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OVERVIEW

The project analysed and designed an innovative technological system for the control of vehicle transit through equipped gates and of parking in restricted areas, applicable in different mobility control and management scenarios.



The main features of the system include:

- (applicative) flexibility and modularity
- (dimensional and functional) scalability
- standard adoption (identification, communication etc.)
- easy installation and configuration

Local authorities activate different measures for the urban mobility management, often following guidelines provided by previous experiments throughout Europe and including, among the others, pricing policies.

Road and Park pricing policies generally consider the possibility to manage the impact of transport activities - such as traffic congestion - charging the transit or the parking, rather than regulating access by restrictive rules. Road pricing schemes include:

- Cordon pricing: charging applied to vehicle entering a restricted area
- Point pricing: charge applied in equipped access gates

The charge can be calculated by applying different principles:

- time charging
- congestion charging
- pollution charging
- taxi charging
- etc



Capacity regulation and management policies
Access limitation is the main measure adopted in Europe and in Italy:

- Restricted access areas
- Restricted parking areas
- Traffic calming (velocity reduction)

Demand management policies

- Car pooling
- Car sharing
- Van sharing

Public transport support policies

- Bus priority
- Cycle tracks
- Electric or low-impact vehicles
- Demand Responsive Transport systems

OBJECTIVES

- Identification of suitable Intelligent Transport System (ITS) technologies for the implementation of the system (sensor technologies, identification techniques, communication protocols, data model etc.)
- definition of technical and architectural features HW and SW requirements for the main system components:
 - control gate
 - multifunctional totem
 - sensors
 - integration service and service center
- development of pre-commercial prototypes (proof of concept) of the main system components, to evaluate features, functionalities and expected performances
- demonstration and presentation of the prototype in the context of the [Ligurian Scientific and Technological Park \(PSTL\)](#) and to the members of the [Sistemi intelligenti integrati tecnologie \(SIIT\)](#) consortium, to find potential exploitation possibilities
- development of a business case to support marketing and commercialization of the solutions designed.



TECHNOLOGY

The project considered State-of-the-art technologies to complete the feasibility study on the application of ITS in access and parking control.

In particular, it specifically focused on **vehicle identification systems**:

- Video identification systems
- Induction identification systems
- **Radiofrequency identification systems (RFID)** reader, tag / transponder, communication protocol, related rules and laws.

RESULTS

The final results of the project have been presented in three events with the participation of private and public stakeholders potentially interested in adopting the solutions designed:

- January 2008, Genoa (IT), University of Genoa, Faculty of Engineering, Conference - **"Valutazione di impatto sociale: un efficace strumento di partecipazione"**
- March 2008, Genoa (IT), **Energethica** Fair-Congress
- March 2008, Faenza (IT), Congress - **"Sviluppo industriale sostenibile-tecnologie al servizio dell'uomo nel rispetto dell'ambiente"**