



SISTER

The Satcoms In Support of Transport on European Roads

BETTER ROAD TRANSPORT APPLICATIONS THROUGH SATELLITE TELECOMMUNICATION

The SISTER project promotes integration of satellite and terrestrial communication with Galileo in order to enable mass market take-up by road transport applications.

The transport market is extremely attractive because of its scale as well as the potential for location based services combined with communications to provide innovative solutions to transport problems.

SISTER brings together major players in transport telematics applications with key actors in the space infrastructure and service delivery industries.

Designed to investigate, validate and develop crucial areas that will affect the adoption of satellite communications (SATCOM) systems in the transport sector, SISTER covers three main streams of activity:

- An analytical stream: to provide a comprehensive assessment of the full range of Galileo Intelligent Transport System (ITS) applications and their communication requirements from both technical and business operation perspectives;
- A practical stream: to produce a prototype of an integrated satellite/terrestrial/Galileo transceiver and perform demonstrations of applications to prove and measure the effectiveness of satellite communication;
- A standardisation stream: to work to add a satellite component to the ISO CALM (Continuous Air Interface for Long and Medium Distance) standard, as well as other relevant standards identified during the course of the project.

The diagram below shows a possible architecture for the SISTER communications services.

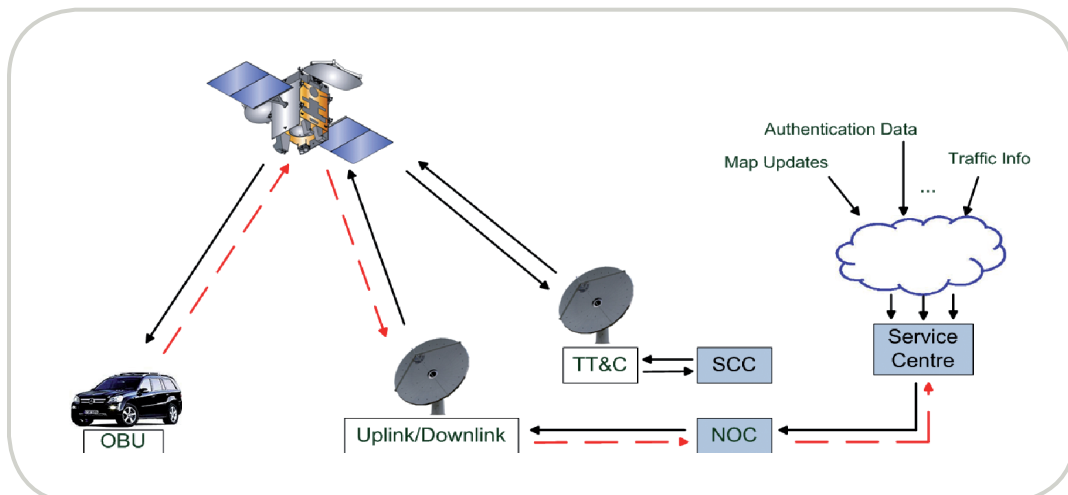
ANALYSIS OF COMMUNICATION SERVICES

ITS applications have been grouped into three main clusters: Safety and Security; Dynamic Navigation and Fleet Management.

Two communication services have been defined and underwent a detailed analysis:

- Satellite Data Broadcast Service (SDB) is conceived to broadcast data files to telematic units including map updates, points of interest, traffic information and weather. It will also deliver services such as real time kinematic corrections, GNSS authentication and GNSS assistance services.
- Satellite Narrowband Service (SNB) is designed to provide the facility for bi-directional communications with individual users to support either a small number of simultaneous users involved in emergency related communications (emergency call, theft detection) or a larger number of users transmitting small amounts of data.

Architecture for the delivery of these services is under development and two options are being considered: either leasing a third party satellite capacity or using a dedicated ITS satellite.



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LIST OF PARTNERS

- Avanti Communications Ltd, UK
- ERTICO – ITS Europe, Belgium
- Navigon GmbH, Germany
- ComSine Ltd, UK
- OHB Teledata GmbH, Germany
- Lux Space, Luxembourg
- ARS TT&T, The Netherlands
- JAST, Switzerland
- Jan de Rijk Logistics BV, The Netherlands
- EFKON AG, Austria
- EFKON Mobility, Germany
- NAVTEQ B.V, The Netherlands
- Surrey Satellite Technology Ltd, UK
- The University of Nottingham, UK
- WirelessCar, Sweden
- Autoliv, Sweden
- Volvo, Sweden
- Telematix Services, Czech Republic
- IPMIT, Slovenia
- Nottingham Scientific Limited, UK

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PROJECT INFORMATION

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