ERICSSON

MASTER THESIS STUDY:
ANALYSIS OF 5G HIGH AND LOW FREQUENCY BAND CHARACTERISTICS

Description
This is an opportunity for a Master of Science student to work with technology leading radio network performance modeling and analysis in the mobile industry.

The next-generation wireless technology 5G is developed to enable use cases such as e.g. broadband experience everywhere anytime and smart vehicles (transport & infrastructure) and includes access extension to higher frequency bands (up to 100GHz) than what is used today. The very high bands have shorter range and different characteristics compared to existing bands. As a result, it is expected that connectivity is provided through the use of a combination (interworking) of bands and technologies in some scenarios. The task of the thesis is to analyze frequency band characteristics and dynamics of low and high bands for some selected scenarios to understand the benefits but also needs that interworking put on radio resource and mobility management. The analysis will be based on advanced 3D propagation prediction models but also measurement data can be considered. Visualization of radio characteristics and dynamics in a 3D view is part of the study. The result of the thesis should be concluded in a presentation and a report. The report may also include methodology improvements and changes in the radio network simulation process.

The project is intended for one master thesis student, and is expected to be performed in Kista, starting in 2017 Q1 and ending 6 months later.

Qualifications
You should be a ***Master of Science*** student in electrical engineering, applied physics or similar. Courses in wireless communication theory and signal processing as well as experiences of communication systems are considered valuable merits but are not required.

The successful candidate must have

- Excellent grades
- Fluent in English, both written and spoken
- Good matlab skills
- Good communications skills
- You are a self-motivated and positive person.

Contact person
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