

RoboCom Flagship: More than Future

A large scale European initiative to create robots that will co-exist and work together with humans

Genoa, 6th November 2012 - A hugely important EU program is coming down to the wire and may carry within it the seeds of the future. In the beginning of the next year the European Commission is expected to assign funding of up to €1 billion each - under the Future and Emerging Technologies (FET) Flagship initiative - to support two vast and highly innovative research projects over the next decade. These projects are intended to change the face of European science, opening entirely new avenues of technological innovation, economic competitiveness and generating novel benefits for society. After pre-selection among 26 projects, six survived the cut and are competing for the grants.

RoboCom, which stands for Robot Companions for Citizens, proposes a new technology that enables sustainable welfare. European welfare is challenged in a range of domains: personal, social, economic, urban and environmental. Major factors behind these challenges are the demographic shift in our population and the increasingly global economic competition.

The RoboCom FET-Flagship initiative will deliver a transformative technology resulting in a novel sustainable welfare: Robot Companions (RCs) that are safe, social, sustainable, skilled and sentient, meanwhile being affordable. The robots of today are unable to operate effectively in complex human and natural environments. RoboCom proposes to overcome the current technology bottlenecks by capitalizing on our growing understanding of the most advanced behaving and social “machines” we know: animals. Biological systems, including ourselves, have in fact solved many of the problems contemporary robots face and a new kind of robotics based on similar biological principles will overcome these bottlenecks. Through understanding the natural principles underlying animal bodies, brains and minds, and their integration in complete organisms, RoboCom will instantiate an integrated multi-disciplinary federated effort and synthesize RCs both as a technology and as a validation of new scientific theories.

RCs will be realised through five dedicated platforms, each capturing complementary aspects of the challenge of sustainable welfare: from search and rescue to human assistance. Finally, RoboCom will assure the responsible deployment and uptake in society of RCs through a proactive ethics, legal, Open Science and Social Innovation model, and will establish European leadership in their future industrial development.

Neelie Kroes, European Commission Vice-President, announced the finalists of the Flagship competition last year in Budapest by saying that the aim is to produce: “successes that will be remembered, not just for today, but for a lifetime”. This is exactly what RoboCom delivers through its tight and synergistic coupling of science, technology and society.

The consortium comprises 73 partners from 24 European and other collaborating countries including the leading research centers of science and technology. This trans-disciplinary team of about one thousand European scientists has been brought together in this enormous undertaking, coordinated by the Genoa-based Istituto Italiano di Tecnologia (IIT). The scientific coordinator is Paolo Dario, Professor of robotics at Scuola Superiore Sant’Anna and senior scientist at IIT.

RoboCom is unique by addressing pressing societal challenges through an unprecedented scientific effort that culminates in a revolutionary technology that will provide assistance to humans in the real world: Robot Companion.

Istituto Italiano di Tecnologia (IIT)

The Istituto Italiano di Tecnologia is a private law Foundation jointly established by the Ministry of Education, University and Research and the Ministry of Economy and Finance, with the aim of promoting excellence in both basic and applied research and to facilitate the development of the national economy. IIT's total staff number is 1087 individuals. The scientific area is represented by about 86% of the personnel; 41% are foreigners: 24% are scientists who come from 38 countries and 17% are "returning Italian brains."

IIT has produced approximately 2000 publications and 91 inventions with a result of 145 patents, 71 in Italy and 74 at international level. In Genoa, the departments that collaborate include robotics ("Robotics, Brain and Cognitive Sciences" and "Advanced Robotics"), departments oriented to life sciences ("Neuroscience and Brain Technologies" and "Drug Discovery and Development") and the "Nanochemistry", "Nanophysics", "Nanostructures", "Pattern Analysis & Computer Vision" and "iCub" facilities. Since 2009 the scientific activity has been further supported by 10 research centers located throughout Italy (Turin, Milan, Trento, Parma, Rome, Pisa, Naples, Lecce) that are developing the new platforms of the 2012-2014 scientific plan.

Scuola Superiore Sant'Anna

The Scuola Superiore Sant'Anna is a public university with a special statute. The Scuola Superiore Sant'Anna operates in the field of Social Sciences (Economics and Management, Law, Political Science) and Experimental Sciences (Agricultural Sciences and Biotechnology, Medicine and Industrial Engineering and Information Engineering).

Over the years the Scuola Superiore Sant'Anna has consolidated its role as a research university. The exploitation of the results of the research conducted in the various institutes is one of the core missions of the Scuola Superiore Sant'Anna. This has led to partnerships with businesses and government agencies. The Institutes of Biorobotics, DIRPOLIS (Law, Politics, Development), Economics, Management, Life Sciences and TeCIP (Communication, Information and Perception Technologies) have helped to set up 33 spin-off companies, which currently employ about 180 staff. The Scuola Superiore Sant'Anna has a portfolio of 76 patents, both at a national and international level, some of which are shared with other public and private institutions or licensed to companies

For further information:

Istituto Italiano di Tecnologia Press Office - Weber Shandwick Italy

Costanza Bajlo

cbajlo@webershandwick.com

Ph: +39 02 57378.352 – Mobile: +39 335 459496

Scuola Superiore Sant'Anna - Media relations

Francesco Ceccarelli

Francesco.ceccarelli@sssup.it

Ph: +39 050 883378 - Mobile +39 348 7703786

RoboCom website

<http://www.robotcompanions.eu/>