

Development of an inductive localization technique in the near field

Project work, BA or MA thesis, student assistant

Motivation

- Development of a coil-based localization technique for new applications (inhomogeneous biochemical environments, improvement of indoor localization and wireless energy transmission, logistics, ...)

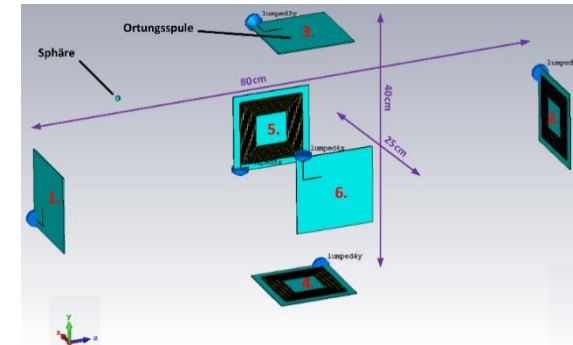
Possible Tasks

- Optimization of coil geometries
- Investigation of various influences on the procedure (conductive liquids, metal plates, ...)
- Calculation methods for determining the coupling parameters between the coils
- Development of methods or adaptation of other localization techniques for the extraction of the searched coordinates (x,y,z)
- Improvement of the localization technique by stochastic methods
- Etc.,

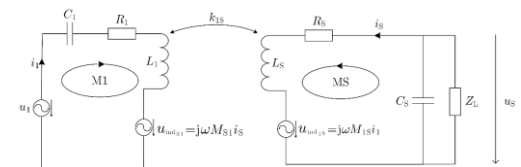
Contact

Sven Lange

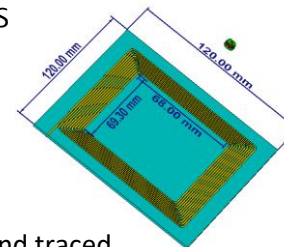
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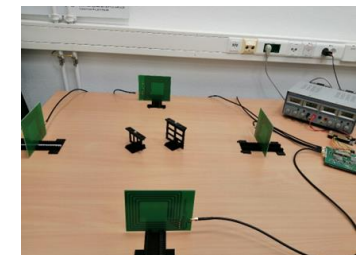
Localization setting as a simulation model



Electrical equivalent circuit of coupled coils



Detecting coil and traced coil (sphere) as simulation model



Real 2D localization setting