

B.Sc. Thesis: Spectrum Data Modelling & Visualization

Background

Understanding RF-Spectrum use fundamentally important for designing the future wireless systems and innovative services for demanding applications such as smart traffic, ubiquitous IoT etc. One usual approach to get high-level understanding is to use different graphical visualization techniques combined with exploratory low-level data analysis. iNETS has been over a decade one of the pioneering institutes on conducting different measurement campaigns and collecting detailed spectrum data. In this thesis you would be using this data and develop rapid graphical visualization software to explore and demonstrate the data.

Tasks

The main task of this thesis will be development of visualization and data pipelining techniques. The tools can be agreed with the student, but in general the aim would be to use existing software libraries and programming environments, and target environment for the visualization would be high-end PCs with fast(er) graphic cards.

Tools

You should be familiar with programming and have a desire to learn (or already know) about graphical visualization. Previous knowledge on RF-measurement data is not necessary as you would learn enough during thesis work.



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