Abstract:
Over the last decade, there is an increasing trend in the use of more and more mobile navigation devices. In order to make mobile navigation more intelligent, issues such as location and context awareness need to be addressed to offer location-based navigation services. For example, one might think of a scenario of a large commercial center where a customer with some mobile device in hand wishes to go to a drugstore. The system should efficiently identify the current location of the customer, a list of drugstores located nearby, the easiest path to the next drugstore and provide routing and destination suggestions to the customer. In this paper, assuming that the mobile device gives us the co-ordinates of the current location of the customer, we present a graph and an octree-based approach to identify the location of the customer, identify a list of destinations located in the neighborhood and determine the best possible destination and the respective path to the destination.

Stichworte: octree, location awareness, graph algorithms, navigation and routing services