

## **GALILEO TO SUPPORT EUROPE'S RAIL FREIGHT**

**Vienna, Xx June 2009** – It was announced today that the specification and design of the GALILEO Wagon Tracking System has been finalised, along with a market analysis. The study, known as GaWaLoc, has been carried out by a consortium of European companies led by Thales Rail Signalling Solutions, and supported by the Fraunhofer Institute, Kayser-Threde, SELSYS and TriaGnoSys. The next stage could be the commercial development of the satellite tracking system, with the product hitting the market in 2010/2011.

GaWaLoc, an Era-Star project partial funded by the Austrian and Bavarian state, is one of the many planned uses of the GALILEO global satellite navigation system and will provide a cost-effective, independent tracking solution for wagons, locomotives and block trains. The GaWaLoc system will provide logistic support and surveillance in European countries; outside Europe, support will depend on a suitable communication infrastructure, such as GSM.

Robert Sappl of Thales Rail Signalling Solutions GesmbH said, "The GaWaLoc satellite tracking system for railway fleets will help improve productivity, and therefore reduce costs, through more effective operational and maintenance management. Smart businesses take the opportunity of difficult economic times to find ways to reduce costs and in today's world that generally means finding the right IT. The European rail freight industry should act now."

GaWaLoc uses cutting-edge technology to provide real-time monitoring of wagon movements and flag up any deviations from the schedule or location. Importantly, the information is independent of the train-operating companies, giving increased control to freight owners. Several sensors for good monitoring are available.

A central consideration of the research was increasing the efficient use of the existing infrastructure and rolling-stock, in the same way that the Single European Sky initiative is developing more efficient use of European airspace. Increased use of the railways and waggons will result in a reduction in transport costs and a competitive advantage.

The GaWaLoc technology is unique, using a next generation GALILEO transponder, which has two key attributes. The first is that additional modules can be added to a GSM transmitter and extend coverage cost effectively with satellite services. Secondly, the low-energy transponder harvests power intelligently, meaning its maintenance free operating period will outperform existing solutions on the market.

There are additional benefits of real-time information:

- sensors to detect unauthorised door openings, changes in load weight, excessive shocks and load temperature monitoring where appropriate
- enhanced information about the status and condition of each vehicle, which will drive higher productivity through a faster reloading rate
- real-time monitoring to help reduce train operation costs and allow the introduction of condition-based rather than periodic preventative control
- automatic provision of information on the vehicle order, brake system status, train integrity checks and more precise calculations of the gross train weight, allowing operating staff to increase efficiency by replacing various manual tasks with automatic once during trains assembly

Sappl said, “An important aspect of the design was to make the system as cost-effective as possible. One of the major costs is GSM and satellite usage, so the solution will reduce operational costs by using state of the art compression and optimisation techniques. In addition, we can collate information from all the wagons in a train so that the information is sent in one blast, as opposed to individual wagons sending individual messages. The total savings are certainly significant.”

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