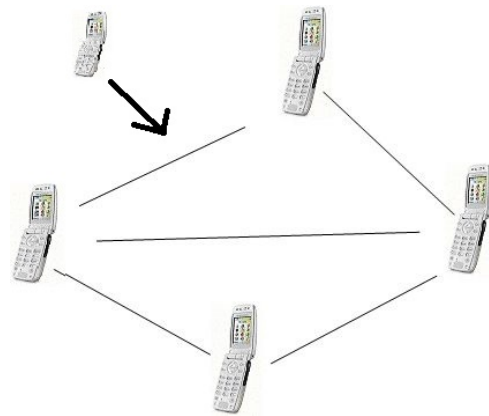


Term thesis “Localization of (moving) objects”

Motivation

Localization is a very important feature used by every navigation system (in phones, cars) and in many applications requiring knowledge about the position of objects, e.g. mobile robots, shooter detection. In this thesis we focus on localizing a moving object using a network, e.g. the picture shows a network of five phones and one of them is moving. We wish to estimate the position (and speed) of the moving object. In this thesis we use a new methodology for localization, i.e. distinct from GPS and other well known techniques.



Task

The student should implement, evaluate and possibly extend the technique on a real network! The network programming part is simple and can be done using our sensor nodes (e.g. TinyNodes) or for skilled programmers possibly also using our Android phones. A major part involves smart algorithms for filtering, e.g. dealing with noise and outliers of the measurements used to compute the position of the moving object.

Requirements

Any student is welcome to apply for the thesis. There are no special requirements necessary. Basic knowledge of machine learning, filtering and tools such as Matlab is an advantage.

Interested? Please contact us for more details!

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