# Algorithms for Location Referencing

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In this article an overview of the difficulties that arise when dealing with location referencing on digital maps for car navigation systems is given. The task is to identify the location of an element taken from a first digital map in a second usually different map. The problems due to the structures of the digital maps as well as the contraints due to the transmitting channel are shown. To overcome these problems algorithms based on the geometry, the topology, and also on the attributes of the underlying graph are introduced and compared. Results of the current development using methods from graph theory and pattern recognition are demonstrated.

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