Low-cost Differential-GPS Positioning on Mobile Devices

Bachelor Thesis

Project:
Our group at ICG is collaborating with major industrial players in long-term research projects. Topics covered include likewise temporal tracking, infrastructure visualization, HCI and user interface design. We are looking for a motivated Bachelor student to combine a sub-100 USD differential GPS sensor (left image) with a remote base station to a state-of-the-art mobile smartphone or tablet. The goal is to improve the accuracy of the position estimate of the device to the sub-centimeter range, to enable future outdoor Augmented Reality applications like in the Smart Vidente project (right image, https://youtu.be/dMOSIBZmUVI).

Candidate Profile:
We offer you the opportunity to perform cutting-edge research in a challenging, motivating environment, working within a multidisciplinary team. A willingness to tackle challenges and problem solving capabilities is a must. Candidates should have a background in either Machine Learning, Computer Graphics, Computer Vision or Augmented Reality. English fluent in spoken and written is mandatory.

Special Qualifications:
• C#/C++/C programming
• Liking to work with mobile hardware
• Team player

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