

iv2splus INFONET

Verkehrsinfrastruktur, MdZ 4. Call (2014)

TRAM-in-TAKT II

Detektions- und Warnsystem von ÖPNV-blockierenden Falschparkern (Fortführung)

Every year in many European cities numerous delays of public transport vehicles (tram or buses) are caused by wrongly parked vehicles blocking the passage. For the corresponding public transport vehicle and its passengers and above all for schedule adherence of the corresponding transit line this poses substantial difficulties. In Vienna alone there are thousands of such service disruptions every year. In order to eliminate the time consuming towing of the blocking vehicles (a) the detection of potential blockages at the time of parking and (b) a suitable and timely notification of the driver of the blocking vehicle is necessary. The project "TRAM-In-TAKT" develops suitable technologies for these tasks and evaluates its embedding into the technical and organizational system of public transport authorities.

Every year in many European cities several thousand of service disruptions of lines of public transport (tram or bus) are caused by wrongly parked vehicles blocking the passage. These disruptions require a substantial effort to be resolved (usage of fire brigade) and hence typically last for 15-40 minutes. Disruptions of this magnitude pose significant problems for the public transport vehicle and its passengers, but above all for schedule adherence of the corresponding line. In order to eliminate the necessity to tow away blocking vehicles, the detection of potential blockages at the time of parking is required. Since this event is independent of the public transport schedule, the detection needs to take place continuously. If a blocking vehicle is detected, the corresponding driver needs to be alerted and immediately advised to remove his vehicle from the conflict region.

TRAM-in-TAKT II tries to detect the problem by an online sensor and to avoid it by actively warning the driver.

This project utilizes the results of the I2VSPPlus feasibility study "TRAM in TAKT" (FFG 835756) to build an experimental system with the following goals:

- Solve the identified scientific and technical key problems (quality and accuracy of the 3D measurements, operation and performance of the system in heavy traffic, static objects on the street, open car doors, false alarm rate, effects of weather)
- Design and prototype a cost-efficient and robust detection and warning system
- Assemble two operational sensor systems
- Develop a concept for the integration of the warning system of the public transportation authority daily operation
- Test the prototype sensor at 3 locations for at least 6 months each
- Evaluate the performance of the sensor prototypes regarding the reduction of wrongly parked vehicles as well as regarding its effects in the local social environment

program line

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Project coordination

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Links

TRAM-in-TAKT - Alarmsystem für
falschparkende Autos
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