

Automation of mmW and Wi-Fi Measurements

M.Sc. Thesis

Background

The future high frequency (mmW) cellular and Wi-Fi systems require a large number of field measurements. This same problem is also shared when building so called spectrum usage maps. As the required spatial resolution is increased the purely human based approach is not any more possible. Thus more automated approaches are required.

Tasks

In this thesis you will help us to develop **automated measurement platform** system ("a robot"), which will be built around precision mechanical, programmable, platform that is usually deployed for small movies production. Another alternative is to use low-cost movable platform. Only one development hardware is chosen for each thesis project. You will start your work by discussing with your supervisor, who comes from the measurement group of the department, in order to generate requirements list for the development work. After that you will get familiar with the chosen "robotic" platform and finally program easy to use system to conduct measurement radio measurement campaigns. As the final part of the thesis you verify your development by conducting a small measurement campaign using one of the mmW/SDR-platforms of iNETS.

Other Information

In this thesis you have an unique opportunity to learn and develop automated wireless measurement systems for real-life usage. The work is strongly practically oriented, where you are required to be comfortable to work both mechanical and electrical components.



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