GAUSS (Galileo And UMTS Synergetic System) is a Research and Technological Development project co-funded by EC (IST – Framework Programme 5). GAUSS demonstrated the integration of Satellite Navigation GNSS-1 and UMTS communication technology for the development of location based services and applications for road info-mobility and safety, emergency assistance and intermodality. GAUSS project involves a Consortium of companies, with proven experience and complementary skill in the fields of telecommunication, equipment manufacturing, communication and navigation system engineering and service provisioning. New technology with respect to the current state-of the art and promising location-based services have been developed and validated through a trial campaign in a real environment. A System Demonstrator has been built up by developing new hardware and software components, along with the use of existing facilities. A prototype of user terminal has been realised by integrating advanced GNSS1 and GALILEO technologies with S-UMTS compatible ones. Mobility assistance and safety and transport efficient management are the core of the developed applications. GAUSS performances and benefits have been validated with the direct involvement of an inter-modal transport user, during a trial campaign run under real environment conditions. Applications have been proven for emergency assistance, Point of Interest inquiry, real-time localisation of commercial fleet and control of dangerous goods transhipment. Integrated GNSS1 precise positioning based on EGNOS, and UMTS packet communication based on satellite has been successfully demonstrated by GAUSS. Reliable and effective location-based services were validated, in terms of market opportunities, positive impacts on users’ operational activities and efficiency, improvement of safety. GAUSS system integrates advanced communication and precise navigation, for providing reliable and effective location-based services oriented to transport and mobility applications (freight and fleet management, road safety and info-mobility, emergency assistance, dangerous goods transportation control, inter-modal transport). The GAUSS system combines off-the-shelf and new developed technologies, using S-UMTS 3GPP compliant point-to-point and broadcasting packet-based communication and GNSS1-EGNOS accurate positioning. It has an open architecture ready to operate with the future GALILEO and UMTS, and further exploitation scenarios. GAUSS results open the way to the development and commercial exploitation of advanced services and technology for transport sector and the whole mobility domain:

- Road info-mobility
- Emergency assistance
- Safety-of-life applications
- Transport management
- Dangerous goods transportation
- Freight transhipment.

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