
Web services for routing problems

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Abstract

Recently, the “Cloud” has replaced the “Internet” and, despite this big change in the daily approach of communications, academic researchers are still solving the logistic problems in the same way. They gather instances from the companies, usually transform them in text files and solve the corresponding routing problems before sending back their results in another text file that has to be interpreted by decision makers. Moreover, most of the academic researchers are still working on “theoretical problems” for which the instances are sometimes far from reality (e.g. see the classical CVRP instances).

In order to make available some realistic instances and organize collaborative development in our field, we propose to implement our main algorithms related to Vehicle Routing Problems and to host them in a web-service based platform that will provide real data from currently available Internet map systems (the platform uses Open Street Maps, geolocalized points, and Mapquest for distances).

The purpose of the web-service platform is also to allow an easy adaptation of a perfectly tailored method to solve a larger specific class of problems or different variants of the same problems. The goal of this project is to create two communities: i) one community of developers that would be ready to use our platform to get or generate real life instances and ii) one community of users such as small or medium size companies that will never invest a lot in a routing software but who have needs in that domain.

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