

E90 Topic Proposal: Dynamic Routing Using a GPS

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For our project, we propose to develop an intelligent vehicle routing system supported by a GPS and a laptop interface. The GPS device will be used to determine the current location of the vehicle relative to its final destination. A continuous network optimization algorithm will be used to dynamically route vehicles along the best route based on distance or time. The algorithm will also incorporate live traffic updates, and current road conditions in order to establish the optimal route. The laptop system will output driver directions and read them aloud so that the driver does not have to stare at the laptop.

Our motivation for choosing this topic was the fact that it combines several aspects of interest to the two of us. The concept of dynamic routing while already in existence can be still be improved in many ways, and we find these possibilities exciting. The creation of the user front end, and the possible applications of this project are also of interest to us. In addition the project will incorporate two areas of engineering that are of interest to us, operations research, and software engineering.

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