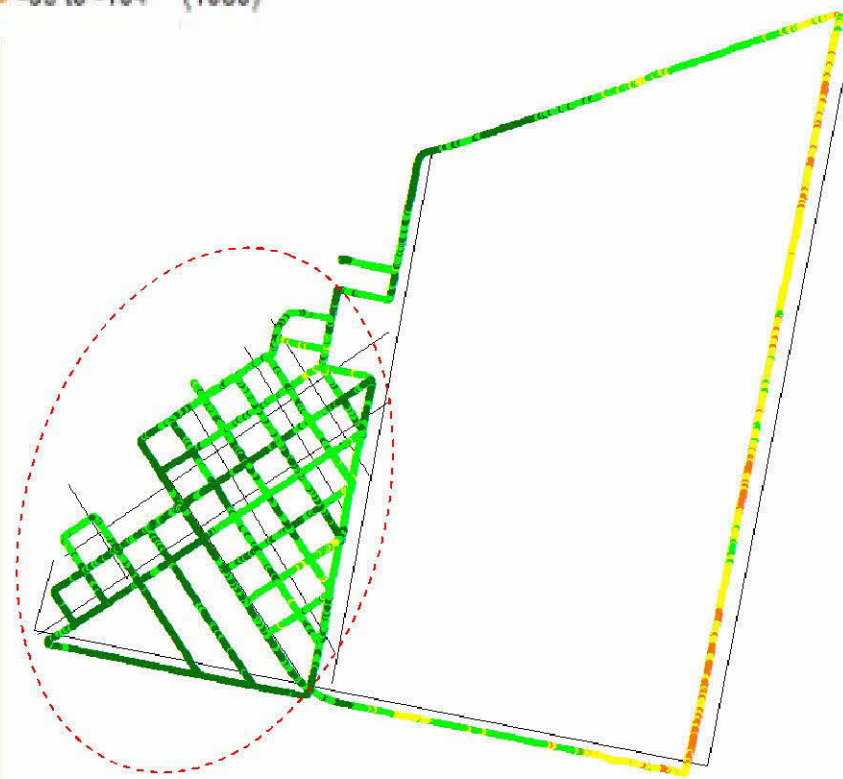


Before

Rx Level Sub
[dBm]

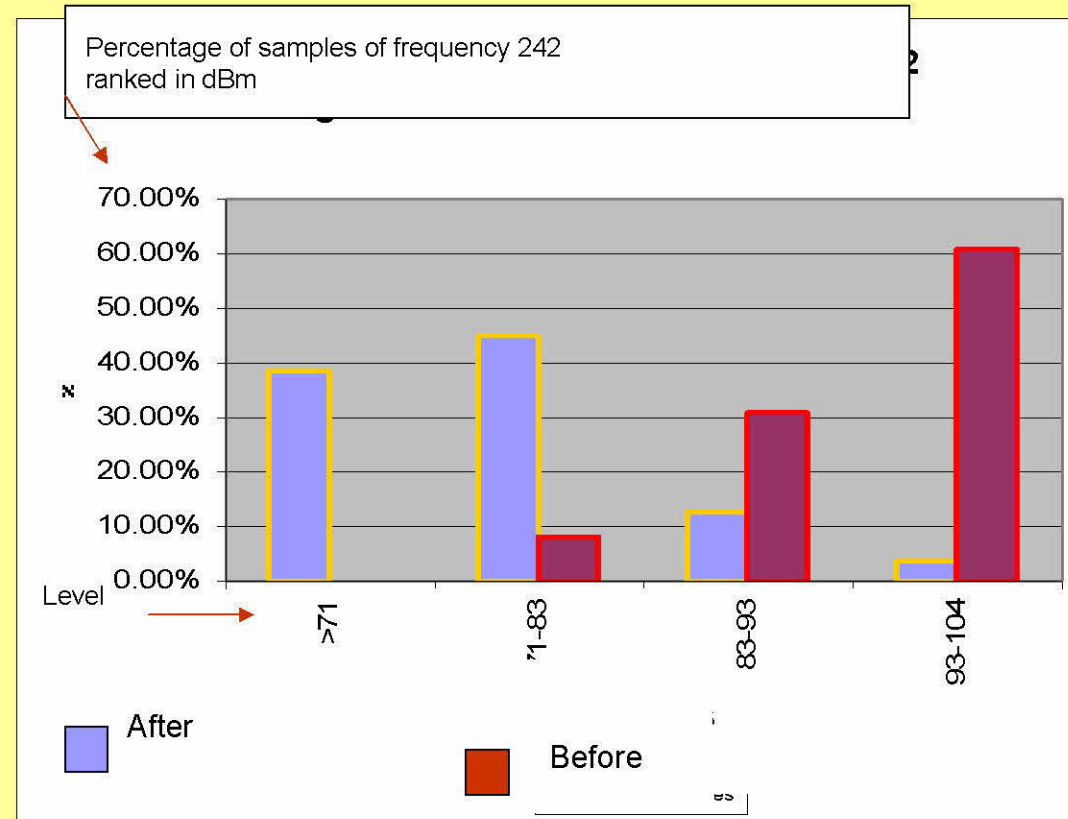
- ≥ -71 (11806)
- -71 to -83 (13643)
- -83 to -93 (3902)
- -93 to -104 (1080)

Improvement in levels of over 15 dBm. New levels guarantee good indoor service



After

Propagation plots channel 242



The VEGA antenna has created a notable improvement as observed in coverage distribution

Two co-directional antennas are used to save on power combiner losses due to large number of carriers required at this area