

Ligurian Scientific and Technological District on

“Integrated Intelligent Technological Systems”



A selection of projects

Gap, 13 September 2007

2 out of 6 Main Industrial Research Projects...

Field of Activity	Funding (M€)
1. <i>Extended Automation</i>	3.6
2. <i>Security</i>	3.6
3. <i>Info-mobility</i>	3.6
4. <i>Complex Organizations</i>	3.3
5. <i>Health</i>	3.2
6. <i>Energy</i>	3.0
TOTAL	20.0

...plus 4 out of 25 Pre-Competitive Development projects for SME's

- 200 ÷ 300 k€ each project
- With the overall management of the



Let's start with the Industrial Projects on...

Info-mobility (Research Area n. 3: 3.6 M€)

The project aims to set-up an

Advanced Cooperative Info-mobility System (ACIS)

for both individual and collective transportation capable of guaranteeing information and safety during traveling

Partners of the project:

Large enterprises



SME's



Academic

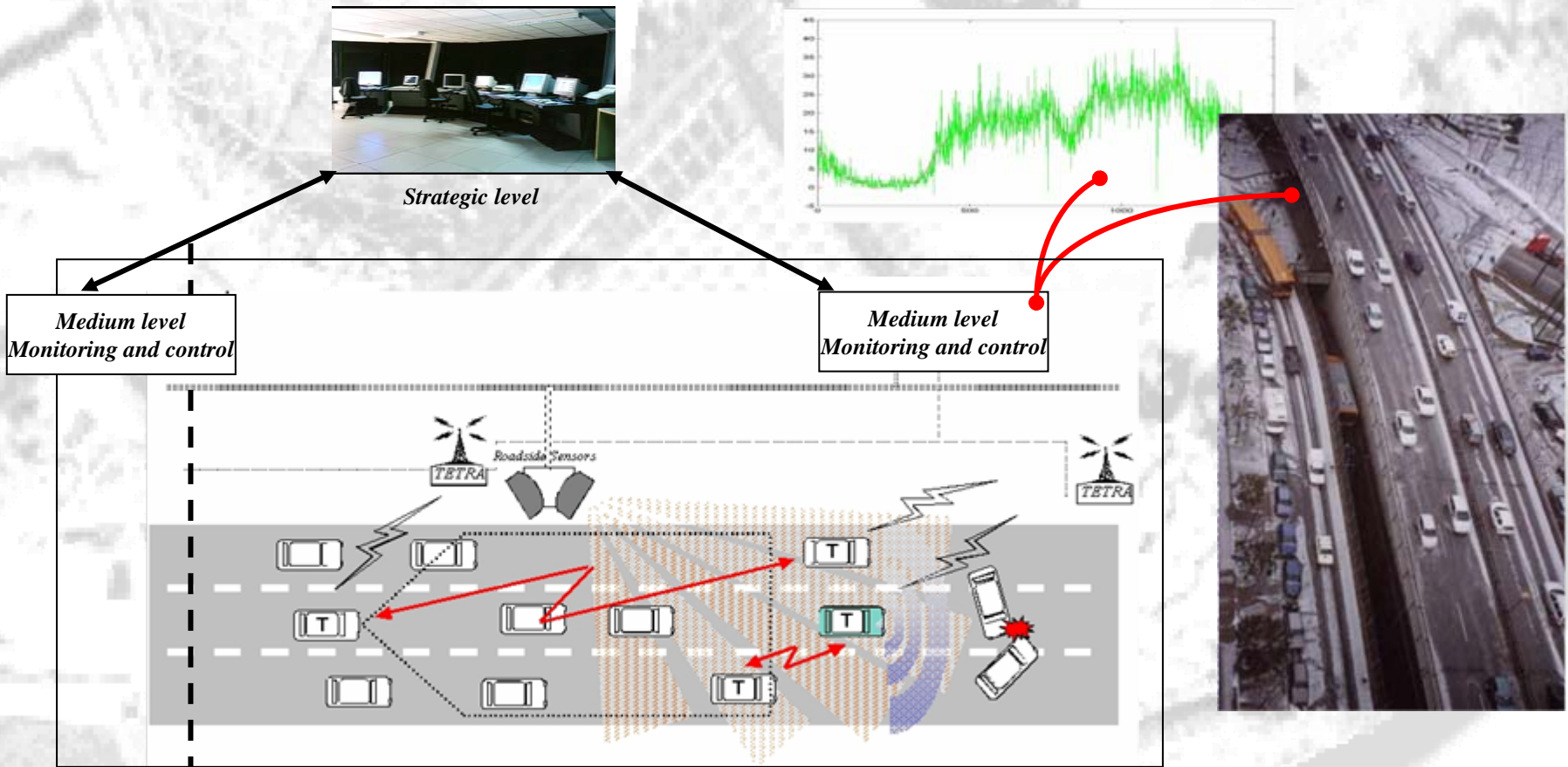


The ACIS project main goals:

- Development of communication infrastructures and systems for Information delivery, Security and Emergency Management
- Development of Info mobility applications for data fusion from real time heterogeneous and distributed data acquisitions systems within different contexts: Railways and Roadways
- Development of applications for traffic management, control and optimization within both contexts
- Widen the application field of high security and high architectural flexibility mobile communication systems (TETRA)

Innovative contents:

1. Cooperation among different centers distributed along the territory
2. Development of effective algorithms for real time control actions
3. Definition and development of a wireless network architecture
4. Study, development and realization of fixed and mobile platforms



Health (Research Area n. 5: 3.2 M€)

Title: *Intelligent Systems for Patient HANdling on diagnostic and therapeutic cycles (ISPHAN)*

- Aims:**
1. Advanced Ultrasonic CAI for diagnosis and surgery planning
 2. Advanced Systems for managing medical information
 3. Robotized Systems for therapy and rehabilitation

Partners of the project:

Large enterprise



SME's






Academic



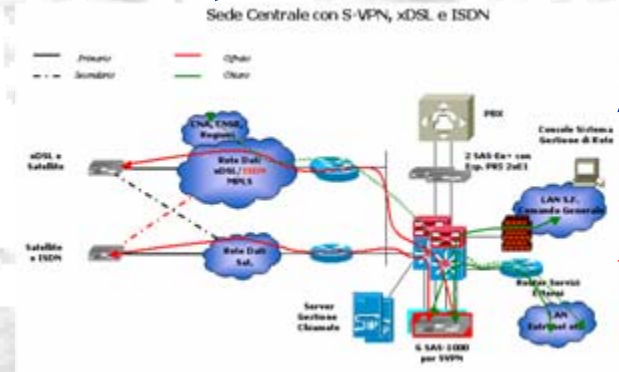
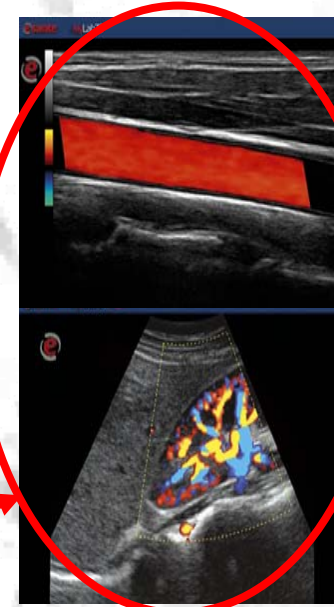
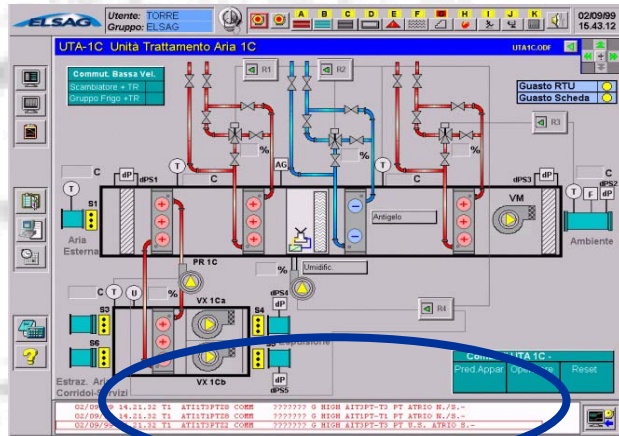


ISPHAN - Two main investigation fields:





- **Real-time 3D medical ultrasound imaging**
 - ◆ Real-time 3-D image generation
 - ◆ Image enhancement
 - ◆ 3D visualization and navigation
- **Secure management of medical information**
 - ❖ Reliability and security technologies
 - ❖ Data organization and access
 - ❖ **Wearable computing systems**
 - ➔ **Specialized for the hospital environment**
 - ➔ **Including wearable terminal, patients sensors, interfaces, management software, integrated communication system**

Innovative contents:

1. 4D-Echographic Imaging
2. Enhancement of eco-graphic images
3. Hospital area Web Info Management & Security
4. Robotized systems for rehabilitation



.....then let's take a look to
**4 Pre-Competitive Development projects for SME's
related to the OCOVA meeting topics:**

-  **Access and Parking Control in Urban Areas**
-  **Infopoint**
-  **Traceability of Blood Bags**
-  **Wireless Sensor Networks Platform**

Access and Parking Control in Urban Areas (1/2)

Aim of the project:

Defining an innovative system for controlling vehicle access and parking in urban area.

This will be obtained through:

- ◆ Performing a state of the art analysis of the most recent technologies for Intelligent Transport Systems.
- ◆ Designing and prototyping an automated gate with:
 - low environmental impact,
 - harmonized with the rest of the area (historical centre etc.),
 - easy installation and maintenance.
- ◆ Designing and prototyping a multifunctional totem for users capable of:
 - releasing tickets for occasional or time limited access
 - communicating data to a centre
- ◆ Winning technologies: Dedicated Short Range Communication, R.F.Id.

Access and Parking Control in Urban Areas (2/2)

Proposers:

Aitek S.p.A.
Selesta Ingegneria S.p.A.
NIS S.r.l.
Gruppo Sigla S.r.l.
Imavis S.r.l.

Executors:

Softeco Sismat S.p.A.
University of Genova - D.I.S.T.
University of Genova - D.I.E.

Contact:

Marco Boero - marco.boero@softeco.it



Infopoint (1/2)

Aim of the project:

- ◆ developing an innovative GPS based system for delivery of multimedia information.

This will be obtained through:

- ◆ Integrating a content management software capable of delivering information based on the geographic position of the terminal.
- ◆ Contents delivery will be personalized through R.F. identification of users
- ◆ Contents could also be downloaded through N.F.C. technology
- ◆ Winning technologies: R.F.Id., N.F.C.

Infopoint (2/2)

Proposers:

- CAP S.p.A.
- FOS S.p.A.
- NIS S.r.l.

Executors:

- Aitek S.p.A.
- University of Genova – D.I.B.E.

Contact:

Paolo Questa – paolo.questa@aitek.it



Traceability of Blood Bags (1/2)

Aim of the project:

- ◆ minimizing errors in transfusion centers by developing an innovative system for tracking blood bags and controlling environmental parameters.

This will be obtained through:

- ◆ Introducing R.F.Id. technology coupled to other sensors capable of acquiring basic environmental measures (i.e. temperature) into the transfusional process
- ◆ Integrating this information into hospital data networks and information systems through standard communication protocols
- ◆ Winning technologies: R.F.Id.

Traceability of Blood Bags (2/2)

Proposers:

- Aitek S.p.A.
- Mediteck S.r.l..
- SI.GE.CO. S.r.l.

Executors:

- CAP S.p.A.
- FOS S.p.A.
- Montalbano Technologies S.p.A.
- University of Genova - D.I.S.T.

Contact:

Marco Ferrando - ferrando@cap.it



Wireless Sensor Networks Platform (1/2)

- ◆ The Wireless Sensor Networks domain aims to transform a real complex environment in a System: **sensitive, connected, intelligent, reactive.**
- ◆ The project is investigating the state of art of WSN in order to define the best industrial scenarios and applications for the next years.
- ◆ As result of this step of research, a new prototype of HW/SW platform will be implemented and tested in a real situations.
- ◆ The project is developed within the new **WISELAB Laboratory**, dedicated to the applied research in the field of WSN and RFID technologies.



Wireless Sensor Networks Platform (1/2)

Proposers:

- Aitek S.p.A.
- TP S.r.l.
- SI.GE.CO. S.r.l.

Executors:

- HG
- FOS S.p.A.
- University of Genova - DIBE

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...and now, work in progress...

