PROJECT SHOWCASE
EUREKA PROJECT > ITEA RECONSURVE

CANADA'S RESEARCH COUNCIL AND EUREKA JOIN FORCES

REDUCING FRAGMENTATION IN MARITIME SURVEILLANCE SYSTEMS

The September 11 attacks led to a sharp rise in the global surveillance and security market, which has grown five-fold in 10 years and is forecast to double again by 2018. Now, a Turkish-led consortium is focussing on improving maritime security with a cost-effective approach to wide-area sea-border surveillance. The project will particularly reduce the number of illegal immigrants crossing sea borders in small boats.

RECONSURVE, an international R&D project under the EUREKA ITEA2 Cluster, is developing an open interoperable maritime surveillance framework with multimodal sensor networks and an automated decision-making and support system. It will replace the current fragmented systems across Europe.

All these fragmented systems fail to talk to each other and a key objective of RECONSURVE is therefore to achieve interoperability. 'We are trying to develop interoperability standardisation in this area so that existing systems can share information,' explains project leader Cengiz Erba of Turkish defence electronics company Aselsan. Outcomes will include improved small vessel detection and classification capabilities and cost-effective wide-area surveillance.

Working with coast guards

'We started at the beginning of 2011,' he says. 'In the first 10 months, we worked closely with the Turkish Coast Guard Command to gather end-user requirements. We appreciate their active support, which enabled us to develop an operational and functional view document, including the specification of abnormal behaviours within an area.' This view extended the usual statistical approach with the Turkish Coast Guards' expert knowledge of suspicious vessel criteria.

The RECONSURVE project is not trying to develop yet another surveillance system, but rather creating interfaces between existing systems across domains and borders through an interoperability framework.

This framework will establish a secure cross-domain network to meet ever-increasing requirements to provide a common and recognised picture. Major activities include: integrating unmanned aerial vehicles (UAVs) with surveillance systems; developing situational awareness; interoperability; integration and validation. To accomplish all this, RECONSURVE is tackling a number of scientific and technical challenges, such as integrating UAVs and sonar sensor networks to command control. It will also provide semantic interoperability to enable different surveillance systems to cooperate by sharing information.

Scalable solutions

'We have a clear focus on improving sea border surveillance by developing scalable, reliable and cost-effective

solutions to identify illegal activities without hindering the flow of legitimate vessel traffic,' says Erba . 'The use of our results will dramatically improve the effectiveness of maritime surveillance, specifically for monitoring non-reporting vessels, and will reduce the costs of deploying such systems.'

Illegal immigration networks have an estimated market of some 4 billion euro annually. This project will make it more difficult for illegal networks to operate across sea borders and will thus contribute to the fight against such networks. The costs that European economies incur to deal with illegal immigration could then be reduced.

RECONSURVE will also help make search and rescue operations more successful through early detection of boats in trouble.

Technological progress

RECONSURVE has already made progress with technological developments, specifically related to image processing, interoperability, command and control. 'We specified the system interfaces for sensor data processing and created databases for virtual two-dimensional (2D) infra-red (IR) image and a real IR image,' explains Erba.

More information at
www.reconsurve.eu
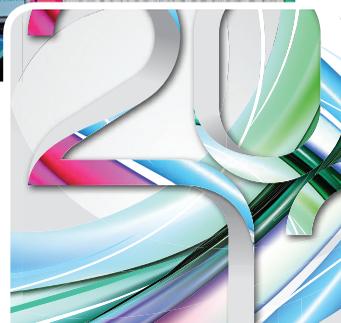
ITEA 3 - the new Cluster on software-intensive systems and services receives EUREKA label

During the EUREKA High Level Group (HLG) meeting in Budapest on 20 June, the EUREKA HLG approved the successor of the ITEA 2 Cluster: ITEA 3. After an introductory presentation by ITEA 2 Chairman Rudolf Haggenmüller and very warm and supportive reactions from the EUREKA member countries, the label for ITEA 3 was officially awarded.

Canadian and European companies can gain more access to international markets thanks to a new association between Canada and EUREKA. In an agreement signed last June in Budapest, the National Research Council of Canada (NRC) has been designated the country's National Project Coordinator office for EUREKA. The NRC is the Government of Canada's premier organisation for research and development. Similar to that of EUREKA, the NRC's mission is to partner with industry to take research results from the lab to the marketplace, where society at large can benefit from the innovative technologies developed, as well as bringing financial rewards to the organisations involved. Each year, the NRC works with thousands of Canadian firms to help them achieve their business goals.

'Our government's top priority is the economy—creating jobs, growth and long-term prosperity for Canadian workers, businesses and families,' said Gary Goodyear, Canadian Minister of State for Science and Technology. 'Through our participation with EUREKA , Canadian companies will be better positioned to access international markets and accelerate technology development leading to commercialisation.'

For small and medium-sized enterprises, the NRC Industrial Research Assistance Programme will play a key role in advising, partnering and supporting companies, as well as providing funding where appropriate. The goal is to secure networking opportunities between Canadian and European firms, to build joint research and development projects, and gain access to international markets.

'EUREKA welcomes Canada as an associated country,' said Zoltan Cséfalvay, the Hungarian Minister of State for National Economy who signed the agreement on behalf of EUREKA. 'We expect this association to result in the development of mutually beneficial,

innovative R&D projects. It will strengthen the competitiveness of both European and Canadian economies.'

Canada's EUREKA National Office will provide Canadian innovators with a single contact point for EUREKA. Through its network of partners, the National Office will facilitate the start-up and operation of EUREKA projects and lead companies through their next stages of development.

EUREKA welcomes in its international team John McDougall, High Level Group Representative (HLR) for Canada, Melanie Cullins, Canadian National Project Coordinator (NPC) as well as William Dobson, who will be Canada's National Point of Contact for SMEs wishing to participate in EUREKA, and Kelly Thompson, Program Officer.

More information at
www.nrc-cnrc.gc.ca/EUREKA
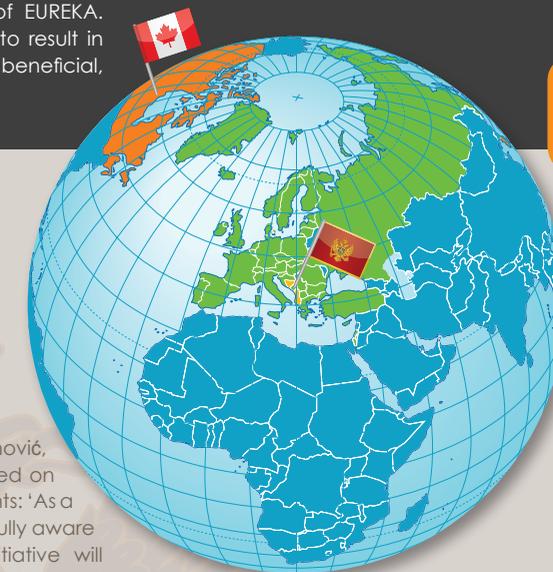
MONTENEGRO BECOMES EUREKA'S NEWEST MEMBER COUNTRY

Montenegro became in June 2012 the 41st full member of EUREKA: an extraordinary step for Montenegrin research, opening new possibilities for the development of the country's economy - connecting its 1130 researchers to their counterparts in the whole of Europe. The management of EUREKA activities in Montenegro has been assigned directly to the Montenegrin Ministry of Science, demonstrating commitment at the highest level for the young nation to be an integrated and active member of the network.

Minister of Science Sanja Vlahović, in a recent interview published on the EUREKA website, comments: 'As a rather small country, we are fully aware that joining the EUREKA initiative will contribute greatly to the development of innovation in Montenegro. Our funds, although steadily increasing, are still not sufficient to support the strategic and infrastructural projects, necessary to raise the profile of our research institutions.' It is therefore important to open possibilities for researchers to access international funds for their R&D projects,' the Minister adds. A high participation rate in the Eurostars Programme is one of the Ministry's priorities.

Ivana Lagator from the Montenegrin Science Ministry is EUREKA National Project Coordinator (NPC), while Darko Petrusic will be High Level Representative (HLG) of the country.

DARKO PETRUSIC
EUREKA MONTENEGRIN HLR

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