



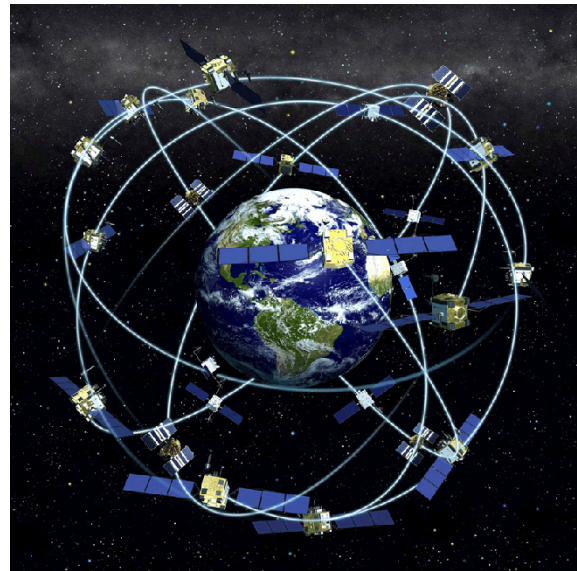
MA:

Robust A-GPS for NLOS Environments

This document describes the subject and the general time schedule of the master thesis of Leonardo Tonetto, beginning in the spring term 2014. Adaptions or changes can be agreed upon by the advisors. The GPS system has developed from a system used for military purposes to one of the most important sensors in today's smartphones. The range of applications for accurate location information is vast and still growing.

Although GPS delivers very accurate and reliable data if the satellites are in line of sight, the system quickly gets unusable when used indoors. In such Non-line-of-sight environments, accurate localization would be just as important to potential users as outdoors since indoor spaces might be just as complicated to navigate through as outdoor ones.

Experiments with GPS-like systems based on acoustic signals have shown that performance can be improved using a localization scheme different from the state of the art. The primary task of this thesis is to evaluate the performance of this localization scheme in the case of GPS signals. To properly compare our method to the state of the art, experiments should show how both systems perform in heavily attenuated but also outdoor environments.



Requirements: Creativity, programming skills and basic knowledge in signal processing are advantageous. The student should be able to work independently on the topic.

Interested? Please contact us for more details!

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