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Per informazioni contattare: "Vincenzo Angrisani" - angrisani@apre.it

Reference n.: **ICT-PT-SMCP-1**

Deadline: **23/10/2007**

Programme: **ICT**

Project Title: Intention recognition in human-machine interaction systems

Financial Scheme: Medium small

Description: Intention recognition is defined as the process of becoming aware of the intention of some agent. It can be technically defined, as the problem of inferring an agent's intention through its actions and their effects in the environment. It lies accordingly in the boundary between perception and cognition. It is generally not required that the agent whose intention is being recognized, has any explicit intent. We describe an intention recognition approach that relies on four-level decomposition of intentional behavior: intention, desired state, action and state.
The first two levels constitute the classical intentional level. The desired state, either represented explicitly or implicitly, is the final result of the cognitive and planning process and is seen as its output. The actions are selected to achieve the desired states. We make the inference using dynamic Bayesian Networks. Here, the intentions are represented by top nodes, and the result of the intentional deliberations is a desired state.
This area can be widely applied in both human-robot interaction and ambient living systems.
For example, a human operator can command robotic wheelchair with extended perceptual and actuating capabilities. The wheelchair senses the environment and tries to move autonomously, but also comply with the human commands. Without recognizing the intentions of the human, the wheelchair can behave in a less-cooperating and a morefrustrating way. It is impractical and annoying to ask the human operator for his intentions explicitly, by speech or through other interfaces. It is favorable that the wheelchair itself infers the actions (commands or their effects) of the human, into intentions. There are other applications of intelligent intention recognition in the human-machine interaction: intelligent car interfaces, training machines, disable-people tools, home appliances etc.

Organisation Type: Università

Partner Sought: Partner (or coordinator) that works in cognitive robotics, and/or Human-machine interaction.
Machine learning and knowledge technology are also welcomed.
Country:
ÖSTERREICH, DEUTSCHLAND, DANMARK, ESPAÑA, SUOMI/FINLAND, FRANCE, HELLAS, ITALIA, NEDERLAND, POLSKA, SVERIGE, SLOVENIJA, UNITED KINGDOM

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Riferimento: **ICT-EU-SMCP-2**

Data Scadenza: **05/03/2008**

Programma: **ICT**

Titolo: Integrated information system aimed at preventing citizens from consuming products with high risks for their health state>

Tipo Progetto: Collaborativo

Descrizione: The project proposes the implementation of an integrated information system through which the consumer is warned about the harmful effects that food products or any other type of products he he buys could have upon his\her health. Based on the knowledge about the chronic illnesses, diseases and allergies that the consumer suffers from, this system is aimed at reducing the risks of worsening the medical condition of the citizens. With the full support of the Food Chemistry Institute and of the Faculty of Medicine and Pharmaceutics in Romania we have started in constructing a large data base designed to store the necessary amount of data that describes the chemical content and composition of a wide variety of food, pharmaceutical and cosmetic products. This data base will also contain the side effects for consumer health as a result of using this products. Another key element of the project is the design of a different data base aimed at storing the unique id code and personal medical data of any particular user. The result of this project will be a network distributed system, with fully automated check points set throughout a large number of supermarkets and general stores all connected to a main central server. The system users will be provided with a set of special electronic cards based on NFC technology (Near Field Communication)which will facilitate user identification based on the unique id. The check points will have electronic smart card readers which integrated with the rest of the equipment will guarantee user identification. Also the check points will provide bar code readers that will allow the system to identify any particular product that the customer wants to buy. By cross reference between the two data bases described before the system will automatically warn the customer with regard to any desired products unsafe for his\her state of health.

Tipo Ente: Centro di Ricerca

Partner richiesto: Advanced ICT for risk assessment and patient safety
Partners with expertise in:
Bar codes and RFID technologies
NFC (Near Field Communication)
Contactless card technology
Database development
Web-based applications development
Medicine and Pharmaceutics
Both R&Ds and SMEs are sought.

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Reference n.: **ICT-EU-SMCP-4**

Deadline: **15/11/2007**

Programme: **ICT SEC**

Project Title: Real Time Location Framework for First Responders

Financial Scheme:

Description: Nowadays, first responders plan rescue missions and define action plans based on critical and accurate information about who, where and when things happen.
Whenever an emergency happens (e.g. fire, earthquake, hurricane, robbery, terrorism attempt), the demand for information increases. Unfortunately, the availability of information systems tends to diminish every time an organization has to deal with a critical situation, as for example when power supplies and/or communications collapse or communications are purposely cut off.
First responders such as the police, medical teams or fire fighters don't usually have access to key information that is kept on the information systems run by the organizations in need of help. This lack of information increases response time and reduces the efficiency of rescue missions, where most of the times the failure is measured in "number of lives lost".
SecureISNow believes that there is a way to make this extremely valuable information available for the rescue forces using both standard solutions and novel technologies.
SecureISNow aims to provide organizations a Location-Based Services Framework (LBS Framework) that will allow first responders to seamlessly connect and process accurate information about the location and state of people, critical equipment and dangerous materials inside the organization facilities immediately before the emergency situation happens and/or when the emergency is happening.
SecureISNow proposes to develop a platform solution that allows different kinds of organizations and first responders to build specific software tools that use the information available from the LBS Framework installed in each organization. Different tools can be developed according the specific function and mission of certain rescue forces.
The LBS Framework is set on a service-based architecture with redundancy mechanisms, in order to assure the availability of the LBS Framework on day-to-day organization activities as well on emergency and critical situations where systems collapse.
The LBS Framework is set on a service-based architecture with redundancy mechanisms, in order to assure the availability of the LBS Framework on day-to-day organization activities as well on emergency and critical situations where systems collapse.
In order to provide flexibility, LBS Framework aims to operate based on several standard and widespread technologies such as Wi-Fi, RFID, GPS or Galileo and GSM/GPRS. This flexibility will allow the selection of what technologies should and can be adopted according to the working environment, context and dimensions of the organization facilities.
Possible Scenario
Imagine a fire in a 10 floor building. The energy supply and communications collapse. When the fire fighters arrive at the building, they can use their PDA or Laptop PC to connect to the LBS Framework of that specific building and find out the number of people that were inside when the fire started, as well as their location. They can also find out which sectors of the building contain dangerous materials (e.g. explosives, gas, chemicals).
With the correct tools the rescue forces can get an accurate overview of the emergency scenario not only when planning the mission, but also during the mission

itself. This kind of information may leverage the success of rescue missions – Saving Lives.
Organisation Type: Impresa

Partner Sought: RFID Reader Development (Research and Development) WI-FI Portable Tag Miniaturization (Research and Development) First Responder Institution (Demonstration) Critical Infrastructure Organization (Demonstration)

SME x Research
x Technology Transfer>

Reference n.: **ICT-IT-SMCP-5**

Deadline: **15/11/2007**

Programme:

Project Title: Modular, interacting Actuator-Sensor Systems by Automation of Design and Implementation

Financial Scheme:

Description: The focus of this project is on miniaturising of the electrochemomechanical actuators, based on carbon-nanotube material (CNT) and integration into microsystems.
The modular and distributed structure of the system will be controlled by in field reconfiguration of the components and by a computer-aided design automation tool. The complexity of the system design will be got under control by a customized and application specific approach on a high abstraction level.
The new microsystems will require miniaturised sensors and energy converters for autarkic operation. The communication between the system components will be realized using wireless network technology.

Organisation Type: Centro di Ricerca

Partner Sought: unspecified