**NAME OF CASE**

*GOFER: a cooperative system for freight management and regulation*

**KeyWords:**

Access to transport networks, ICT, prioritisation, communication between businesses and authorities, transport management, access rules and restriction of urban areas, data collection and statistics.

**Case Logo or Picture:**

![GOFER Logo](image)

**Description:**

GOFER'S main objective was to contribute to a reduction in emissions, queues, accidents and operator costs related to heavy road freight, by introducing new technical solutions and ways of cooperation. Three separate demonstrations took place in the project: A live demonstration on the 500 km route Oslo to Trondheim; a heavy vehicle driving simulator to study heavy vehicles prioritising measures in urban areas; and a simulation model for access to the Alnabru terminal area in Oslo. This best practice case describes the two first demonstrations.

**Starting Point/Objectives/Motivation:**

GOFER partners identified that the common goal was a wish for increased efficiency within their own area of responsibility:

- Public authorities: reduction of queues and emissions, and improved road safety.
- For transport practitioners: capacity utilisation and drivers’ security.
- For terminal operators: traffic throughput in the terminal, with correct vehicle arriving at the right time, and the environmental effect of this.

The GOFER project started in 2009 with the idea of developing concepts based on cooperative systems which facilitate the control and management of heavy freight vehicles, including reducing their exposure to queuing situations, and giving them priority to parts of the road network under certain conditions. After a study of user needs and requirements in the early phase of the project, three demonstration ran between November 2011 and January 2012:

- A ten-week long live demonstration of a cooperative information system with eight heavy vehicles on the 500 km route from Oslo to Trondheim.
- Tests in a Heavy vehicle driving simulator to study heavy vehicles prioritising measures in urban areas.
- A simulation model for access to the Alnabru terminal area in Oslo.

**Benefits:**

- Positive effects on heavy vehicles drivers’ work situation, traffic safety and environment (i.e. improved travel time, average speed, predictability, stress levels).
- Future development of new information services aimed at heavy vehicle drivers, tools for calculating driving time, fuel consumption and emission from heavy vehicles.

**Success Factors:**

- Based on off-the-shelf equipment and free or open source software.
- Collaborative system allowing for information exchange.
- Potential for positive effects on efficiency and predictability for the transport industry, urban environmental issues, traffic safety, and work conditions.
- Assessment of priority measures as compensation for restrictions/management.

**Supported Strategic Targets:**

- For public actors: improved utilisation of infrastructure, competitive logistics and transport system, higher safety and security.
- For private actors: Increased efficiency of logistics processes, increased safety and security.
- For both: limited climate change, reduced emissions.
Case Description (Cont.):

The project activities in GOFER were not primarily a test of technology, but demonstrations of services and functionality, aiming at establishing a “win-win”-situation for the participants. The data system developed for the live demonstration was based on off-the-shelf equipment and free or open source software (e.g. Samsung Galaxy tablet, Android, Java). The live demonstration was built as a collaborative system allowing for information exchange. The drivers participating in this pilot considered the messages received as very useful tool to prevent heavy vehicle queuing at terminals in urban traffic.

Case Description (Cont.):

Drivers placed emphasis on the benefits to travel time and traffic safety. The driving simulator complemented the live pilot and was used to assess compensating measures, including access to public transport lanes and waves of synchronised green traffic lights. Results showed reductions in average driving time (up to 40% using public transport lanes) and increased average speed (e.g. 17 km/h to 30 km/h when given access to public transport lanes).

Though this is a potentially transferable solution it requires access to and quality information. Physical infrastructure, regulations and laws, and models of cooperation will define the future implementation of such a system.

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Transport mode or supply chain elements:

• Road transport (8 heavy goods vehicles)
• Main actors involved:
  • The Norwegian Research Council sponsored the GOFER demonstration. Several actors were involved:
  • Local authorities/Road operators: Oslo, Bergen and Trondheim municipalities, Roland County, Trondheimfjord Intermunicipal Harbour, National Public Roads Administration
  • Research Institutes/Technology suppliers: SINTEF, NTNU, Q-Free, Triona
• Freight/Terminal operators: Bring, CargoNet
• Associations: ITS Norway, Norwegian Logistics and Freight Association

Pictures:

Display of on-board equipment used in the live demonstration

Example of daytime traffic scenarios used for the test

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