Mobility measurement and cartography

Résumé du projet de recherche (Langue 1)

The research community suffers from the lack of datasets reflecting the mobility of users in space and time. In this thesis, the candidate will focus on developing measurement strategies to collect and analyze mobility traces in some target area without having to deploy any software at the user devices. The main idea is to rely on an infrastructure composed of sniffers that analyzes the normal transmissions of nodes to estimate the spatial and temporal displacements of nodes in the region. The objective of such a non-intrusive strategy is to identify changing trends of displacements and spatial occupancy without the need to explicitly identify the nodes. Achieving the goals of the project will require developing innovative approaches ranging from the efficient collection of wireless traffic on the fly to the analysis of mobility data using advanced data manipulation tools. The success of the thesis will depend on a balance between experimental and theoretical contributions.

Informations complémentaires (Langue 1)

The candidate must hold a M.Sc. in Computer Science or equivalent field. She/he must show a high-level academic record and strong motivations to pursue as a Ph.D. student. The candidate must have strong expertise in software development and data analysis. Fluent written and spoken English is mandatory.