Fixed Dipole Methode Source Reconstruction

Project work, (Bachelor/Master thesis with further objectives)

Motivation

- Near-field Scanner can be used to measure electric and magnetic near-fields
- From near-field scans, the source of emission can be derived down to the PCB
- The simplest version if to create a grid of fixed electric and magnetic dipoles
- These dipoles have an orientation, amplitude and phase
- They can be scaled from low number to very high numbers

Tasks

- Literatur review on source reconstruction from near-field scans
- Modeling of one or more test-devices in CST
- Developing of a Python code to create a variable number of dipoles
- Implementation of an optimization algorithm to get the optimal dipole parameters
- Error evaluation of the approach
- Report and presentation of results

Requirements

- Passed courses in theoretical electrical engineering and CST course (if offered)
- Python(!)

Contact

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