Title: Optimization of a customized delivery in city logistic

Supervisor: Marie-Laure Espinouse (G-SCOP), Alain Kibangou (GIPSA)

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Brief Description:

The aim of city logistic is to optimize the flow of goods in the city. Due to environmental and societal impacts of these deliveries, coupled with the development of the e-commerce, city logistic is a topical issue. Due to increase of the e-commerce, new needs appears, it is an opportunity for economic stakeholders to offer new services. In this thesis, we will focus on one of these most promising services: the customization of the delivery point. More and more users want to be delivered not only at home but also at their workplace or at their gym center... therefore revealing personal information and habits, which is not without consequences for privacy protection. In this thesis, our aim is to propose routing methods with delivery points defined by negotiation between the user and the logistic service provider according to the user’s desired district and other deliveries planned in this district.

The main steps of this thesis will be as follow:

- The first step will be classically devoted to the literature review. This bibliographical study will be quite broad: urban logistics [1], routing problem (VRP type problem), determination of meeting points in carpooling (problem with similarities to our problem) [2], consensus in privacy context [3].
- In a second step, routing methods on districts using a single type of means of transport will be proposed. Delivery points will be negotiated on the desired district. This negotiation must be realized in a privacy protection context.
- The third step will be devoted to taking into account uncertainties on trips ‘durations in proposed routing methods with a dynamic estimation of the duration of a trip [4].
- The final part of the thesis will be devoted to the multimodal aspects and costs induced by these changes in means of transport.
References


Contact(s) : Marie-Laure Espinouse

Laboratoire G-SCOP

Marie-Laure.Espinouse@g-scop.grenoble-inp.fr

Alain Kibangou

Laboratoire GIPSA-Lab

alain.kibangou@gipsa-lab.grenoble-inp.fr