Deployed sensor network premises in WBC centres will be used not only for research and education activities, but for knowledge dissemination as well. Demos/proofs of the concept of the use cases selected for each WBC centre will be presented to the local research and industrial community and general public at one-day presentations of the sensor facilities in both WBC centres. Broader demonstration and dissemination of the novel sensor premises will be given at the summer schools.

WSN Award

An award schema will be established to recognize significant achievements of students and young researchers in the wireless sensor networking research field in the WBC region. It is planned to have two types of awards: one for undergraduate students and one for postgraduate (PhD) students. Projects submitted by students (undergraduate and PhD) from any WBC based organization will be allowed to participate. Candidates are expected to submit an extended summary of their work describing the project, the main research ideas and the results. The Prosense project will evaluate all submissions and will select the winners based on the novelty of work, the technical depth and the presentation style.

Joint PhD studies

The goal of this task is to enhance research collaboration between project partners, particularly between the WBC and the EU centres. A shared student supervision is envisaged as well as undertaking of research tasks and assignments in research organizations involved. It is planned to include at least 3 PhD students into the programme during the project. The collaboration agreements will stay in place after the end of the project.

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ProSense

Promote, Mobilize, Reinforce and Integrate Wireless Sensor Networking Research and Researchers: Towards Pervasive Networking of West Balkan Countries and the EU

(March 2008 – February 2010)

SEVENTH FRAMEWORK PROGRAMME

THEME Cooperation
REGPOT-2007-3-01
Grant agreement no.: 205494

The overall objective of the ProSense project is to improve the research potential and capability of research centres in Skopje (FEEIT) and Belgrade (ETF) and to develop them into wireless sensor networking centres of excellence capable of driving the research agenda and serving as a seed for development of other similar centres in the region. Two use cases, one for each WBC centre, have been selected as particularly interesting and beneficial for the WBC region:

- Personal health monitoring systems (including systems for support of independent living) and
- Emergency/disaster recovery applications.

Objectives

1. Improve the wireless sensor networking research capacity and capability of two selected West Balkan Countries (WBC) centres of excellence, Belgrade and Skopje, in terms of scientific and technical human resources and S&T infrastructure to enable them to drive and actively contribute to this research field.
2. Promote and reinforce researchers and research institutions from the EU's convergence regions.
3. Build a sustainable cooperation framework to support continuous collaboration in the wireless sensor networking research field between research institutions based in the WBC, the EU's convergence regions and Member States, particularly under the FP7 framework.
4. Establish means for closer collaborations of the WBC research centres and researchers from the WBC region that have left the region, to prevent brain drain and support brain gain.
5. Disseminate economic and social benefits of potential key applications for the region and identify newly accessible market niches within the EU and WB countries to generate interest and opportunities for the local industry and particularly SMEs.

Workshops and Seminars

Four **research workshops** are planned, one every six months, in Dublin, Santorini, Belgrade and Skopje. Researchers and PhD students from project member institutions and selected external parties will participate. Topics covered at workshops include hands-on development (for example Mote programming, Mobile sensor API and J2ME development for sensors), RFID, WSN based applications: requirements and experiences from the field, as well as special themes (like health applications etc).

Two **seminars** will be held during the project, one each year. Leading WSN researchers from academia and industry will be invited to give tutorials and present the latest advancements and issues in the field. Researchers from the project member institutions will present the activities in their respective institutions and research results thus giving them opportunity to raise their research profile and network with a larger group of researchers. Other WSN researchers from the WBC region and the EU's convergence and outermost regions will be also invited to present their work thus spreading the impacts of the project and providing additional collaboration opportunities. The seminars will be open to general public and will be held in two WBC countries, Serbia and FYROM. They will be organized in conjunction with other major research events, like well established national and regional conferences. Significant attention will be given to the media coverage of these seminars. Also, local government and targets potentially interested in results of improved research centres will be invited to participate in the seminars. The first ProSense Research Seminar will be held together with the PhD-NOW workshop at the Ad Hoc – NOW '08 Conference in France, while another Research Seminar is planned for 2009 in Ljubljana, colocating with the joint workshop with JSI.

Summer Schools

Two "Senzations" summer schools will be held, one each year in Ljubljana and Ohrid. Although targeted audience are primarily young researchers and PhD students from the project member institutions, researchers and students from other organizations and from European countries in general are very welcome. The schools will provide a mix of hands-on and theoretical classes. Time will be allocated for students to present their work and get feedback from their peers and lecturers in an interactive manner.

Special Sessions

The goal is to establish wireless sensor networking as a standard topic on conference agendas of WBC and EU convergence and outermost regions national and regional conferences. To achieve that, at least three special sessions on selected wireless sensor networking topics will be organized as a part of well established national and regional conferences. In particular, ProSense Special Sessions will be held together with the DCOSS '08 and Telfor '08 conferences, in Greece and Serbia respectively, as well as in Poland during 2009.

Sensor Networks Deployment

The **WBC centre in Skopje** targets an actual implementation of a sensor network test bed aimed at monitoring potentially emergent situations and responding accordingly. In addition, the test bed will be enhanced with a web interface providing remote access and management of emergency situations. The new equipment will be used for research and educational activities (undergraduate and postgraduate).

The **research centre in Belgrade** will focus on a smart environment capable of monitoring activities and health of its inhabitants, including a web interface for remote caregivers to monitor the status of the inhabitants.

The deployed sensor networks in the WBC centres will be interconnected with the existing sensor networks in the labs of other partners, via **an overlay network**. This will create an extensive deployment of collaborative sensor networks spreading across the EU and WBC that will open up new research challenges.