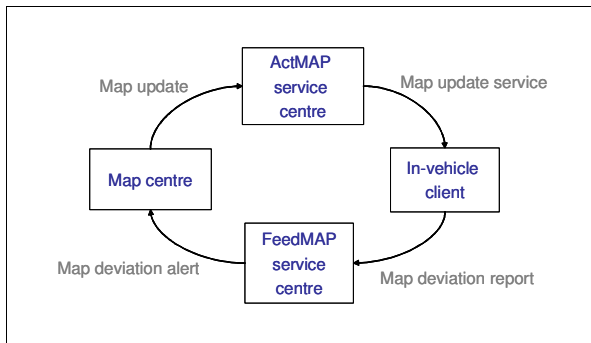




FeedMAP – Technical and economic feasibility assessment of map data feedback loops applied to the ActMAP framework

For the past years, the importance of accurate and up-to-date map information has increased dramatically. The digital maps are seen as a new type of sensors for the vehicles and could contribute to detect objects or dangerous curves beyond the horizon of the driver and sensors. An up-to-date map is a key prerequisite to such functionalities. As one important part, the flexible updating of in-vehicle maps has been pioneered in the previous ActMAP project. In FeedMAP the vehicle assisted map error capture shall be addressed, so that a closed information loop can be established consisting of two branches: The FeedMAP part from the vehicle to the map centre and the ActMAP part from the map centre to the vehicle.



Objectives

The FeedMAP project aims to build a cooperative map feedback and updating framework improving the cooperation between data owners, in particular map providers and data users i.e. the drivers using in-vehicle applications. The objective of the project is to assess the technical and economic feasibility of map correction data generated by the vehicle by providing a map data feedback loop to the map centre. Concepts and services from the ActMAP framework shall then be used to update the vehicles once map errors have been identified and corrected.

Together, ActMAP and FeedMAP concepts focus on a cooperative environment between road users and map providers collecting, analysing and distributing in-vehicle digital map incremental updates. Using the combination, the road users shall enhance the map

update process for all the other road users using intelligently the communication infrastructure and the in-vehicle map data base and sensors available.

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Project: FeedMAP – Technical and economic feasibility assessment of map data feedback loops applied to the ActMAP framework

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Infoline: Dept. RDM (PTV AG),

http://www.ertico.com/en/activities/projects_and_fora/feedmap.htm

Procedure

On-board algorithms allow the detection of map data anomalies and send deviation reports to the FeedMAP service centres (FSC). Confirmation procedures and statistical analysis of aggregated deviation reports at the FSC will produce potential map deviation messages to the map centre including a measurement on the reliability and accuracy of the underlying detection. At the map centre, further information sources will be used to ascertain or to reject such deviation messages. Certified map updates are then supplied to service centres which themselves supply map updates to the vehicle through the ActMAP framework.

PTV's role

PTV is participating at all steps in the project ranging from user requirements, specifications, implementation to evaluation. PTV's involvement is focused on client side functionalities to detect map deviations and to integrate map updates as well as at FeedMap and ActMAP service centre functionalities. From the different test sites in the project, PTV is particularly involved in supporting the Stuttgart and Torino test site.