

## INFOMOBILITY AND CONNECTED CARS

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Until end of '80 speaking about system for mobility seemed quite strange. The population of cars on the road networks were not needed sophisticated systems and infrastructures to monitor and control the traffic flows. Year by year this population is growing and roads suffer more and more of congestions. Urban roads as well as highways present critical issues in terms of queues, incidents, road works, ... and due to the road network capacity is not infinite, other paradigm should be applied for reducing setbacks and fatalities. Intelligent Transport Systems (ITS) have been more and more introduced in last decades, most of them based on roadside infrastructure, sensors and Variable Message Sign (VMS), and management centres, able to monitor and control the traffic. Traditionally the private vehicle, which is the fundamental part of the traffic flow, has not been included in the loop leaving its detection to different typology of sensors (inductive loops, video cameras, ...). Vehicle and its drivers should be included in the loop of ITS for at least two main reasons: 1) estimate wherever the traffic condition lightening the roadside infrastructure and consequently reducing costs, 2) provide customised information to the drivers on the base of theirs locations and destinations.

This paper will highlight how telematics platform, as technological part of the next generation connected car, will support in the future ITS. Localisation and Navigation to map traffic flows and data, human machine interface (HMI) to dispatch information to drivers, communication and multimedia streaming for connectivity with others vehicle (V2V), roadside infrastructure and operational centre (V2I), represent key technologies toward the integration of cars with ITS.

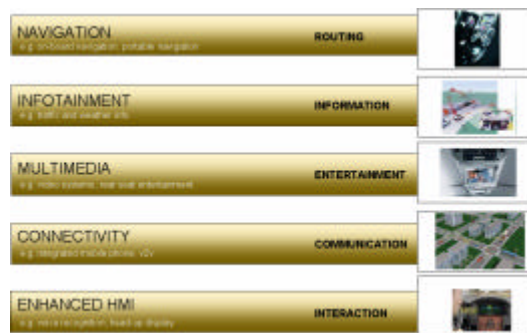


Figure 1 – key in-vehicle technologies for ITS

By the way this integration will not only related to the technical solution, due to standards and economics will represent the real enablers of a fully adoption. Cars are produced by different manufacturers which are provided by different telematics system suppliers; the same issue is related to the roadside infrastructure and traffic management centre. So, an over the air communication standard is needed for enabling different branded cars to communicate each others or with infrastructure. High volume penetration of ITS, included telematics within the cars, will be possible if the following main condition will happen: a) cost of sensors and modules will go rapidly down and b) both public entities and private companies will find common motivations, e.g. increase road safety and incoming revenue respectively.

Since years FIAT is active in the telematics fields. BLUE&ME NAV<sup>®</sup>, the platform launched in the market at Geneva Motor Show in 2007, is suitable to provide services to its drivers. BLUE&ME NAV<sup>®</sup> in the next years will act as platform for Infomobility.

#### **Publication**

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F. Lilli, presentation, “**GNSS for Road Application**” - GNSS Applications and Services Workshop, Seville, 2001

F. Lilli, presentation, “**GALLANT Pilot Project: Galileo for safety road application**” -- ITS World Congress 2003, Madrid, 2003

F.Lilli, presentation, “**Vehicle integration with Urban Infrastructure**” – ACI Congress, Mobilità Urbana: Opportunità e Prospettive Tecnologiche, Turin, 2006

F. Lilli, presentation, “**Pervasive Networked technologies for Automotive Application**” --RFID and Internet of Things, Brussels, 2006

G. Faranda Cordella, presentation, “**Open Platform for Enhanced Mobility**”, European Mobility Forum, Turin 2007