



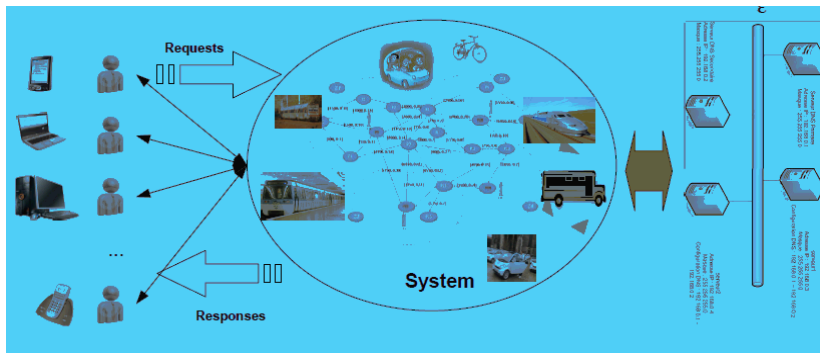
PhD Proposal 2017

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Title: Design and optimization of a Mobility Support Service Information System in dynamic and distributed environment
Scientific field: Optimization, Industrial computing, transport logistic, eco-mobility
Key words: distributed optimization, scheduling, web-services, multi-agent systems, distributed artificial intelligence, dynamic graphs

Background, Context:

Nowadays, information related on displacement and mobility in a transport network represents certainly a significant potential. Indeed, we can imagine infinity of innovating services related to mobility and eco-mobility, not only intended for general public, but also for companies, to a relevant control of the mobility for their displacement plans. However, such support for mobility services does not exist yet. Especially when we focus on an innovative system which offers a combination of mobility services in real time and space, proposed by diverse information providers with eventually different formats, response time and cost. The main goal is to ensure the mobility assistance, which is related to the daily or occasional traffic motivations, tourism and culture occupations, etc. with a possibility to profit from relevant and exploitable information taking into account users' preferences (eco-mobility, data format, total services' cost, delay,...).



Research subject, work plan

This work aims to design, optimize and implement a Mobility Support Service Information System (MSSIS) taking into account services' similarities in order to optimize the management of the data flow of the users' requests, which can be simultaneous and numerous. That's why; a user request has firstly to be designed in terms of web services permitting the system to decompose each set of simultaneous requests into a set of independent web services. Each service can be proposed, differently, by several information providers, in competition, with different cost, response delay and different size and format of the data. An information provider, which aims to propose some services, has firstly to register his information system, by assuming the responsibility for the legal and qualitative aspects of the correspondent data. The MSSIS is related to an extended and distributed network, which contains several heterogeneous data sources including the different proposed services to mobile users.

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