Master Thesis – Handover Optimization in GSM

Background
When a mobile device (e.g. smartphone) makes a handover (moves between cells during an ongoing call) in GSM the network controls when the handover shall take place. The algorithms for controlling when the handover is triggered are complex and have many parameters which can be changed by the operator of the network.

Thesis Description
The Master Thesis shall explore how parameters that control handover in an Ericsson GSM network can be automatically optimized. A simulation model of the handover algorithm and the measurements from the mobile device will have to be designed to carry out the study. Input data from live GSM networks will be available. The simulation model may also use parts from or be based on internal Ericsson simulation tools.

Qualifications
- Programming competence, preferably Matlab
- Competence in optimization and simulation
- Competence in Mobile Communications, preferably GSM

Extent
1-2 persons, 20 weeks.

Preferred starting date
January 2015

Keyword
Master, Thesis, Handover, GSM, Optimization, Simulation

Contact person
Sebastian Lindqvist
sebastian.lindqvist@ericsson.com
+46722449742