Abstract

Today many people have a navigation system installed in their car. A navigation system can not only guide the driver to its destination, it can also provide other useful information. Points of Interest (POIs) are points of general interest like a fuel station, hotel or a shopping mall which are stored in most navigation systems as well. A driver can for example search for a fuel station in the vicinity of the car when it needs to be fuelled up. These POIs are currently updated (along with all the other information inside a navigation system) by updating the complete database at once. For most build-in systems, this is done by inserting a disc which updates the system. This requires the driver to visit a garage frequently to keep the in-vehicle database up to date.

In this thesis we present a solution to update the POI related data in the in-vehicle database in a dynamic way. Based on information and interviews, we present the requirements which should be fulfilled by the design. The design we present is based on the ActMAP framework, a framework to update in-vehicle databases. It supports two ways to update the in-vehicle database, the offline updates and the online updates. The offline update is similar to the old way of updating because it uses discs as well. This design provides also some methods to speed up the offline update process. Online updates provide the possibility to update just that part of the in-vehicle database which is of interest for the driver. It is possible to update a navigation system by using a wireless connection or by using a memory card. The presented design is verified for the navigation system and the service centre (which provides online updates for the navigation systems) and we can conclude that the presented design meets almost all the requirements.