

# “Car2Car - Information protocol of road events, vehicle-to-vehicle communication”

INVEST IN SPAIN

“Investment opportunities in the automotive sector in Spain”



GOBIERNO  
DE ESPAÑA

MINISTERIO  
DE ECONOMÍA  
Y COMPETITIVIDAD

INVEST IN  
SPAIN

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## I. Introduction

### Aim:

Design of a communication protocol that can enable the creation of cumulative intelligence between vehicles, as a Web 2.0

### Business scope and technologies:

- ⇒ Technology based on WLAN net, each vehicle is a router, repeats and amplifies the received signal
- ⇒ C2C, or V2V (Car2Car or Vehicle-2-Vehicle) communication: information exchange between 2 near vehicles on the traffic ways
- ⇒ Assistance to the driver, stepping up its security:
  - ⇒ Reduction of the number of accidents
  - ⇒ Mitigating unavoidable accidents
- ⇒ Clearing a lane for priority vehicles (ambulances, fire brigade)
- ⇒ Warning drivers about traffic problems
  - ⇒ Congestion anticipation (braking)
  - ⇒ Route change



## II. Current situation of the business in Spain

### Business situation in Spain:

- MARTA project (Movilidad y Automoción con Redes de Transportes Avanzadas) financed by CDTI in the ZENIT Program: Development of networks and protocols, vehicle equipment (sensors, communication modules, actuators), human-machine interfaces, equipment for infrastructures, services for the end user, services to increase the efficiency of the road network, integrating vehicle and certification.
- MARTA project have finished during 2011 having established solid R&D capabilities to exploit.

### Main companies involved:

- SEAT and FICOSA as OEM and TIER1 supplier, with approach on embedded technology.
- Telefónica, ETRA GMV, with approach on networks and infrastructures
- Other partners: ADTelecom, Agnitio, AT4Wireless, Atipic, IDOM, Moviquity, Opnatel, SGI y TSS.
- PRIs (Public Research Institutes) and Universities.

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### III. Evolution forecast, opportunities and strategy

- New technology: possibility to launch new applications and services, free or not, to enter in the market.
- Two clear business opportunities: providing / operating the technology.
- Worldwide business, possibly subsidized by the administration, based on technology ready to use.

## IV. Requirements

### ↳ **Legislation:**

- ⇒ UE has set an operation frequency (5,9 GHz) and a bandwidth (30MHz) for the V2V system in all member countries.
- ⇒ Range between 5,885 GHz and 5,915GHz to not interfere (without counting with the guard bands).
- ⇒ USA and Japan have similar operation frequencies.

### ↳ **Economic aspects:**

- ⇒ Active participation by the cities and urbanizations (equip streets and roads with this technology).
- ⇒ Communication limits between vehicles must be improved.

### ↳ **Product specification:**

- ⇒ Already operative.

## What is Invest in Spain?

We share mutual  
Interests



## Taking advantage of this opportunity

**INVEST IN SPAIN offers, without charge, an integrated investment support service**

**I. Study and assessment of opportunities:**

- i.** We provide reports tailor-made studies and all the relevant information you need to establish yourself in Spain.
- ii.** Starting-up: finding the ideal location identifying suitable partners and/or consultants and assessors, offering institutional contacts; lawyers, management services, accountants, employment agencies and executive headhunting services, assessment in permit and licensing procedures.
- iii.** Post-investment: specialized assistance and support, facilitating contact with the relevant players, assessing the regulatory and legal environment, with a permanent service of monitoring opportunities and aid, thereby facilitating your integration into the Spanish industrial fabric and its sectorized networks