

On A* Search with Stopover Areas

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Abstract

Today's map navigation software offers more and more functionality. For example, it can not only route from a start to a destination address, but the user can also specify a number of via destinations that are to be visited along the route. What is not commonly found in the software is the handling of so-called stopover areas. Here the user specifies a sequence of geographic areas and wants the route to lead into or through each of these areas (but he does not actually care where exactly). A modification of the well-known A-Star algorithm that considers convex stopover areas is presented. Algorithmic variants and implementation issues are discussed. Example results on a real-world data set are presented for the case of axis parallel rectangular stopover areas.

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