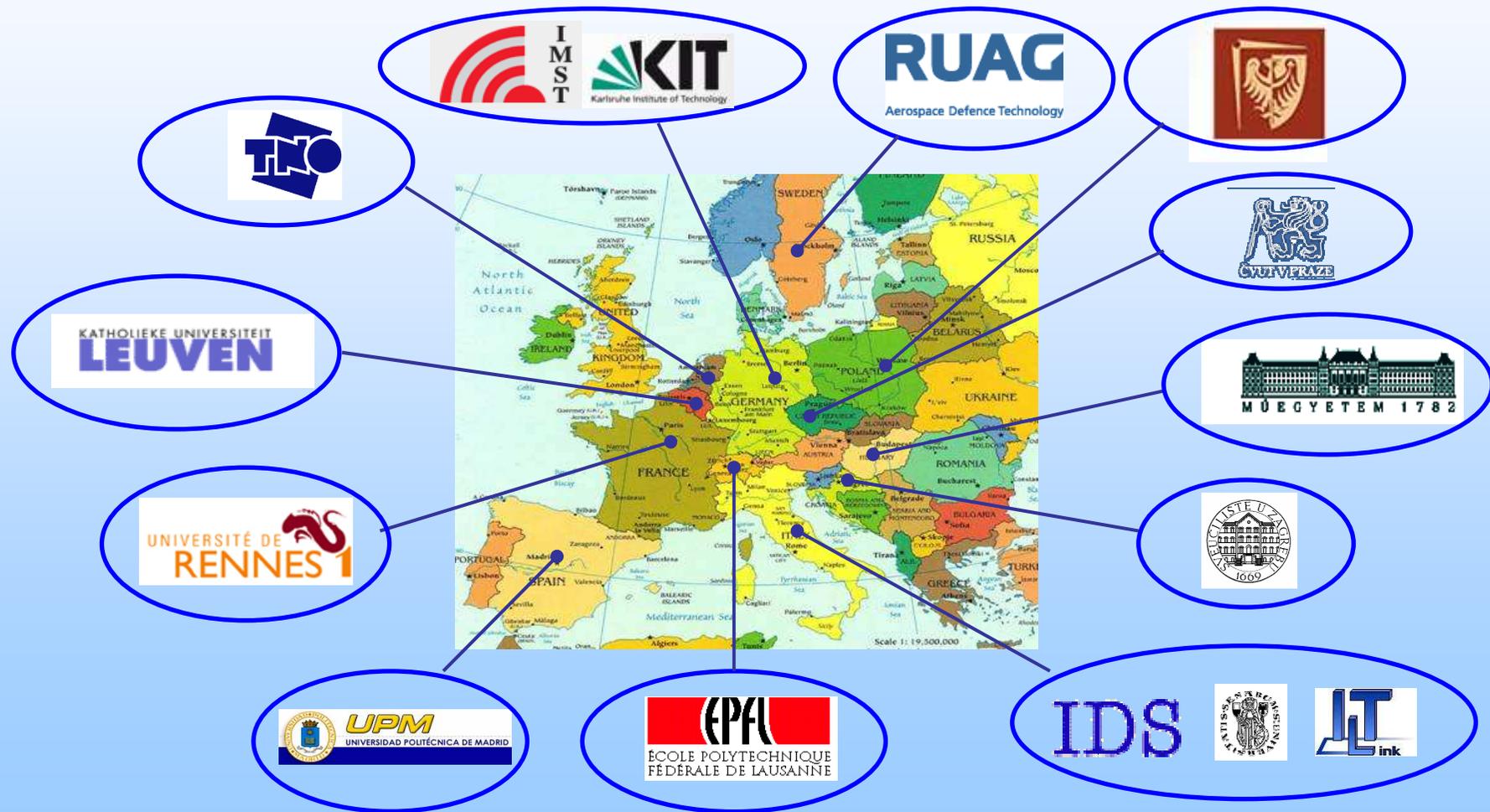

CARE

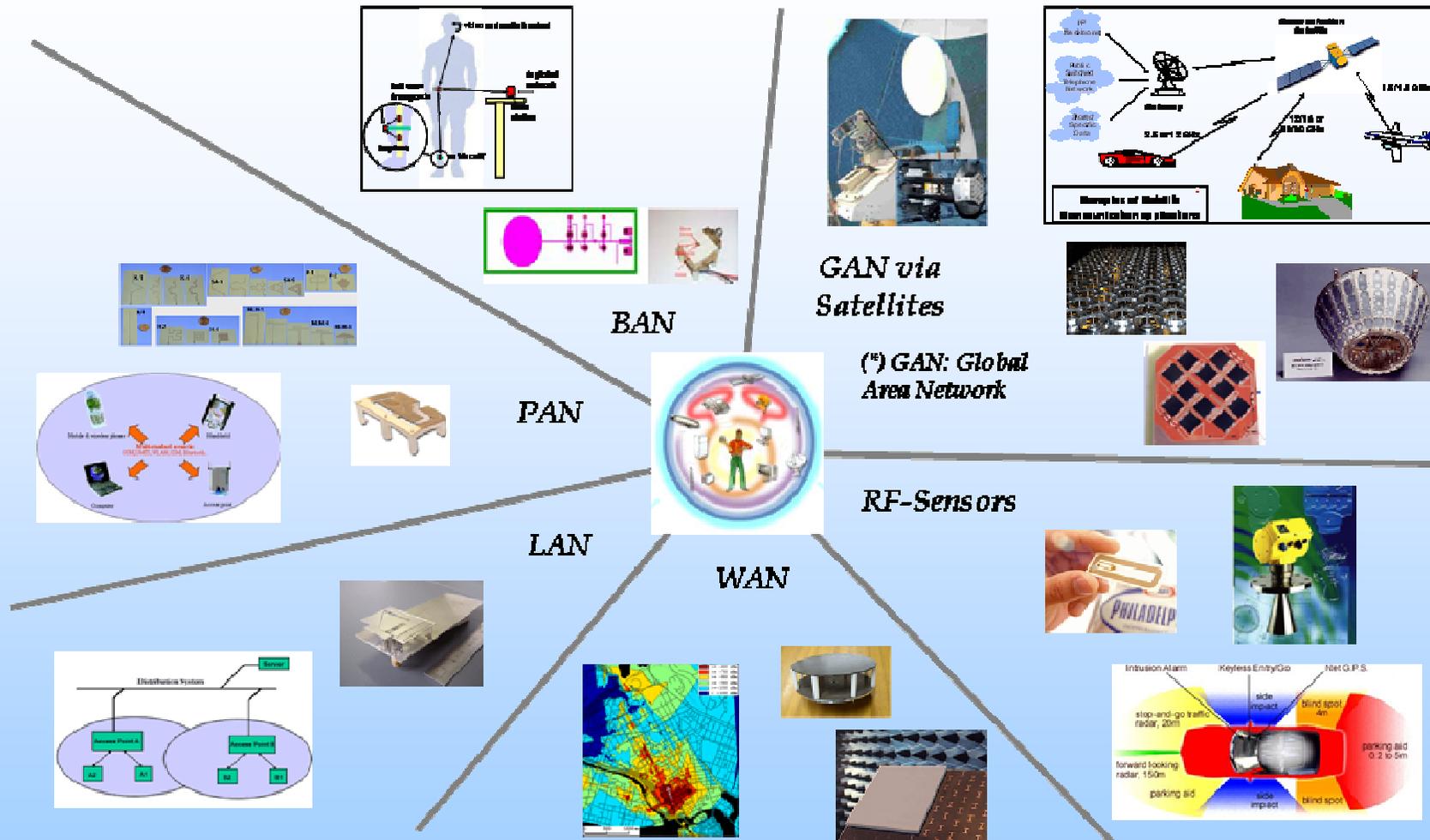
Coordinating the Antenna Research in Europe

Overview

Dr. Bruno Casali
IDS – Ingegneria dei Sistemi spa
E-mail b.casali@ids-spa.it

The CARE Consortium includes 15 European Organisations, at top level of excellence in antenna research, from 12 European countries.





Complex antenna subsystems are expected to enable the future applications in Communications, Transport, eHealth, Environments, etc.

CARE aims at reinforcing the collaboration among the European Institutions involved in antenna research. This pan-European effort, focused on the *New Member States*, aims at improving the European excellence by providing:

- 1) **researchers secondments**
- 2) **international workshops**
- 3) **training courses**
- 4) **dissemination, by conferences and Internet.**

The CARE funding will also support the dissemination of the results within the enlarged Europe, in close cooperation with the European Association on Antennas and Propagation (see www.EurAAP.org).

CARE funds the mobility of the European antenna researchers.

How to apply?

Candidates application procedure

Researchers that would like to apply for a CARE secondment must fill the CARE Secondment Application Form and to send it by email to the CARE Secondment Responsible, with copy to the Coordinator.

Hosting application procedure

Institutions that are interested in hosting the CARE secondees must fill the CARE Host Application Form and send it by email to the CARE Secondment Responsible, with copy to the Coordinator.

What happens after the application?

Under the supervision of the CARE Secondment Responsible, all applications will be triaged against pre-defined eligibility criteria and the final decisions for funding will be made based on the evaluation of CARE and the hosting Institution.

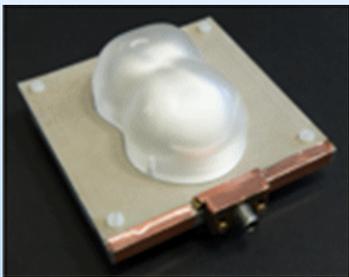
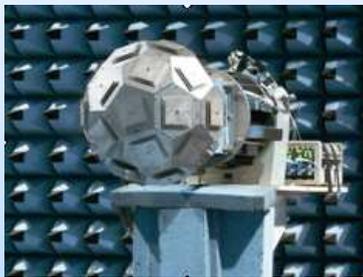
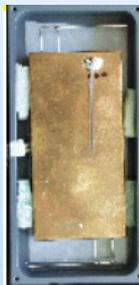
Once the secondment is accepted, the CARE Grant Officialisation Form will be sent to the selected applicant in order to inform him/her about the successful result of his/her application.

Then details about logistic aspects will then be fixed between the Secondee and the Tutor, appointed by the Hosting Institution.

What happens at the end of the secondment period?

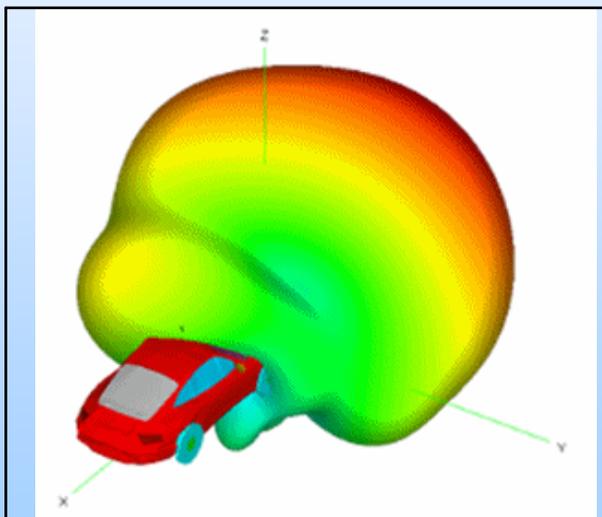
At the end of the secondment period the secondee has to fill the CARE Secondment Report Form, in order to present the results of the hosted activity.

The WP1 coordinates the European excellence provided by the **Antenna Experts Groups (AEGs)** in:

<i>MM & Sub-MM Wave Antennas</i>	<i>Small Antenna & Sensors Antennas</i>	<i>Wideband Antennas</i>	<i>Array Antennas</i>	<i>Smart Antennas</i>
				
<i>Shaped lens for space applications at 26 GHz(UR1).</i>	<i>Cochlear implant for hearing aids (IMST)</i>	<i>Miniaturised ultra-wideband antenna for handheld devices (KIT)</i>	<i>Prototype of an electronically steerable satcom antenna for boats and ships (IMST)</i>	<i>Antenna configuration for MIMO handsets (KIT)</i>

and is focused on the transfer of knowledge towards researchers in Academia and Industry, by **offering researchers secondments and visits.**

In **WP2**, the **Antennas Best Practices Groups** will provide the software tools to easily assemble complex antenna simulation and will distribute the state-of-the-art antennas measurement procedures able to guarantee the highest level of quality in indoor and outdoor Test Field.



*Obstacle radar antenna pattern
(KIT)*



*Measurement of radiometer antenna system
for ESA's Soil Moisture and Ocean Salinity
mission at the DTU-ESA Spherical Near-
Field Antenna Test Facility*

In **WP3**, three **CARE workshop** will be organised (in 2010, 2011 and 2012) to present the latest R&D results achieved by the CARE secondment. These workshops will be joined with the major conference in Europe on antennas: the European Conference on Antenna&Propagation (EuCAP), see www.EuCAP2010.org.



EuCAP2006



EuCAP2007



EuCAP2009



EuCAP2010



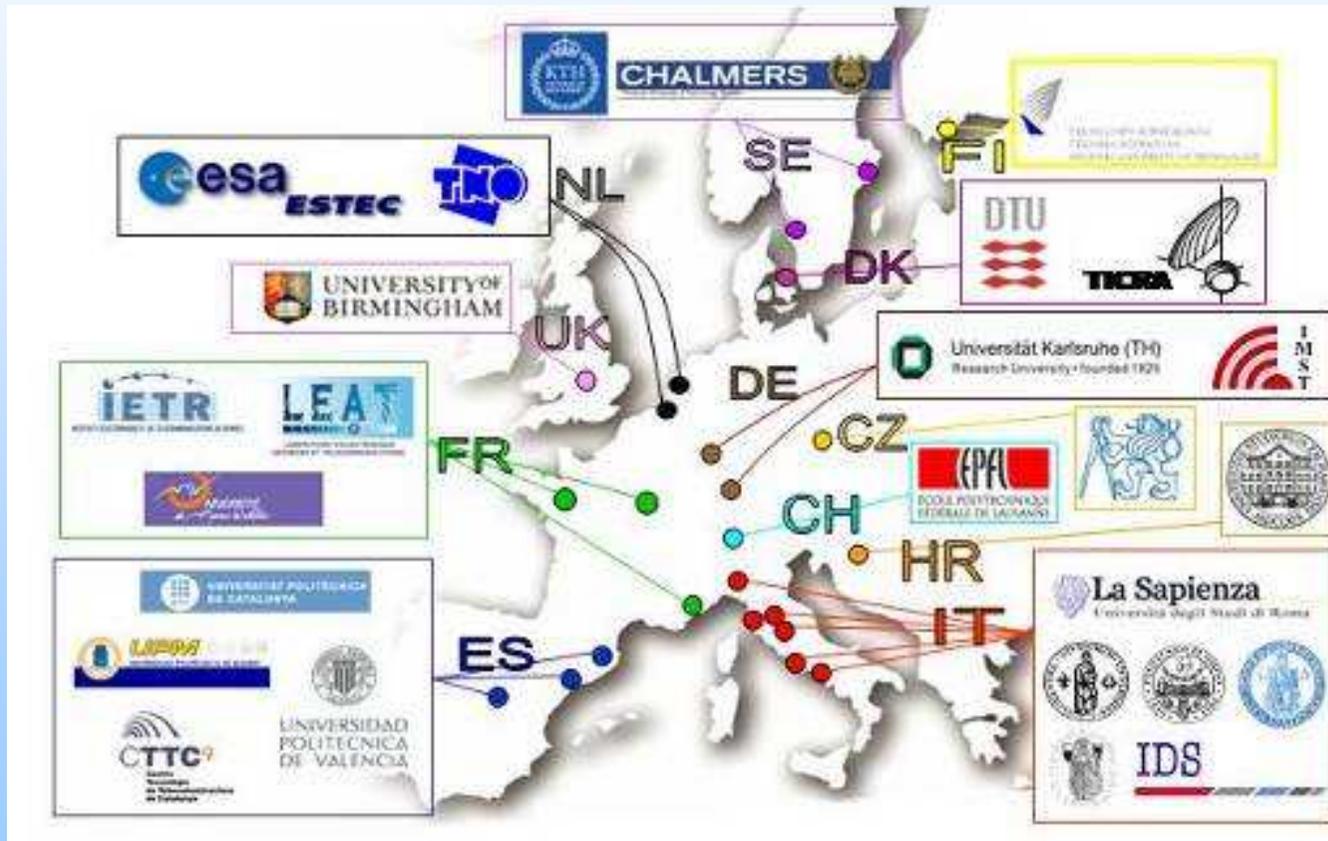
EuCAP2011

The Antennas VCE portal will host the CARE website, where the project will be presented on the web towards the scientific community and the public.

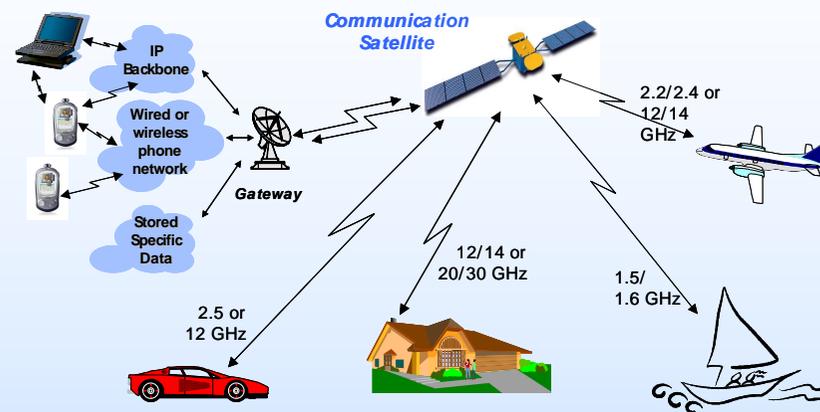


CARE is reachable at www.care-ict.eu

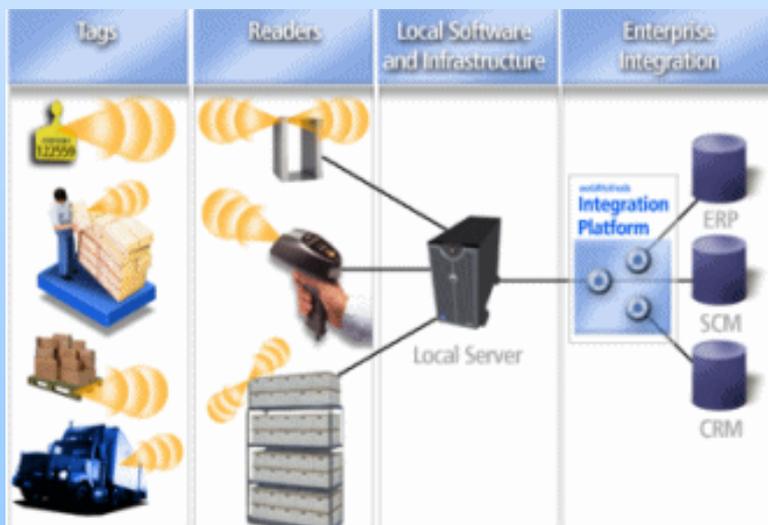
In WP5, the ESoA initiative (see figure) will be supported by the contributions of IMST, KIT, IDS, CTU, TNO, UNISI, UPM and EPFL.



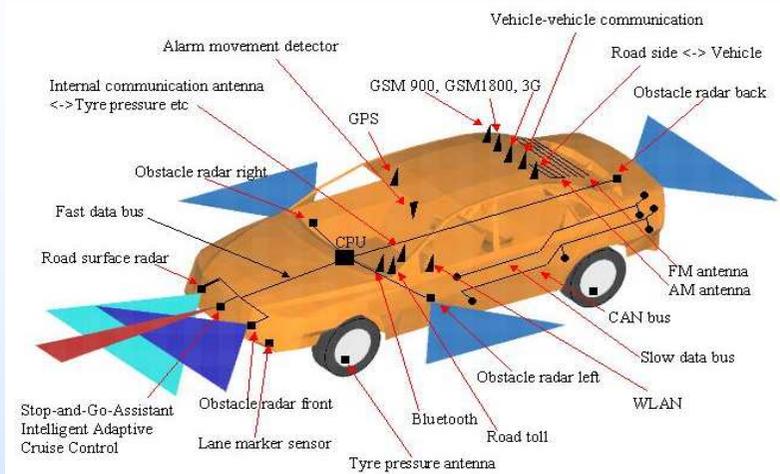
In satellite communication there is a strong need to reconfigure Ku-band coverages, EIRP and polarisation in orbit. Conventional technologies are too expensive and heavy and new, flexible but simple and lightweight technologies are needed.



Satellite communication systems

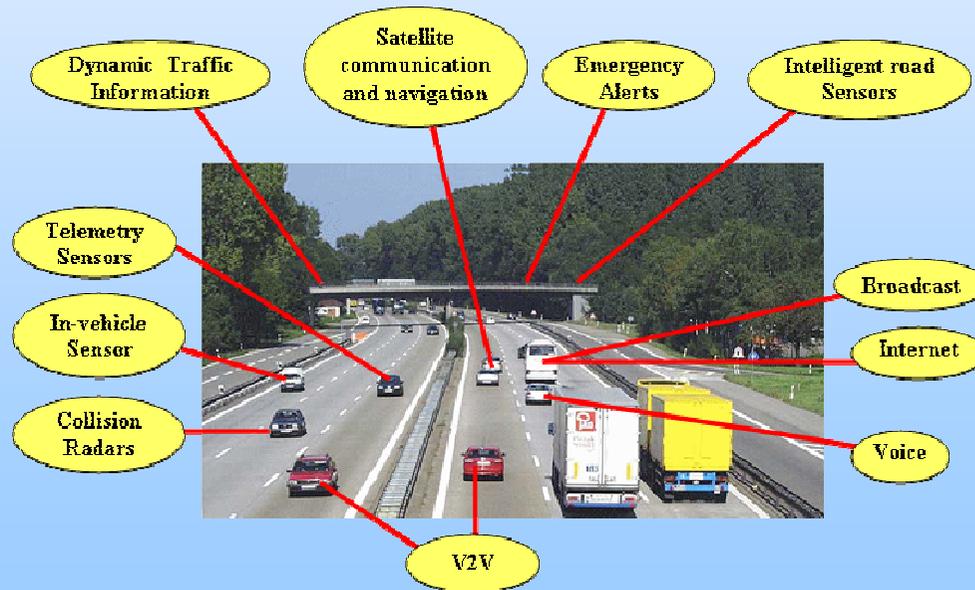


Wireless communications based on RFID and Smart Tags are expected to improve the quality of the manufacturing processes by tracing the assembling and delivery during the entire product lifecycle.

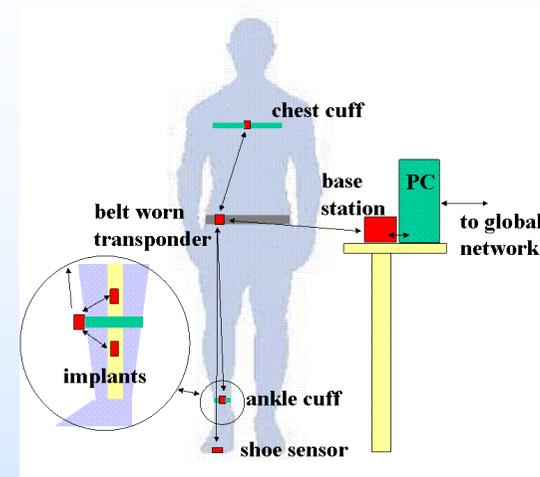


Advanced antenna technologies need to be faced in order to satisfy novel requirements in the sensors expected in the Intelligent Car Initiative

Complex antenna subsystems are expected to link the future transport infrastructure, for improved safety, higher transport system efficiency, reliable information to drivers, etc.



Wireless sensors can be used to measure critical parameters like heart rate, oxygen saturation, arterial blood pressure, electrocardiogram (ECG), breath rate, skin temperature, respiration and glucose or patient position and activity.



Body centric communications supporting medical systems.



A key application is the tracing of the animals by wireless sensors. Studies about migration paths and other behaviour are strongly supported by data transmitted by wireless sensors carried by moving animals.