

## T1 NORTH AMERICAN OPERATOR BECOMES THE MARKET LEADER IN QUALITY

### Case Study at Tier 1 North American operator

#### PROJECT PROFILE

- Duration: on-going services project
- Size in cells: 25880
- Technologies: Ericsson FDD LTE
- Resources: 2 P.I.Works LTE engineers

#### CHALLENGE

- Customer lost leading position in market for data performance
- Low throughput
- Missing neighbour relations
- PCI conflicts
- High drop rates
- Coverage problems
- Unacceptable number of HO Ping-pongs

#### APPROACH

- 565 Change Requests issued
- Analyzed LTE call traces
- New PCI and RSI (Root sequence Index) plans approved
- Neighbor optimization
- Footprint optimization done by using Timing Advance Information

#### RESULTS

- Returned customer to #1 position in market for data performance
- 16.8% composite improvement on agreed KPIs between baseline and project closure
- Above 7% Improvement on Busy Hour DL Throughput and Delay KPIs while the Data volume increased 5.87%

KPI Classification	Targets for optimization	Baseline KPIs	Final KPIs	Improvement
RRC Setup Fail%	0.43%	0.49%	0.38%	<b>22.45%</b>
Bearer Drop%	0.23%	0.28%	0.22%	<b>21.43%</b>
RACH Failure Rate%_PI	19.00%	20.98%	14.28%	<b>31.94%</b>
Handoff failure%	2.70%	3.47%	1.97%	<b>43.23%</b>
RRC Re-estab. Failure %	0.86%	0.94%	0.89%	<b>5.32%</b>
Network Quality Index	9.51	9.3841	9.5787	<b>2.07%</b>
DL PDCP Volume [ Terabyte ]		111.32	117.85	<b>5.87%</b>
DL Throughput (Avg Daily BH)		5444	5858	<b>7.61%</b>
DL PDCP Latency (Avg Daily BH)		42.28	38.91	<b>7.97%</b>

### ROOTMETRICS OPERATOR PERFORMANCE METRIC BEFORE AND AFTER P.I.WORKS OPTIMIZATION PROJECT

<http://www.rootmetrics.com/us/rsr/atlanta-ga/2014/2h>