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Once again I have the pleasure to write the foreword for the ERCIM Annual Activity Report. 2011 was a pivotal year for ERCIM; the plans to form a new AISBL (Association International Sans But Lucratif; International not-for-profit association) announced in the report for 2010 were realised and from end-2011 I am elected president of the ERCIM-AISBL and Michel Cosnard is President of the ERCIM-EEIG. As explained in the last report, the AISBL will pursue our core mission of “cooperating for excellence in research” now without the restriction of one member per country, while the EEIG manages the office with associated contracts and W3C-Europe. You are welcome to participate in ERCIM’s activities.

Throughout 2011 ERCIM has continued to develop with applications from potential new members (indicating that ERCIM is attractive) and the inclusion of new members. ERCIM has acquired new EC-funded joint research projects (supporting our core mission of cooperating for excellence in research) and continued research activity in the Working Groups. The ABFP (Alain Bensoussan Fellowship Programme) continues to prosper and is educating to a high standard standing membership – provided excellent advice and oversight. The ERCIM-EEIG manages the office with associated contracts and W3C-Europe. You are welcome to participate in ERCIM’s activities.

In 2011 ERCIM exceptionally selected two winners for the Cor Baayen Award: Stratos Idreos, researcher in the Database Architectures group of CWI, and Luca Mottola, researcher in the Networked Embedded Systems Group at SICS. Stratos Idreos did his PhD research at CWI and received his PhD degree in 2010 at the University of Amsterdam. He invented the concept of “database cracking”, a remarkable result in an area that is fundamental for database systems and has been studied for decades. Luca Mottola received his PhD degree at Politecnico di Milano, Italy and is a former ERCIM fellow at SICS. His research focuses on the programming of wireless sensor networks. These are key components in the “Internet of Things” vision. The Cor Baayen Award, named after the first president of ERCIM and the ERCIM “president d’honneur”, is awarded each year to a promising young researcher in computer science and applied mathematics.

ERCIM continues to communicate its vision and achievements through various channels. ERCIM News is our flagship representative of ERCIM with issues in 2011 on “Cognitive Systems and Robotics”; “Unconventional Computing Paradigms”; “ICT for Cultural Heritage” and “Ambient Assisted Living”. These are all important areas of research and – as usual – ERCIM News is commonly used as a reference source for them. The first two issues for 2012 are “Evolving Software” and “Big Data”. The website continues to develop while maintaining the ERCIM “brand image”.

During 2011, the European Forum for Information and Communication Science and Technology (EFICST) was formed with ERCIM as a founding member. EFICST will provide a platform for cooperation among the European societies in Information and Communication Sciences and Technologies (ICST). The objective is to have a stronger, unified voice for ICST professionals in Europe. Jan van Leeuwen from Utrecht University is the president and I serve as one of two vice-Presidents. ERCIM is hosting the forum’s website at http://www.eficst.eu/

In the 2010 report I announced the end of my presidency of ERCIM, spanning six years January 2005- December 2010. Michel Cosnard took over as President for 2011-12 but, as explained above, in mid-2011 we achieved the new structure and so once again I became President with a mandate to end 2013. The new structure – with the General Assembly of member representative and an elected Board with executive responsibility – differs significantly from the old Board of Directors and Executive Committee.

As in previous years I would like to acknowledge those who make ERCIM what it is. The External Advisory Committee – with its outstanding membership – provided excellent advice and oversight. The vice-president, Domenico Laforenza – covering strategy and external relations including new members - ensures strategic direction. The Secretary Jerzy Tiuryn and Treasurer Dick Broekhuis ensure governance. The other members head Task Groups: Dimitris Plexousakis and Patrick Furrer for Science including projects and working groups; Claude Kirchner for Human Capital including the ABFP and CBA, and Andreas Rauber for Outreach (including the web site and ERCIM News). This Board ensures the smooth running of ERCIM activities and interacts strongly with the EEIG and especially the ERCIM Office where - led by our ERCIM Manager, Jerôme Chailloux - our staff members work tirelessly. Led by our Chief Editor, Peter Kunz, the Editorial Board continues to ensure the excellence, relevance and outreach of ERCIM News. However it is the Working Groups and the researchers from ERCIM member institutions and associated academic and industrial partners participating therein, that are the “engine room” of ERCIM. It continues to be an honour to lead this great organization.
ERCIM – the European Research Consortium for Informatics and Mathematics – aims to foster collaborative work within the European research community and to increase cooperation with European industry. In 2011, the members of ERCIM include leading research establishments from twenty European countries. Encompassing over 12,000 researchers and engineers, ERCIM is able to undertake consultancy, development and educational projects on any subject related to its field of activity.

ERCIM was founded in 1989 and is a European Economic Interest Grouping (EEIG). In 2011 ERCIM established an international association carrying out all research, networking, and support activities of ERCIM.

What is ERCIM?

ERCIM aims to foster collaboration within the European ICT research community and to increase cooperation with industry. Its members are centres of excellence across Europe. ERCIM is internationally recognized as a major representative organization in its field. ERCIM provides access to all major ICT research groups in Europe and has established an extensive program of working groups, publications, fellowships and prizes. It also hosts the European branch of the World Wide Web Consortium (W3C).

ERCIM, a consortium of leading research institutions, is opening its doors to new members. The organization, which focuses on information and communication science and technology (ICT) and related areas of mathematics, has a successful track record of promoting ICT research and cooperation in Europe and beyond. Membership was previously restricted to one member per country, but that limit is now being lifted to allow applications from more top level research institutions (including universities) in ICT from each country.

Objectives

ERCIM’s aim is to play a leading role in Information and Communication Technology in Europe by:
• building a Europe-wide, open network of centres of excellence in Information and Communication Technology (ICT) and Applied Mathematics.
• excelling in research and acting as a bridge for applications
• being internationally recognised both as a major representative organisation in its field and as a portal giving access to all relevant ICT research groups in Europe
• liaising with other international organisations in its field
• promoting cooperation in research, technology transfer, innovation and training.

Members

Member institutes must be a leading research establishment in its country, with excellent links to both the national and international, academic and commercial research communities. All ERCIM members are national centres of excellence, independent of specific commercial ties. They have a strong involvement in the research programs of the European Union and joint projects with both small and medium-sized enterprises and large industrial companies.

Benefit of Membership

ERCIM is a European-wide network internationally recognized as a representative organisation in its field so members can benefit from easy access to all major ICT research groups in Europe. Members can take part in all ERCIM activities including research projects, Working Groups or in the PhD fellowship programme supported by the European Union. They also benefit from ERCIM’s privileged partnership with standardisation bodies such as W3C and ETSI.
International Cooperation

ERCIM considers it a high priority to develop cooperation with scientists all over the world. ERCIM hosts the European branch of the World Wide Web Consortium (W3C), the unique international standardization body which sets the Web standards and protocols (HTML, HTTP, XML, etc.) since 1994. ERCIM participated in EU activities and projects, for example in an initiative to foster cooperation between the EU and India. ERCIM has also established cooperation with ETSI, the European Telecommunications Standards Institute and with the European Mathematical Society. ERCIM is also a member of the European Forum for ICST (EFICST). Its objective is to have a stronger, unified voice for ICST professionals in Europe.

Consultancy

ERCIM experts have been involved in many advisory bodies, such as the “Next Generation Grid expert group” (NGG3) and the Cloud Computing Expert Group convened by the European Commission, an expert group on “Software Evolution and Maintenance”, and the Information Society Technologies Programme Advisory Group (ISTAG). Additionally, ERCIM senior researchers are participating in several EC-funded roadmapping projects as partners, invited participants or members of advisory boards.

Research Projects

In addition to many projects involving a few ERCIM institutes, ERCIM is itself participating in several European-Commission-related activities and projects as coordinator or partner. In these projects, several member institutes carry out the research while the ERCIM Office takes care of administrative and financial tasks.

Working Groups

Working Groups are specialist networks set up by researchers, within which the ERCIM partners arrange regular workshops with invited external participation to study a specific topic and prepare international research projects.

Innovation

In addition to research in computer science and mathematics, innovation and transfer of research results is one of the ERCIM institutes’ current main assignments. ERCIM members play a pioneering role in creating small and medium-sized high-tech companies, an effective way of achieving such a transfer. In addition, ERCIM members have a long track record of cooperation with European industry in R&D projects, generally within the framework of European programmes. As a network, ERCIM can help industrial partners to locate the best scientific teams in Europe for a given domain.

Cor Baayen Award

Each year, ERCIM presents a promising young researcher in computer science and applied mathematics with the prestigious Cor Baayen Award.

Publications

ERCIM publishes the quarterly magazine ‘ERCIM News’ and policy documents.
Structure and Organisation

The ERCIM community is supported by a Consortium of two bodies:
- ERCIM AISBL an international non for profit association under Belgian law, carrying on the activities of ERCIM concerning collaborative research, networking, and support.
- ERCIM EEIG, the European Economic Interest Grouping, responsible for managing the ERCIM Office and hosting the European branch of W3C.

ERCIM Association
The ERCIM association is managed by the Board of the Association composed of:
- Keith Jeffery, STFC, UK: President
- Domenico Laforenza, IIT-CNR, Italy: Vice-President:
- Dick Broekhuis, CWI, The Netherlands: Treasurer
- Jerzy Tiuryn, University of Warsaw, Poland: Secretary
  and in addition:
- Dimitris Plexousakis, Institute of Computer Science, Foundation for Research and Technology (FORTH) – Hellas, Greece
- Patrick Furrer, Swiss Association for Research in Information Technology (SARIT), Switzerland, jointly responsible for scientific aspects (projects, working groups)
- Claude Kirchner, INRIA, France, responsible for human capital
- Andreas Rauber, AARIT, Austria, responsible for outreach.

The majority of these board members lead a task group consisting of ERCIM member representatives or substitutes.

ERCIM EEIG
The ERCIM EEIG is governed by the EEIG Board of Directors composed of:
- Jos Baeten, CWI
- Michel Cosnard, Inria: President
- Keith Jeffery, STFC
- Matthias Jarke, Fraunhofer-Gesellschaft
- Domenico Laforenza, CNR
- Constantine Stephanidis, ICS-FORTH

and its activities are carried out by an Executive Committee composed of:
- Thomas Bendig, Fraunhofer Gesellschaft
- Dick Broekhuis, CWI
- Michel Loyer, Inria
- Dimitris Plexousakis, FORTH
- Fausto Rabitti, CNR
- Michael Wilson (chair), STFC.

Advisory Committee
An external Advisory Committee advises ERCIM on strategic directions
- Gérard Berry, Gérard Berry, Inria research director and Professor at College de France
- Michael L. Brodie, Computer Scientist
- Wendy Hall, Professor of Computer Science at the University of Southampton, UK; President of ACM
- Erik Sandewall (Rapporteur), Professor of Computer Science at Linköping University, Sweden
- Mazin Yousif (Chair), Chief Enterprise Architect and Head of Architecture T-Systems International.
A major activity within the scope of the Association’s mission is related to the promotion of excellence in research and the maintenance of a strong portfolio of scientific activity, materialized in the form of ERCIM-led and coordinated joint research projects and ERCIM-hosted Working Groups. The Science Task Group sets as its mission to enable, encourage, sustain and coordinate scientific activities in the form of collaborative research projects and working groups in areas of ICT and Mathematics within which significant research activity is taking place at Institutions within and beyond ERCIM.

The Science Task Group is therefore subdivided in two Subtasks:

• Working Groups for building and maintaining a strong network of ERCIM researchers in the different scientific fields of competence of ERCIM.
• Projects for stimulating the submission of ERCIM-led strategically relevant projects and for helping defining the topics for the yearly ERCIM Conference

The members of the Science Task Group are.

Co-chairs:
• Dimitris Plexousakis, FORTH, Working Groups Subtask
• Patrick Furrer, SIRA, Projects Subtask

Members:
• Manuel Carro, SPARCIM
• João Falcão e Cunha, PEG
• Michel Loyer, INRIA
• Leszek Pacholski, PLERCIM
• Jean-Jacques Quisquater, FNRS
• Fausto Rabitti, CNR
• Niklas Rudemo and Janusz Launberg, SICS
• Julius Stuller, CRCIM
• Pierre Guisset, Philippe Rohou, Jérôme Chailloux, ERCIM Office

You can join us via email to tg-science@ercim.eu

Dimitris Plexousakis, ICS-FORTH (left) and Patrick Furrer, SARIT; chairs of the ERCIM Science Task Group
Working Groups
Activity Overview

The activities of a Working Group can be divided into several areas: workshops to build the community and maintain its vibrancy, projects designed to advance research and innovation in the particular area of the group, and human mobility (internal mobility and fellows) to assure the appropriate trained human capital. ERCIM supports financially the Working Groups.

A major activity of an ERCIM Working Group is to search actively for project funding that crosses national borders. NetWMS for example, was initiated by the ERCIM Working Group “Constraints”.

ERCIM institutes have reserved resources to stimulate mobility, enabling work on collaborative research projects at other institutes for periods from one to six months. ERCIM Working Groups contribute many of the articles in ERCIM News and commonly provide scientific coordination for the special theme sections. They also participate in the production of ERCIM strategic reports.

**Computing and Statistics**

The working group Computing and Statistics focuses on all computational aspects of statistics. Of particular interest is research in important statistical applications areas where both computing techniques and numerical methods have a major impact. The working group gathers over 300 members and is organised in eleven specialized tracks. The aim is twofold: first, to consolidate the research in computational statistics that is scattered throughout Europe; second to provide researches with a network from which they can obtain an unrivalled sources of information about the most recent developments in computational statistics and applications. Emphasis is put on computational methods with computational statisticians being the primary target of the WG.

Within the WG, the interest group “Computational and Financial Econometrics” is associated with the journal of Computational Statistics and Data Analysis. The Working Group members are currently editing eight special issues of the CSDA journal. The Working Group had also a number of exchange research visits among its members.

**Coordinator:** Erricos Kontoghiorghes, School of Computer Science and Information Systems, Birkbeck, University of London

**Organised event:**
4th International Conference of the ERCIM WG on Computing & Statistics held jointly with the 5th CSDA International Conference on Computational and Financial Econometrics (CFE’11), London, 17-19 December 2011. (950 participants)
http://www.dcs.bbk.ac.uk/ercim

The purpose of an ERCIM Working Group is to build and maintain a network of ERCIM researchers in a particular scientific field. The Working Groups are open to any researcher in the specific scientific field.

**Current Working Group and Coordinators**

- **Computing and Statistics** (Erricos Kontoghiorghes, University of London)
- **Constraints** (Barry O’Sullivan, University College Cork)
- **Dependable Software-Intensive Embedded Systems** (Erwin Schoitsch, AIT - Austrian (Research Centers/AARIT)
- **E-Mobility** (Torsten Braun, University of Bern/SIRA)
- **Environmental Modelling** (Steffen Unger, Fraunhofer-FIRST)
- **Formal Methods for Industrial Critical Systems** (Radu Mateescu, Inria)
- **Grids, P2P and Services** (Frederic Desprez, Inria)
- **Image and Video Understanding/MUSCLE** (Emanuele Salerno, ISTI-CNR)
- **IM2IM - IT and Mathematics applied to Interventional Medicine** (Marc Thiriet, Inria)
- **Media Technology and Edutainment** (Sepideh Chakaveh, University of Hertfordshire)
- **Models and Logics for Quantitative Analysis** (Flemming Nielson, Technical University of Denmark)
- **Security and Trust Management** (Javier Lopez, University of Malaga/SparCIM)
- **Sensor Web** (Gregory O’Hare, University College Dublin)
- **Software Evolution** (Tom Mens, Université de Mons / FNRS/FWO)
- **Software Engineering for Resilient Systems** (Didier Buchs, University of Geneva/SIRA)
Constraints

The Constraints Working Groups focuses on research related to constraint programming. Constraint programming has been successfully applied in numerous domains. Recent applications include computer graphics (to express geometric coherence in the case of scene analysis), natural language processing (construction of efficient parsers), database systems (to ensure and/or restore consistency of the data), operations research problems (like optimization problems), molecular biology (DNA sequencing), business applications (option trading), electrical engineering (to locate faults), circuit design (to compute layouts), etc. Current research in this area deals with various foundational issues, with implementation aspects and with new applications of constraint programming. The concept of constraint solving forms the central aspect of this research.

**Coordinator:** Barry O’Sullivan, University College Cork

**Organised event:**
CSCLP 2011 - Annual ERCIM Workshop on Constraint Solving and Constraint Logic Programming, York, United Kingdom, 12-13 April 2011

http://wiki.ercim.eu/wg/Constraints/

Dependable Software-Intensive Embedded Systems

Dependable embedded software-intensive systems technology challenges are addressed with topics on current research, solutions, examples, professional and academic education, and training. Dependable systems are systems that can justifiably be relied on throughout the complete life cycle and under all possible conditions of use. System attributes comprise safety, reliability, maintainability, survivability, availability and security, their relative impact and implementation depending on the application.

The ERCIM Working Group ‘Dependable Software-Intensive Embedded Systems’ organised several exhibitions and events where ERCIM was promoted.

**Coordinators:** Erwin Schoitsch, Austrian Research Centers/AARIT and Amund Skavhaug, NTNU

**Organised events:**
ERCIM/EWICS/DECONS Dependable Cyber-physical Systems Workshop 2011, Naples, Italy 20 September 2011, held in conjunction with SAFECOMP 2011

http://www.ercim.at/

E-mobility

The ERCIM eMobility working group aims to develop strategic basic research agenda and project proposals in the area of eMobility. To complement the activities of the former eMobility European Technology Platform (now called NetWorks ETP), the working group focuses on more (theoretical) basic research issues. The goal is long-term research projects with a more academic background, without having any commercial constraints.

**Coordinator:** Torsten Braun, University of Bern, Switzerland/SARIT

**Organised events:**
• 5th ERCIM workshop on e-mobility, Vilanova i la Geltrú, Catalonia, 14 June 2011
• 3rd Workshop on the Pervasive Application of Wireless Technologies, Enschede, The Netherlands, 27 September 2011
• The 3rd International ICST Conference on Mobile Lightweight Wireless Systems, Bilbao, Spain, 9-10 May 2011

http://wiki.ercim.eu/wg/eMobility/

Environmental Modelling

The ERCIM Working Group Environmental Modelling has the objective to promote the cooperation and the research activities of groups working in the field of environmental modelling and simulation at ERCIM institutes. Current research themes include parallel, distributed and Grid computing, knowledge from data, decision support, intelligent/adaptive user interfaces and visualization, standardization of metadata and system interfaces, workflows for automatic access to distributed resources, and the generic nature of information and simulation systems.

**Coordinator:** Steffen Unger, Fraunhofer FIRST

**Organised event:**
Session G1.1: “Analysis of data of remote sensing data for environmental models” at the 6th International Congress on Environmental Modelling and Software (iEMSs), Leipzig, Germany, 1-5 July 2011

http://ercim.first.fraunhofer.de/

Formal Methods for Industrial Critical Systems

Formal methods have been advocated as a means of increasing the reliability of systems, especially those which are safety or business critical, but the industrial uptake of such methods has been slow. This is due to the perceived difficulty of mathematical nature of these methods, the lack of tool support, and the lack of precedents where formal methods have been proven to be effective. It is even more difficult to develop automatic specification and verification tools due to limitations like state explosion, undecidability, etc. The FMICS Working Group brings together researchers of the ERCIM consortium and beyond in order to promote the use of formal methods within industry.

**Coordinator:** Radu Mateescu, INRIA

**Organised event:**

http://www.inrialpes.fr/vasy/fmics/
Grids, P2P and Services

The ERCIM Working Group “Grids, P2P and Services” aims to ensure the sustainability of the CoreGRID Network of Excellence, requested by both the European Commission and the CoreGRID members who want to continue and extend their successful co-operation, and to establish a forum to foster collaboration between research communities that are now involved in the emerging area of Service Computing, namely high performance computing, distributed systems and software engineering.

Coordinator: Frédéric Desprez, INRIA

IT and Mathematics applied to Interventional Medicine

The ERCIM Working Group IM2IM focuses on modeling and simulations for minimally-invasive, safe and cheap procedures, especially those used to treat diseases of the cardiovascular and respiratory apparatus (e.g., stenting, coiling, and nanoaerosols). Patient-specific computer-aided diagnosis, treatment planning, and prognosis rely on image processing with 3D reconstruction of the organ of interest, modeling of events at various time and length scales (from molecules to organs), and simulations of multiphysics phenomena (e.g., air and blood flow in deformable conduits, heat and mass transfer, etc.).

Coordinator: Marc Thiriet, INRIA

Multimedia Understanding through Semantics Computation and Learning

MUSCLE (formerly Image and Vision Understanding) is the ERCIM Working Group on multimedia understanding through semantics, computation and learning. It gathers teams from both ERCIM and non-ERCIM institutions whose expertise ranges from machine learning and artificial intelligence to image/video/ audio processing and multimedia database management. The reorganization of the group’s activities has been continuing through the entire year 2011. Two plenary meetings were held, in Barcelona, on 1st September, and in Pisa, on 15th December where a steering committee, was established to select the scientific topics and promote joint projects. The group is also closely collaborating with ibai-publishing (www.ibai-publishing.org) that provides open-access journals in the fields of Data Mining, Case-Based Reasoning, and Mass Data Analysis of Signals and Images.

Coordinator: Emanuele Salerno, ISTI-CNR

Models and Logics for Quantitative Analysis

Models and Logics for Quantitative Analysis are seen as comprising process models analysed using logics for quantitative properties. More specifically, the Working Group (i) considers process models formally described by transition systems, automata or process calculi, (ii) considers logics for expressing stochastic and continuous properties as well as discrete ones, (iii) focuses on algorithms, theory and tools, and (iv) studies applications with particular emphasis on embedded systems and service oriented systems but will aim at treating also IT guided workflow systems and biological systems.

Organised event:
Third annual workshop of the Working Group on Models and Logics for Quantitative Analysis (MLQA) ,Aachen, Germany, 5 September 2011

Coordinator: Flemming Nielson, Technical University of Denmark

Media Technology and Edutainment

The Media Technology and Edutainment Working Group seeks innovative ways to merge human-computer interaction holistic design in the area of novel context or location-aware interfaces (mobile, ubiquitous, multimodal, mixed reality) as well as creating and implementing solutions and middleware with digital broadcasting & networking as the underpinning platforms. The main objective is to contribute to technology development efforts by deepening the understanding of human and technological issues relevant in the use as well as creation of new technologies. The group was officially set-up in November 2010

Coordinator: Sepideh Chakaveh, University of Hertfordshire

Security and Trust Management

The ERCIM Working Group Security and Trust Management aims at focussing the research of the ERCIM institutions on a series of activities, for example projects and workshops, to foster the European research and development on security, trust and privacy in ICT.

Coordinator: Javier Lopez, University of Malaga, SparCIM

Organised event:
7th International Workshop on Security and Trust Management (STM’11), Copenhagen, Denmark, 27-28 June 2011

http://www.iit.cnr.it/STM-WG
Sensor Web

The objective of the Sensor Web working group is to bring together research groups that are actively involved in ubiquitous sensing and the infrastructure demanded to underpin this vision. Specifically the group is interested in sensing in the physical world, cyber sensing and the seamless consideration of diverse sensors from both arenas. The Working Group members cover a wide range of ICT skills (software engineers, information management and databases including information retrieval, wireless applications, networks, security and e-mobility, ambient and ubiquitous computing), and through their collaborators have a broad multidisciplinary base. Areas of interest to the group include both applied and basic research. Examples of deployment areas include personal health, environmental analysis, ambient intelligence, locomotive and large vehicle monitoring, military applications, deployment of personnel in toxic environments and traffic analysis.

The Sensor Web Working Group has had a successful year gaining maturity and producing notable outputs in the last year. The number and quality of the venues in which joint publications have been published has both increased in number and quality. The continuation of the RUBICON project (http://fp7rubicon.eu/) continues to investigate the interplay between robotics (mobile sensor platforms) and sensor networks. In addition WG members organised the highly successful Pervasive Health 2011, 5th International ICST Conference on Pervasive Computing Technologies for Healthcare

Coordinator: Gregory M. P. O’Hare, University College Dublin
http://wiki.ercim.eu/wg/SensorWeb/

Software Evolution

The main goal of the ERCIM Working Group Software Evolution is to understand the phenomenon of software evolution, and to develop well-founded and disciplined tools and techniques to support software developers with the common problems they encounter when evolving large and complex software systems. With this initiative, the group plans to become a Virtual European Research and Training Centre on Software Evolution.

Coordinator: Tom Mens, Université de Mons / FNRS/FNR

Organised events:
- IWPSE-EVOL 2011: Joint 12th International Workshop on Principles on Software Evolution, and 7th ERCIM Workshop on Software Evolution, Szeged, Hungary 5-6 September 2011
http://wiki.ercim.eu/wg/SoftwareEvolution
Projects

In 2011, ERCIM participated in eighteen research projects funded by the European Commission either as coordinator or as a partner. Within these projects, ERCIM institutes and their partners carry out joint research activities, while the ERCIM Office carries out the administrative and financial coordination.

Ensuring the management of common research projects is a real asset, and this activity has become increasingly important for the ERCIM Office, which is dedicating considerable effort to the administrative and financial coordination of European projects. Relying on an experienced team, the Office has a full range of expertise from the identification of funding opportunities to the development of project ideas, the finding of project partners, proposal writing, contract negotiation, project dissemination and project management. This is a key success factor, allowing research teams to focus on the scientific tasks at the core of each project.

Coordinating several projects, ERCIM has witnessed the emergence of a growing number of research initiatives involving strong interdisciplinary activities. If this has been a growing trend over the year, the European research projects now go a step further with the integration of advanced information and communication technology (ICT) to other domains.

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<tr>
<th>Project acronym</th>
<th>ERCIM's role</th>
<th>ERCIM members/partners involved</th>
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<tr>
<td>ABCDE</td>
<td>coordinator</td>
<td>all ERCIM members</td>
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<td>AXES</td>
<td>coordinator</td>
<td>Fraunhofer IAIS, Inria, KU Leuven, Dublin City University (IUAI), ERCIM EEIG</td>
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<td>Webinos</td>
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<td>Fraunhofer FOKUS, W3C/ERCIM</td>
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Overview of the projects in which ERCIM participated in 2011
The “ERCIM Alain Bensoussan Fellowship Programme” is supported by the FP7 Marie Curie Actions - People, Co-funding of Regional, National and International Programmes (COFUND) of the European Commission. This support is for an initial period of four years. With the support from the European Commission, ERCIM plans to co-fund more than 130 fellows in a four year period which started in September 2010. With the “COFUND” action, the Commission recognizes ERCIM’s successful and long-lasting fellowship programme.

The Marie Curie co-funding action is a new way of implementing individual fellowships. It aims to increase the trans-national mobility for training and career development of experienced researchers, in line with the objectives set out in the activity heading “Life-long training and career development” of the “People” Work Programme. The co-funding is expected to result in a considerable increase in the number of ERCIM fellows, with the current average of 20 ERCIM fellowships per year almost doubling. Also, the fellowship’s duration has been extended and applicants can now benefit from one or two periods of twelve months spent in one or two ERCIM member institutes.

Additionally, employment conditions are now more flexible, with the option of signing a working contract instead of a stipend agreement (an agreement for a research training programme) in some of our institutions. Another novelty is the yearly “ABCDE seminar” where fellows will have the opportunity to benefit from specific training on a range of non-scientific skills. The first seminar was held in November 2011.

**ABCDE**

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**ABCDE - Alain Bensoussan Career Development Enhancer is supported by the Marie Curie Co-funding of Regional, National and International Programmes (COFUND) of the European Commission”**

**EC funding:** €3 500 000

**ERCIM’s role:** administrative coordinator

**ERCIM members involved:**
all ERCIM members

**Coordinator:**
Philippe Rohou, ERCIM office

**Duration:**
September 2010 to August 2014

**http://fellowship.ercim.eu**
AXES

"Access to Audiovisual Archives" (AXES) is the name of a new large-scale integrating project (IP) that will investigate innovative solutions for audiovisual content exploration. The goal of AXES is to develop tools that provide various types of user with new engaging ways to interact with audiovisual libraries, helping them discover, browse, navigate, search and enrich archives. In particular, apart from a search-oriented scheme, the project will explore how suggestions for audiovisual content exploration can be generated via a myriad of information trails crossing the archive. This will be approached from three perspectives (or axes): users, content, and technology.

Innovative indexing techniques will be developed in close cooperation with a number of user communities through tailored use cases and validation stages. Rather than just starting new investments in technical solutions, the co-development will investigate innovative paradigms of use and novel navigation and search facilities. Targeted users are media professionals, educators, students, amateur researchers and home users.

Based on an existing Open Source service platform for digital libraries, novel navigation and search functionalities will be offered via interfaces tuned to user profiles and workflow. For this purpose, AXES will develop tools for content analysis deploying weakly supervised classification methods.

Information in scripts, audio tracks, wikis or blogs will be used for the cross-modal detection of people, places, events, etc., and for link generation between audiovisual content. Users will be engaged in the annotation process: with the support of selection and feedback tools, they will enable the gradual improvement of tagging performance. AXES technology will open up audiovisual digital libraries, increasing their cultural value and their exposure to the European public and academia at large.

The consortium is a perfect match to the multi-disciplinary nature of the project, with professional content owners, academic and industrial experts in audiovisual analysis, retrieval, and user studies, and partners experienced in system integration and project management. The project comprises thirteen partners including the ERCIM members Fraunhofer Institute for Intelligent Analysis and Information Systems IAIS, INRIA, Katholieke Universiteit Leuven, and Dublin City University.

AXES - Axess to Audiovisual Archives is an “Integrated Project” supported by the European Commission under the 7th Framework Programme

EC funding: €8 800 000

ERCIM’s role: administrative coordinator

ERCIM members involved: Katholieke Universiteit Leuven (FNRS/FWO), Inria, Fraunhofer IAIS

Scientific coordination: Tinne Tuytelaars, Katholieke Universiteit Leuven

Administrative Coordinator: Philippe Rohou, ERCIM office

Duration: January 2011 to September 2014

http://www.axes-project.eu
CROSSOVER

Bridging communities for next generation policy-making is the overall goal of the CROSSOVER coordination and support action. In an increasingly interdependent, unstable and complex world, policy-makers lack the tools to anticipate emerging problems and the impact of possible solutions. At the same time, citizens are becoming more vocal in monitoring and influencing policy decisions. Emerging ICT tools for governance and policy modelling show great opportunities for decision-making in a complex world, through the dramatic and combined growth of data availability, analysis and simulation tools, participative and behavioural change technologies. However, they still remain at the margins of policy-making: research and deployment are fragmented between academic fields, policy domains, geographical areas, technological layers and type of stakeholders. As a result, resources are spent in “reinventing the wheel” and reach sub-optimal efficiency and effectiveness.

The CROSSOVER project aims to consolidate and expand the existing community (built largely within FP7) by:
• bringing together and reinforcing the links between the different global communities of researchers and experts: it will create directories of experts and solutions, and animate knowledge exchange across communities of practice both offline and online;
• reaching out and raising the awareness of non-experts and potential users, with special regard to high-level policy-makers and policy advisors: it will produce multimedia content, detailed case studies, roadmap, workshops and high-level policy conference with competition for prize;
• establishing the scientific and political basis for long-lasting interest and commitment to next generation policy-making, beyond the mere availability of FP7 funding: it will focus on use cases and a demand-driven approach, involving policy-makers and advisors in high-level conference

It will pursue this goal through a combination of content production, ad hoc and well-designed online and offline animation; as well as strong links with existing communities outside the CROSSOVER project and outside the realm of eGovernment.
D4Science-II (Data infrastructure ecosystem for science) was a European e-Infrastructure project, co-funded by the European Commission’s Seventh Framework Programme for Research and Technological Development. It constituted a continuation of the DILIGENT and D4Science projects and the i-Marine project (see page 20) will build on the results obtained.

The major project aim was to develop technologies for enabling interoperation of diverse data e-Infrastructures that are running autonomously thereby creating an e-Infrastructure Ecosystem. This Ecosystem has the power to serve a significantly expanded set of communities dealing with multidisciplinary challenges whose solution is currently beyond reach. In particular, the project created an initial ecosystem composed of at least the GENESI-DR and DRIVER repository e-Infrastructures, and other important thematic repositories maintained by international organizations, like INSPIRE, AquaMaps and FAO Infrastructure (see Figure). By exploiting the resulting ecosystem, the project also aimed at supporting a number of Virtual Research Environments offering innovative functionality for facilitating scientific activities.

One of the major objectives of the project was to enhance the gCube technological capabilities in order to enable D4Science to hold together and interoperate with all data e-Infrastructures that participate in the ecosystem. In particular, the project aimed at extending gCube with new mechanisms that not only enable interoperability but also minimize the need to use ad-hoc solutions for discovering, accessing and using resources published by various, heterogeneous data e-Infrastructures. The gCube system was progressively enriched in the course of the project through a continuous delivery process. gCupe is available at http://www2.gcube-system.org/.

D4Science-II - Data infrastructure ecosystem for science is supported by the European Commission under the 7th Framework Programme

EC funding: €4 300 000

ERCIM’s role:
administrative coordinator

ERCIM members involved:
ISTI-CNR

Scientific coordination:
Donatella Castelli (ISTICNR)

Administrative Coordinator:
Linh Nguyen, ERCIM office

Duration:
October 2009-September 2011

http://www.d4science.eu/
**eAccess+**

Much expertise, many guidelines and tools exist on e-accessibility but they are of a highly fragmented nature. As announced in the Communication of December 2008 on eAccessibility, the Thematic Network eAccess+ is creating a platform for collecting and providing guidance on how to use in practice this body of knowledge. eAccess+ is also a best-practice network to facilitate cooperation between the community of practitioners (found in research institutions and consultancies) and all the other stakeholders (policy makers, administrators in the public sector, technical staff in the private sector...).

The purpose is to accelerate the take-up of e-accessibility specifications and technical solutions, and to contribute to a common approach at European level.

The network will support the development of common guidelines and standards, and, where needed, will provide rationale for harmonised political and legal measures.

**eAccess+ addresses the following areas:**

- web accessibility, as a main focus, in order to ensure accessibility of public web sites in the Member States, in particular through the migration from national web accessibility guidelines and methodologies to the new W3C/WCAG2.0 guidelines,
- accessible convergent communications and in particular accessibility of interactive digital television,
- self-service terminals, in particular in the banking/financial sector, in public transports, in tourism / cultural heritage, and in e-government.

Work is organised in four methodological steps: consultation (introduction, information, advice, feedback), analysis (problems, ideas, incentives, proposals), support (examples, best practice, guidelines), and dissemination. Those four steps will be implemented in three waves, work will start with a first group of already more advanced Member States and then will extend to include more Member States, while expanding activities in the first group.
Euro-India SPIRIT (Euro-India Synchronisation of Policy Initiatives & Research and Innovation Trajectory) was a two-year support action that addressed the objectives of the call “ICT-2009.9.1: International co-operation support to Information Society policy dialogues and strengthening of international cooperation”. The project contributed towards structuring and strengthening the European Union-India policy dialogue on the Information Society by researching and presenting areas of potential research cooperation and by bringing stakeholder contribution into this process.

Euro-India SPIRIT built on the foundations and achievements of successful past projects – BASIC - EuroIndia2004 IS Forum, MONSOON - Euro-India ICT Cooperation Initiative (2005-08) and EUROINDIA (2008-09). EUROINDIA, which had the objective of identifying medium to long term Indian research and innovation perspectives, as well as elucidating the role of policy in fostering ICT innovations in India. The key objective of the project was the alignment of Indian ICT research policies, programmes and priorities with those of the EU in the context of Framework Programme Seven and more broadly with the goals of the Europe 2020 strategy.

Euro-India SPIRIT was supported by domain and policy Experts organised in working groups and an online community of stakeholders in order to identify and validate long-term common research perspectives where the Indian ICT research policies and programmes can be synchronised with the EU priorities. Three Working Groups, composed jointly of Indians and Europeans, addressed societal, technological, and policy issues:

- ICT Addressing Societal challenges, (e.g. eGovernment, eHealth, eLearning)
- AudioVisual, Media & Internet
- Emerging Technologies and eInfrastructures (e.g. Geant, distributed computing)

The project published final recommendations with the aim to lay the foundations for future ICT research collaboration between the European Union and India as we approach the EC’s next Common Strategy Framework (CSF), Horizon 2020 to be launched in 2013 and based upon the success of FP7, the Competitiveness and Innovation Framework Programme (CIP) and the European Institute of Innovation and Technology (EIT). Underlying these funding streams is the Digital Agenda for Europe (DAE), a major roadmap defining the key roles that the use of ICT will have to play for Europe to succeed in its ambitions for a flourishing digital economy by 2020. The DAE is inextricably bound up with the areas of ICT research that have been assessed by Euro-India SPIRIT and that are of relevance to both the EU and India. EU-India Cooperation must harness the game-changing potential of ICT research and development to tackle grand challenges facing both Europe and India with particular reference to inclusive, innovative and secure societies.

The booklet “The New Digital Paradigm - Harnessing EU-India ICT Cooperation” containing the final recommendations of the project’s experts, encompassing diverse technological areas which form a comprehensive mutual research agenda is available for download from the project website.
FET11

FET11 - The European Future Technologies Conference and Exhibition 2011, held in Budapest 4-6 May 2011 was the second edition of a new forum dedicated to frontier research in information and communication technologies. It was unique conference on visionary, high-risk and long-term research in information science and technology. Featuring an exceptionally broad range of scientific fields, the event seeded new ideas across disciplines that will reshape the future. The FET11 coordination action managed by ERCIM and carried out together with SZTAKI and the Future and Emerging Technologies (FET) Units (Open and Proactive) of the European Commission, has as strategic objective to coordinate the efficient and effective organisation and related communications of the European Future and Emerging Technologies Conference and Exhibition 2011, and of promoting the development of a Future and Emerging Technologies (FET) community across diverse stakeholders.

The European Future Technologies (FET) Conference and Exhibition is the top European forum for facilitating international cross-disciplinary dialogue and discussion on visions and challenges for frontier research in future and emerging information technologies. Following the first FET conference held in 2009 in Prague, FET11 was designed to be highly interactive and engaging a broad and multi-disciplinary community.

The conference exceeded all expectations. It attracted more than 1000 participants and received huge media coverage. It involved key policy makers, and featured a mix of seven keynotes, a panel discussion, 30 scientific sessions, 100 poster presentations and a science cafe with energy-packed ignite-style presentations. Hands-on exhibitions with 30 booths ran throughout, in parallel to the conference, showcasing the latest research developments in future and emerging information technologies. FET11 also marked the official launch of the FET Flagship Pilots (see http://cordis.europa.eu/fp7/ict/programme/fet/flagship/) by Neelie Kroes, Vice President of the European Commission and Commissioner for the European Digital Agenda.

More than a traditional scientific conference, the FET Conference was a unique intellectual event which created an atmosphere of excitement for the opportunities presented by FET-type research in Europe.

Impressions from FET11. Left: Neelie Kroes opens the exhibition; right: ERCIM President Michel Cosnard awards the best exhibit 2nd prize winner.
GEO-RECAP

GEO-RECAP “Re-creation and building of capacities in Georgian ICT Research Institutes” is designed to support Georgia in enhancing the cooperative capacity of its ICT research centres and facilitate scientific cooperation between these centres and the European research area (ERA).

Georgia is currently in a period of reform. Analysis shows that the current weaknesses in the country’s research system are:

• a high diversification and division of research institutes
• a weak focus on research commercialization and links to industry
• a weak impact on the socio-economic conditions.

In this respect it is very important to improve the structure and profile of scientific research institutions, to develop strategies to reorganize the research institutes into “European style organizations” and to elaborate new funding models in particular with regard to international programmes and projects.

Two Georgian ICT research centres, N. Muskhelishvili Institute of Computational Mathematics (MICM) and Institute of Cybernetics (IC), members of the GEO-RECAP consortium, possess strong potential in ICT and applied mathematics.

The main objectives of GEO-RECAP will be achieved through two networking and training events: The first networking event was held in Budapest on 4-6 May 2011 in conjunction with FET11, the European Future Technologies Conference and Exhibition. A second event will be organized in Tbilisi in 2012. The project also organised a training event in Tbilisi in 2011, a second is planned for 2012.

GEO-RECAP Expectations
The expected outcome of the project is the following:

• RTD capacity building in Georgia
• enhanced participation of the country in the 7th Framework Programme
• increased scope of MICM and IC with increased linkage with the economic and social environment
• increased job opportunities in the country for young scientists
• increased scientific cooperation between the ERA and Georgian ICT centres.

GEO-RECAP is supported by the EU FP7 Capacities Work programme 2010; Activity 7.6. Integrating Europe’s neighbours into the ERA; Area INCO.2010-6.1: Eastern Europe and South Caucasus. ERCIM is a partner in the project.

GEO-RECAP - Re-creation and building of capacities in Georgian ICT Research Institutes, supported by the European Commission under the 7th Framework Programme
EC funding: €398 000
ERCIM’s role: project partner
ERCIM members involved: ERCIM EEIG
Coordinator: George Giorgobiani, Georgian Technical University
Duration: November 2010 - November 2012
http://georecap.eu:8080/
**i-Marine**

i-Marine is an open and collaborative initiative that will establish a data infrastructure to support the Ecosystem Approach to fisheries management and conservation of marine living resources. i-Marine empowers practitioners and policy makers from multiple scientific fields such as fisheries, biodiversity and ocean observation. The i-Marine infrastructure will ensure that otherwise dispersed and heterogeneous data is available to all stakeholder communities through a shared virtual environment that brings together multidisciplinary data sources, supports cross-cutting scientific analysis, and assists communication. The aim of i-Marine is to contribute to sustainable environmental management with invaluable direct or indirect benefits to the future of our planet, from climate change mitigation and marine biodiversity loss containment to poverty alleviation and disaster risk reduction.

i-Marine’s origins are in the D4Science project (see page 16), which developed capacities for data interoperability among different research infrastructures. The project delivered an open-source technology capable of operating data e-Infrastructures in a federated virtual environment. The next obstacle was to share data among different partners, and this is the engine behind i-Marine.

**i-Marine Services**

A range of products and services have already been implemented and are used by practitioners from a variety of user communities. These gCube-based (http://www2.gcube-system.org/) applications provide specialized functionalities for managing, processing, and visualizing scientific data and textual content:

- **AquaMaps** - Creating global distribution maps marine species which display changes in marine biodiversity caused by global climate change, using biogeography modelling.
- **Integrated Capture Information System (ICIS)** - Integrating regional and global capture and distribution information of aquatic species to improve the quality of global catch statistics
- **The Vessel Transmitted Information Tool (VTI)** - Delivering geospatial products that combine information on vessel activity, environmental conditions for scientists working in the fields of marine biology, ecology and environmental sciences.

As the i-Marine infrastructure develops, further services will be deployed.

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**iMarine** - Data e-Infrastructure Initiative for Fisheries Management and Conservation of Marine Living Resources is supported by the European Commission under the 7th Framework Programme

**EC funding:** €5.000.000

**ERCIM’s role:**
project co-ordinator

**ERCIM members involved:**
CNR, FORTH

**Scientific coordination:**
Donatella Castelli, CNR

**Administrative coordination:**
Philippe Rohou, ERCIM Office

**Duration:**
November 2011-April 2014

**http://www.i-marine.eu**
The MobiWebApp project supports the use of Web technology for developing mobile Internet services, bringing the advantages of Web applications from the desktop to the mobile world. Web applications are easy to deploy, they allow simple incremental updates and they can be developed quickly and at low cost due to a sizable existing developer base.

Started in September 2010, MobiWebApp includes support for European outreach, training, the development of test suites and standardization in the area of mobile Web applications.

The last four months of 2010 were used to get the project started, with already promising outcomes. The participation to four large conferences of MobiWebApp speakers made it possible to present the advantages of using the Web as mobile application platform.

The release of the Mobile Web Application Best Practices as a W3C Recommendation in December 2010 was the opportunity to get the content of that important document better known via a set of handy summary cards that were distributed in the numerous events in which the MobiWebApp staff was present, including the ICT 2010 conference in Brussels.

The MobiWebApp project also supported the standardization work in the W3C Device APIs and Policy Working Group, a group that is looking at bring more integration of Web technologies with on-device features such as cameras, microphones, address book, etc.

Training activities are a major project focus. In 2011 several training activities for application developers took place. The first course “Mobile Web 1: Best Practices”, an online course, delivered as a series of eight one-week modules, started in June 2011 and is followed by more than 200 students. This course as well as a second course “Mobile Web 2: Applications” are continued in 2012.
Multilingual Web

Given the importance of the World Wide Web to communication in all walks of life, and as the share of English web pages decreases and that of languages spoken in the European Union and around the world increases, the importance of ensuring the multilingual viability of the World Wide Web is of paramount importance.

In order to build on current internationalization of the Web and move it forward, it is important to raise awareness of existing best practices and standards related to managing content on the multilingual Web, and look forward to what remains to be done.

This thematic network includes 22 partners from 15 European countries representing a wide range of stakeholders.

At the core of the project were four public workshops held over a two year period. The workshops are intended to survey and share information about currently available best practices and standards that can help content creators and localizers address the needs of the multilingual Web, including the Semantic Web. They also provide an important opportunity to identify gaps that need to be addressed. The workshops were also designed as an opportunity for participants to network and share information between and across the various different communities involved in enabling the multilingual Web:

- Workshop 1: “The Multilingual Web – Where are we?”, 26-27 October 2010, Madrid, Spain
- Workshop 2: “Content on the Multilingual Web”, 4-5 April, 2011, Pisa, Italy
- Workshop 3: “A Local Focus for the Multilingual Web”, 21-22 September 2011, Limerick, Ireland

Building on the success of the original project, a new project is being funded by the European Commission. The work is being carried out at the W3C by the MultilingualWeb-LT Working Group. This project also spans the various areas involved in making the Web multilingual, and aims to define metadata for web content (mainly HTML5) and “deep Web” content (for example a CMS or XML files from which HTML pages are generated) that facilitates its interaction with multilingual technologies and localization processes. The project will also demonstrate interoperable implementations.
OMWeb

The popularity of Internet-based access to networked media such as television content, user-generated videos or music is growing very rapidly. With technologies such as HTML5 video, Web technology is currently undergoing a sea-change which makes it a strong contender for becoming an open, royalty-free standards-based platform for networked media that levels the playing field and enables new market participants, including European players. The key goals of the OMWeb project were to increase the networked media capabilities of Web standards to the level of proprietary technologies through standardisation, to increase the number of developers capable of developing web-based networked media content through training and to increase the awareness of W3C’s networked media work in Europe through outreach.

To achieve its standardisation goal, the OMWeb project helped establish the W3C Points of Interest Working Group and a first Working Draft of a “Points of Interest Core” specification was published. Moreover, the OMWeb project helped establish the W3C Web and TV Interest Group, who published a document on requirements for home networking scenarios (including second screen) as well as a set of TV requirement for HTML5 (including multi-track support, support for adaptive streaming and content protection). Finally, the OMWeb project supported the creation of the W3C Web Real-Time Communications Working Group, addressing real time audio/video conferencing in Web browsers as well as peer-to-peer streaming. The OMWeb project also organized a very successful workshop on “HTML.next for Games” which resulted in the creation of the W3C Games community group. To facilitate contribution by ICT projects to W3C standardization, the OMWeb published a standardization roadmap describing ongoing standardisation at W3C in the area of networked media. The OMWeb project organized three online training courses:

- Introduction to SVG
- HTML5 Audio and Video
- Game Development in HTML5.

These courses were attended by 280 students.

To achieve its outreach goal, the OMWeb project gave eleven presentations on W3C’s networked media activities at high-profile events, issued four press releases on W3C networked media activities and collected close to 350 press articles including from general interest press (El Mundo, The Guardian, France Info, Le Figaro, Les Echos, ZeitOnline) on W3C’s networked media activities.
PrimeLife

In their daily interaction over the Internet, individuals contribute throughout their life leaving a life-long trail of personal data. Technological advances facilitate extensive data collection, unlimited storage and reuse of the individual’s digital interactions. Today, individuals cannot protect their autonomy and cannot retain control over personal information, irrespective of their activities, as present information technologies hardly consider these requirements. This raises substantial new privacy challenges: how to protect privacy in emerging Internet applications such as collaborative scenarios and virtual communities; and how to maintain life-long privacy.

The PrimeLife project addressed the core privacy and trust issues pertaining to the aforementioned challenges. Its long-term vision is to counter the trend to life-long personal data trails without compromising on functionality. It built upon and expanded the FP6 project “Prime” that has shown how privacy technologies can enable citizens to execute their legal rights to control personal information in on-line transactions. The main objective of the project is to bring sustainable privacy and identity management to future networks and services:

- Fundamentally understand privacy-enhancing identity management ‘for life’ (practical life, throughout life & beyond)
- Bring Privacy to the Web and its Applications
- Develop and make tools for privacy friendly identity management widely available -privacy live!

Resolving these issues requires substantial progress in many underlying technologies. PrimeLife substantially advanced the state of the art in the areas of human computer interfaces, configurable policy languages, web service federations, infrastructures and privacy-enhancing cryptography. Its community at large can now adopt the results of the project by working with the relevant Open Source communities, standardisation bodies and relevant partner’s projects.

The results such as prototypes and demonstrators developed within the project documents, and scientific articles can be downloaded from the project web site.
RACE Network RFID

The vision of the RACE networkRFID, supported by the European ICT Policy Support Programme was to provide a RFID network of excellence that creates opportunities and increases the competitiveness of European Member States in the area of RFID through innovation, development and implementation. At the same time it positions RFID technology within the mainstream of information and communications technology.

The network draws upon the expertise of Member States and the evolving RFID community to create a dynamic, change-responsive capability that not only aligns with the initial Information and Communications Technologies Support Programme objectives, but extends that capability to accommodate emergent and future needs.

RACE networkRFID meets the pressing need to generate greater awareness and uptake and the exploitation of user-facing opportunities for innovation and enterprise. It capitalises on work done by European projects and national initiatives to confirm Europe’s position as a leading force in RFID.

After two years of activity, RACE network RFID has taken a more commercial turn, focusing on the needs of and opportunities for SME’s in the area of Radio Frequency Identification. To this end, RACE has decided to brand itself under the new name RFIDinEurope. It has transformed its institutional web site into a more appealing format, addressing the need for practical information and services expressed by the SME’s taking part in the project. As an illustration of this drive towards industry, the database of RFID use cases is now populated with 26 examples of successful applications of the RFID technology. Driven by its 25 core members, the network has now reached an associate membership of 200+ partners representing the 27 member states. In doing so, RFIDinEurope is now able to reach the vast majority of the European RFID community.

In the last year of its EC-funded period, RFIDinEurope gave its full attention to sustainability. All members are keen to maintain a structure that will enable them to continue ripping the benefits they got as a result of this project. The initial point of the project’s sustainability programme was the organisation of the RFIDinEurope conference which successfully took place in Prague at the end of March 2011. Members firmly intend to make this gathering of the European RFID community an annual event for the years to come.
SERENO"A

Serenoa is aimed at developing a novel, open platform for enabling the creation of context-sensitive service front-ends (SFEs). A context-sensitive SFE provides a user interface (UI) that exhibits some capability to be aware of the context and to react to changes of this context in a continuous way. As a result such a UI will be adapted to a person's devices, tasks, preferences, and abilities, thus improving people's satisfaction and performance compared to traditional SFEs based on manually designed UIs.

Serenoa will perform automatic adaptation of UIs involving the end user in two major ways: users can intervene in the adaptation (e.g., by controlling, suggesting, accepting/rejecting adaptations, requesting better adaptations) and the system can learn from users (e.g., by observation, by sensing, by machine learning). The final aim is to support humans in a more effective, personalized and consistent way, thus improving the quality of life for European citizens. In this scenario, we envisage Serenoa as the open source reference implementation of a SFE adaptation platform for the Future Internet.

The expected outcome of Serenoa is:
- a computational framework for multi-dimensional adaptations
- reference models, languages and a methodology which will enable the rapid prototyping and engineering of context-sensitive SFEs
- an open source adaptation engine covering the whole adaptation lifecycle
- an authoring tool to facilitate the engineering, designing and development processes.

During the experimentation and evaluation phases of the project, the Serenoa technology was instantiated, integrated and parameterized to satisfy the demands imposed by domain-specific scenarios (already identified) of context-aware adaptation of SFEs. Such instantiations (in the form of application prototypes) will serve to assess the soundness of our ideas, their acceptance by end-users as well as their viability from a pure technological point of view.

\[\text{http://www.serenoa-fp7.eu/}\]
VOICES

There is a widespread agreement that ICT services, especially mobile ones, have the potential to play a major role in furthering social and rural development in developing economies. Market penetration and rural community adoption of basic mobile telephony and services have been extremely rapid in recent years. This is opening up lots of new opportunities, but in order to realize the full potential of mobile ICT services, however, important challenges and obstacles must be overcome. This is what the VOICES project sets out to do.

The Mobile Web for Social Development Roadmap, recently published as a result of the EU-FP7 Digital World Forum project, makes it abundantly clear that realizing the full potential of mobile ICT and Web services requires addressing two big types of challenges:

• The leveraging of content that is locally relevant to actors and entrepreneurs who are of key importance to on-the-ground social and rural development.
• The removal of a range of access barriers (notably, limitations related to access channels, literacy, and languages) that currently hamper information/knowledge sharing and associated community building especially in rural areas.

The VOICES objectives are to deliver the following results and advances and show their value particularly in the African context:

Open and wider access: VOICES will improve voice-based access to content and mobile ICT services by building a toolbox for the development of innovative voice services VOICES will work towards integration of local community radio and ICTs. VOICES will deliver speech technologies: tool support and methodology for under-researched and under-resourced African languages.

Long term sustainability: A sustainable architecture and business models will ensure local adoption and exploitation of the tools and methods beyond the end of the project. VOICES will enhance uptake by delivering a mobile training lab that offers capacity building for local partners.

VOICES - “Voice-based Community-centric mobile services for social development” is a “Specific International Cooperation Action” supported by the European Commission under the 7th Framework Programme

EC funding: €2 045 000

ERCIM’s role: project coordinator

ERCIM members involved: ERCIM EEIG/W3C

Scientific coordination: Stéphane Boyera, Web Foundation

Administrative coordination: Tom Williamson, ERCIM Office

Duration: January 2011-June 2013

http://www.mvoices.eu/
WAI-ACT

WAI-ACT, a Cooperation Framework for Guidance on Advanced Technologies, Evaluation Methodologies, and Research Agenda Setting to Support eAccessibility, addresses critical areas of advanced accessibility support through activities that build upon the strengths of past web accessibility work, harmonizes existing work, and helps shape a research agenda in coordination with key stakeholders in Europe and internationally.

The project addresses the need for expanded European and international cooperation on the development of accessibility solutions for people with disabilities; for consensus-based, authoritative technical guidance to accelerate implementation of advanced technologies; for internationally harmonised evaluation methodologies; and for a coordinated research agenda on eAccessibility.

WAI-ACT addresses these challenges through development of a framework for open, expanded cooperation among European and international stakeholders, technical guidance on advanced web technologies; an evaluation methodology for web accessibility; and a research agenda for eAccessibility. Technical guidance will include a repository of information on accessibility support in web technologies, application notes on authoring accessible web page components, and code samples for web applications. WAI-ACT will result in:

- Expanded cooperation on the development of accessibility solutions
- Authoritative accessibility guidance on advanced web technologies
- Harmonized methodologies for evaluating accessibility of websites
- Common visions for a coordinated eAccessibility research agenda.

WAI-ACT builds upon the strengths of the W3C Web Accessibility Initiative (WAI) cooperation mechanisms to facilitate strategic European and international participation throughout the project. WAI-ACT also has active exchange with relevant networks in Europe such as eAccess+, and coordinate standardisation activities.
WEBINOS

The Webinos project will define and deliver an Open Source Platform and specific components for the Future Internet, which will enable web applications and services to be used and shared consistently and securely over a broad spectrum of converged and connected devices, including mobile, PC, home media (TV) and in-car units. Promoting a “single service for every device” vision, Webinos will move the existing baseline from installed applications to services, running consistently across a wide range of connected devices, ensuring that the technologies for describing, negotiating, securing, utilizing device functionalities and adapting to context are fit for purpose. Innovations in contextual description will be broad covering but not limited to device capabilities, network access, user identity and preferences, location, behaviourally induced properties and finally the more complex issue of the users’ social network context.

Webinos will directly address security and privacy issues as part of Quality of Service that users of web services expect. The addressed challenges comprise: how to provision and adapt security across a range of devices, services, networks as well as how individuals can gain control over the privacy aspects of their web presence regardless of the service that is being used. Context and privacy are intimately intertwined: rich context is valuable but without user controlled privacy it becomes a liability.

Webinos will boost the industry migration towards web-based services. Webinos can back this by providing inter-operable, standardised, open source technology utilizable across domains with direct commercially exploitable value. Webinos will also act as an industry catalyst to encourage collaboration and discourage fragmentation in this space.

There are strong industry moves towards Internet friendly and Internet integrated offerings, and there exists a window of opportunity to place this WebOS technology on a robust open foundation that will remove economic barriers to engagement, embody policy on data privacy in concrete technology (protecting consumers and enterprise) and creating a centre of web centric expertise (benefiting technical competitiveness).

WEBINOS - Secure WebOS Application Delivery Environment is a “Collaborative Project” supported by the European Commission under the 7th Framework Programme

EC funding: €9 780 000

ERCIM’s role: project partner

ERCIM members involved:
Fraunhofer FOKUS, W3C/ERCIM

Coordinator:
Stephan Steglich, Fraunhofer-Gesellschaft

Duration: September 2010-August 2013

http://webinos.org/
Human Capital (HC) is a central concern within all organizations. In ERCIM its main focus is the European cooperation of different entities with their own HC policies. To this end we are currently building on two key activities. The first is the ERCIM post-doc fellowship programme that has been in existence for a long time and has been reinforced and further stimulated by the support of the European project “ABCDE” (see pages 12 and 31). This programme facilitates the participation of young scientists in research teams within ERCIM member institutes by organizing postdoctoral fellowships. In addition to mobility in high quality teams, it helps participants further their understanding of the European research environment and carrier capabilities. The second activity is the Cor Baayen Award that acknowledges the achievements of young research scientists from European teams in informatics or mathematics (See page 33).

There is scope for further development of both of these tools, but we would also like to create new schemes for mobility between ERCIM members. In particular, in addition to post-docs, we would like to foster mobility of all scientists, including phd students, engineers and management and administration professionals.

ERCIM’s Human Capital Task Group is in charge of supervising these actions and proposing new directions. Its current members are:
Tore R. Jørgensen, NTNU
Claude Kirchner, Inria (chair)
Adriana Lazzaroni, CNR
Laszlo Monostori, SZTAKI
Leszek Pacholski, PLERCIM
Julius Stuller, CRCIM
Pierre Wolper, FNRS/FWO
Edgar Weippl, AARIT

Claude Kirchner, Inria, chair of the
ERCIM Human Capital Task Group
Alain Bensoussan Fellowship Programme

The PhD Fellowship Programme has been established as one of the premier activities of ERCIM. Since its inception in 1991, over 300 fellows have passed through the programme. In 2011, 39 young scientists commenced an ERCIM PhD Fellowship and 67 fellows had been hosted during the year. This represents 388 person-months.

The ERCIM Fellowship Programme is open to young researchers from all over the world. It focuses on a broad range of fields in Computer Science and Applied Mathematics. Ideally, a fellow will work in two ERCIM institutes, thus contributing not only to the work done locally, but also to cohesion between ERCIM partners and to the cross-fertilisation and cooperation between research groups working in similar areas in different laboratories.

The fellowship scheme also helps young scientists to improve their knowledge of European research structures and networks and to gain more insight into the working conditions of leading European research institutions. In 2010, many of the hosted fellows were native of countries outside the European Union. This reflects ERCIM’s contribution to make Europe not only the world’s biggest ‘brain factory’ but also a large ‘brain magnet’ in the field of informatics and applied mathematics.

With the co-funding by the European Commission, the fellowships are of 24 months duration, spent in two of the ERCIM institutes, or 12 months duration spent in one institute. Candidates must:

• have obtained a PhD degree during the last eight years (prior to the application deadline) or be in the last year of the thesis work with an outstanding academic record
• be fluent in English
• be discharged or get deferment from military service
• have completed their PhD before starting the grant.

The fellows are appointed either by a stipend (an agreement for a reasearch training programme) or a working contract. The type of contract and the monthly allowance/salary depends on the hosting institute.

Deadlines for applications are currently 30 April and 30 September each year.

Since 2005 the Fellowship Programme has been named in honour of Alain Bensoussan, former president of INRIA and one of the three ERCIM founding fathers.

http://www.ercim.eu/activity/fellows
ERCIM Fellows hosted in 2011

- Giuseppa Alfano at NTNU
- Lacramioara Astefanoaei at Inria and PLERCIM
- Chakib Bekara at Fraunhofer
- Scott Beveridge at Fraunhofer
- Antonis Bikakis at FNR
- Carles Bosch at Inria
- Majid Butt at Fraunhofer
- Alessandro Crimi at Inria
- José Danado at NTNU and CNR
- Olawande Daramola at NTNU
- Lorenzo Di Biagio at PLERCIM
- Van Tuan Do at VTT
- Zoé Drey at SparCIM
- Fabien Duchateau at NTNU
- Simon Duquennoy at SICS
- Ismail El Sayad at Fraunhofer
- Fei Gao at NTNU
- Panagiotis Germanakos at CNR
- Marco Giunti at Inria
- Ho Dung Ha Duong at Fraunhofer
- Anthony Harrington at PLERCIM
- Anders Hast at CNR
- Jean-Laurent Hippolyte at VTT
- Amir Jabbari at CNR
- Audrius Jurgielionis at Fraunhofer and NTNU
- Georgios Karopoulos at CNR
- Koray Kayabol at Inria and CWI
- Md Aquil Khan at Fraunhofer
- Dzmitry Kliazovich at VTT
- Atanas Kostadinov at NTNU
- Konstantinos Kotis at VTT
- Kyriakos Kritikos at FNR
- Frédéric Larue at CNR
- Serguei Lenglet at PLERCIM
- Jorge Alberto Fox Lozano at NTNU and CNR
- Ioanna Lykourentzou at FNR and Inria
- Valeria Manna at VTT
- Fabio Mesiti at NTNU
- Allahyar Montazeri at Fraunhofer
- Muhammad Marwan Muhammad Fuad at NTNU
- Thanh-Duong Nguyen at NTNU
- Giuseppe Papari at Inria
- Ján Perháč at NTNU
- Giuseppe Pirrò at Inria
- Georgios Pitsilis at FNR
- Zehui Qu at CNR
- Ludmilla Rozanova at CNR
- Tatiana Ryabukha at PLERCIM
- Francesco Santini at CWI
- Dirk Schröder at NTNU
- Valerio Senni at Inria
- Konstantino Stefanidis at NTNU
- Florin Stoian at NTNU
- Petra Sundström at AARIT
- Özgür Tamer at NTNU
- Radha Thanga Raj at FNR
- Marialena Vagia at NTNU
- Christian Versari at Inria
- Dimitrios Ververidis at Fraunhofer
- Srdjan Vesic at FNR
- MM Waliullah at Inria
- Srdjan Vesic at NTNU
- Maciej Wielgosz at NTNU
- Qinghua Wang at NTNU
- Wei Wang at FNR
- Colin Willmott at CRCIM
- Sergiy Zhuk at CWI
Cor Baayen Award 2011
shared by two Winners:
Stratos Idreos and Luca Mottola

This year, ERCIM has exceptionally selected two winners for the Cor Baayen Award: Stratos Idreos, researcher in the Database Architectures group of CWI and Luca Mottola, researcher in the Networked Embedded Systems Group at SICS.

Stratos Idreos did his PhD research at CWI and received his PhD degree in 2010 at the University of Amsterdam, where he defended his thesis "Database Cracking: Towards Autotuning Database Kernels".

In his thesis, Stratos addressed a core component of database management systems and takes a radical departure from the baseline for building efficient systems. He invented the concept of "database cracking", a remarkable result in an area that is fundamental for database systems and has been studied for decades.

The potential impact is very promising; especially in areas where large amounts of data have to be handled and where a priori workload knowledge is not readily available as, for example, in scientific databases, dealing with multiple Terabytes of new data on a daily basis. The technique has been fully realized in the open-source system “MonetDB”, developed at CWI, which is already widely used for data warehouses and forms a basis for scientific databases.

Luca Mottola, researcher and former ERCIM fellow at SICS. His research focuses on wireless sensor networks, and their programming in particular. These are key components in the “Internet of Things” vision. Luca is among the few researchers able to claim the design of high-level programming abstractions successfully used in real deployments. His programming systems are used in challenging real-world scenarios, for example in safety critical control systems in road tunnels.

Luca received his PhD degree at Politecnico di Milano, Italy with the thesis “Programming Wireless Sensor Networks: From Physical to Logical Neighborhoods” in 2008. Since then his work has gained international recognition with several awards. Luca's expertise in wireless sensor networks extends beyond programming. Over time, his research has broadened to embrace a number of diverse topics, from theoretical work on distributed algorithms to formal verification of embedded software and investigations on MAC protocols and low-power wireless.

Luca’s results represent a paradigmatic example of how the research activity in a field may have direct real-world impact. The specific field Luca is focusing on holds great potential, as it represents a fundamental building block of the “Internet of Things” vision.

The Cor Baayen Award, named after the first president of ERCIM and the ERCIM “president d'honneur”, is awarded each year to a promising young researcher in computer science and applied mathematics.

2011 Finalists
Each institute was allowed to select up to two finalists from its country. For the 2011 Cor Baayen Award, The ERCIM Executive Committee has accepted 22 finalists (in alphabetical order):

- Christoph Becker
- Libor Behounek
- Csaba Benedek
- Michele Berlingerio
- Stefan Canzar
- Pietro Ducange
- Pål From
- Sarunas Girdzijauskas
- Stratos Idreos
- Philip Ingrey
- Raphaël Jungers
- Dalia Khader
- Niels Landwehr
- Pál Liljebäck
- Philippe Moireau
- Luca Mottola
- Marc Pouly
- Balazs Rath
- Thomas Schultz
- Jukka Suomela
- Thomas Weigold
- Andrei Zaharescu

The winners, Stratos Idreos and Luca Mottola, were selected by the ERCIM Executive Committee on advice from the ERCIM Advisory Committee.

Award Rules
The Cor Baayen Award, awarded to a promising young researcher in computer science and applied mathematics, was created in 1995 to honour the first ERCIM President and is open to young researchers having completed their PhD thesis in one of the “ERCIM countries”. The award consists of a cheque for €5000 together with an award certificate. The successful fellow invited to the ERCIM autumn meetings.
The ERCIM Outreach Task Group is responsible for the communication between ERCIM and its wide range of stakeholders. They include national and international funding bodies, the research community in informatics and applied mathematics, with a focus on both senior scientists and young researchers, as well as industrial R&D. ERCIM considers its outreach activities as an important tool for community building. These include publications such as the ERCIM News magazine, the ERCIM web site and the support and organisation of scientific events.

The well established ERCIM News magazine (see next page), under the responsibility of the editorial board, has already successfully contributed to ERCIM's reputation in the scientific community. It is also a good example for the close cooperation between all ERCIM institutes. In addition to ERCIM News, a number of strategic reports have also been published. All this information can also be accessed through an RSS feed through social media such as twitter and LinkedIn.

With the recent restructuring of ERCIM, the website (http://www.ercim.eu) was revised, now reflecting the new structure while keeping the key information channels unchanged to maintain the familiar access points for our regular visitors.

ERCIM has also been a sponsor and co-organiser of many scientific events. In May 2011, ERCIM was co-organiser of FET11, The European Future Technologies Conference and Exhibition 2011 together with SZTAKI and the Future and Emerging Technologies (FET) Units (Open and Proactive) of the European Commission. This top European forum for facilitating international cross-disciplinary dialogue and discussion on visions and challenges for frontier research in future and emerging information technologies was attended by more than 1000 participants and received huge media coverage.

ERCIM is also planning to establish a yearly scientific symposium held in conjunction with the ERCIM fall meetings with the goal to attract to a larger audience to participate in ERCIM's activities. The first edition of the ERCIM Symposium will be held in Sophia Antipolis as part of the ERCIM Fall Meetings 23-26 October 2012.

Stay informed about ERCIM activities through www.ercim.eu, ercim-news.ercim.eu, @ercim_news, join the open ERCIM LinkedIn Group (and join us at the ERCIM Symposium in October in Sophia Antipolis, France).

The current members of the Outreach Task Group are:

- Silvia Abrahao, SpaRCIM
- Erzsebeth Cseuhaj-Varju, SZTAKI
- Marios Dikaiakos, UCY
- Irini Fundulaki, FORTH
- Truls Gjestland, NTNU
- Marie-Claire Forgue, W3C
- Kersti Hedmann, SICS
- Annette Kik, CWI
- Peter Kunz, ERCIM office
- Carlo Meghini (CNR)
- Benoit Michel, FNRS/FWO
- Eleni Orphanoudakis, FORTH
- Carol Peters, CNR
- Martin Prime, STFC
- Andreas Rauber, AARIT (chair)
- Harry Rudin, SARIT
- Erwin Schoitsch, AARIT
- Jiri Zlatuska, CRCIM
ERCIM News

Since its creation, ERCIM News has evolved from ERCIM’s ‘in-house newsletter’ into a European quarterly magazine in the domains of Information and Computer Sciences, Applied Mathematics and Communication Technologies, published in both printed and online editions.

ERCIM News mainly consists of articles written by scientists and edited according to guidelines designed to make the articles accessible to all target groups. It also includes invited articles by European policy-makers and decision-makers in relevant areas. ERCIM News’ objective is to provide regular and continually updated high-quality and authoritative information concerning European research and innovation activities in the scientific domains of interest. The information is reported in an easily accessible fashion, with references and links being provided so that the interested reader can find more in-depth information on specific topics as needed. The intended target audience is thus international and national scientific policy- and decision-makers, European and national funding agencies, the global scientific community and relevant industrial organisations, with a special focus on the European area. Through the short articles and news items, it provides a forum for the exchange of information between both member institutes and the wider scientific community.

With each issue focusing on a special theme, the ERCIM News series has become a unique collection providing an overview of different topics within information technology. In 2010 ERCIM covered the following special themes:

- Intelligent and Cognitive Systems
- Unconventional Computing Paradigms
- Cultural Heritage
- Ambient Assisted Living

For each issue, ERCIM News invites a personality to write a keynote statement relevant to the European scientific community. Authors have included:

- Hans-Georg Stark, European Commission
- Susan Stepney, University of York
- Khalil Rouhana, European Commission
- Constantine Stephanidis, ICS-FORTH

ERCIM News is the result of close cooperation between all ERCIM institutes. It is published in both printed and electronic form. The printed edition has a circulation of about 8,000 copies and is distributed in over 100 countries. The online edition offers full-text searching and the numerous sites and documents quoted can easily be accessed on the Web. ERCIM News has made a significant contribution to the wider recognition of ERCIM.

http://ercim-news.ercim.eu/
ERCIM Office

ERCIM has an office in Southern France, hosted by Inria and located in the Inria Sophia Antipolis Research Centre premises, nestled amongst researchers (and surrounded by cicadas). The ERCIM Office manages the day-to-day business of ERCIM as well as the European branch of the World Wide Web Consortium (W3C).

With its team of experts, the ERCIM Office provides assistance to ERCIM members in managing European projects by performing the financial and administrative tasks, either as coordinator or partner. Member institutes can thus fully concentrate on scientific work, unburdened by time-consuming administrative tasks. The office has been involved with more than 70 successful projects. The 18 projects in which the ERCIM Office was involved in 2011 are described on pages 11-29. They also include projects with participation of the W3C. Some include both W3C and ERCIM members. These provide a nice example of how ERCIM can facilitate cooperation between research institutes and the W3C with its interest in Web standardization.

Hosting and managing the European branch of W3C is another major task of the ERCIM Office. The activities related to W3C represent about the half of ERCIM’s budget. Details are given on the following pages.

The ERCIM Office is under the responsibility of ERCIM EEIG Board of Directors but also handles ERCIM AISBL financial matters and supports the whole ERCIM community in administrative matters such as the management of the ERCIM Fellowship Programme, as well as in communications, for example by hosting and maintaining web sites and by producing ERCIM News.

ERCIM Office employees in 2011

- Caroline Baron, finance and administration manager
- Lea Bellolou, project assistant
- Pierre Guisset, senior consultant
- Peter Kunz, ERCIM News central editor, communications
- Viven Lacourba, IT manager
- Alexandra Lavriotte, administrative assistant
- Emma Liere, project assistant
- Jessica Michel Assoumou, project coordinator
- Linh Nguyen, project assistant
- Pascale Peyrol, administrative assistant
- Samuel Réthoré, systems engineer
- Philippe Rohou, project group manager
- Jean-Guilhem Rouel, systems engineer
- Tom Williamson, project coordinator

Jérôme Chailloux, ERCIM Manager and head of the ERCIM Office.
ERCIM and W3C

ERCIM hosts the European headquarters of the World Wide Web Consortium (W3C). ERCIM and W3C aim to strengthen research relationships throughout Europe to better support the development of Web technology and to jointly share the results of their collaboration.

Five of the European W3C Offices are based at ERCIM institutes, namely at CWI (Benelux); FORTH (Greece); SZTAKI (Hungary); CNR (Italy) and SICS (Sweden). W3C Offices in Europe work with their regional Web communities to promote W3C technology in local languages, broaden W3C’s geographical base, and encourage international participation in W3C activities. Specifically, the W3C Offices help organize meetings and workshops (on topics such as Web privacy, Open Data, multilingual Web, WebTV, and the mobile Web).

As a consortium of members from many European countries, ERCIM creates a balance between European diversity and necessary homogeneity by building bridges between different cultures and facilitating the movement of technical ideas within academia and across borders. W3C is very heavily swayed by its members, several of them having interests in the Web (such as HTML5, mobile Web, social Web, eGovernement, etc.) whereas ERCIM jointly has widespread interest in many research fields where Web standards are rarely used. ERCIM then helps to gather those Web communities and make them work together.

Moreover, ERCIM members have strong ties with industrial partners and start-up companies. This is an excellent opportunity for W3C to enlarge its cooperation with European industry, which can broaden its participation in the making of standards.

Finally, hosting the W3C allows ERCIM members to benefit from the know-how and expertise of the W3C team, and to increase its visibility based on W3C’s worldwide reputation. The joint efforts of ERCIM and the W3C have started to increase Web research cooperation in Europe. The number of European Members is of 152 from a total of 369. The W3C Team includes 66 people working from locations across the globe, with 25 being employed by ERCIM (all figures for June 2012).

2011 Highlights

HTML5
In May 2012, W3C called for broad review of HTML5 and five related specifications that constitute the foundation of W3C’s Open Web Platform. At the heart of this platform, HTML5 offers powerful tools for creating Web-based applications that will run on any device. Due to the significant impact of this technology on industry and society, W3C is actively seeking feedback at this phase of the standards process. W3C is developing a comprehensive test suite to achieve broad interoperability for the full specification by 2014, the target date for Recommendation. HTML5 specification: http://www.w3.org/TR/html5/ HTML5 Working Group: http://www.w3.org/html/wg/

Launch of W3C Community and Business Groups
To support the rapid evolution of Web technology, W3C announced today an agile track for developers and businesses to create Web technology within W3C’s international community of experts. Because innovation can come from organizations as well as individuals, W3C has designed Community Groups to promote diverse participation: anyone may propose a group, and groups start quickly as soon as there is a small measure of peer support. W3C also launched Business Groups which provide W3C Members and non-Members a vendor-neutral forum for the development of market-specific technologies and the means to have a powerful impact on the direction of Web standards. W3C Community Group: http://www.w3.org/community/about/#cg W3C Business Group: http://www.w3.org/community/about/#bg

Inria Hosts First W3C Office in France
To strengthen its relations with industry and research activities in France and Europe,
W3C was proud to announce the opening of a W3C Office in France, hosted by Inria. "Inria has a longstanding commitment to the development of free software and open standards," said Michel Cosnard, Inria Chairman and CEO. "We have supported W3C's mission since the inception of the Consortium in 1994, notably by hosting W3C's European branch". The promotional and recruiting activities of the Office, located in Paris, will complement the technical activities carried out by the W3C staff located with the ERCIM Office in Sophia Antipolis.

W3C French Office: http://www.w3c.fr/

W3C Fosters Trust on the Web with the First Draft of "Do Not Track" Standard for Online Privacy

The new standard will allow users to express a preference whether or not data about them can be collected for tracking purposes. This helps to establish a new communication channel between users and services to prevent surprises and re-establish trust in the marketplace. The standard, developed by the Tracking Protection Working Group, will also define mechanisms for sites to signal whether and how they honor this preference and a mechanism for allowing the user to grant site-specific exceptions to DNT.


About the World Wide Web Consortium

The World Wide Web Consortium (W3C) is an international consortium within which member organisations, a full-time staff and the public work together to develop Web standards. W3C's mission is: "To lead the World Wide Web to its full potential by developing protocols and guidelines that ensure long-term growth for the Web."

W3C develops Web Standards and Guidelines

W3C primarily pursues its mission through the creation of Web standards and guidelines. In its first ten years, W3C published more than ninety such W3C recommendations. W3C also engages in education and outreach, develops software, and serves as an open forum for discussion about the Web. In order for the Web to reach its full potential, the most fundamental Web technologies must be compatible with one another and allow any hardware and software used to access the Web to work together. W3C refers to this goal as 'Web interoperability'. By publishing open (non-proprietary) standards for Web languages and protocols, W3C seeks to avoid market fragmentation and thus Web fragmentation.

W3C is an International Consortium

Organisations located all over the world and involved in many different fields join W3C to participate in a vendor-neutral forum for the creation of Web standards. W3C Members and a dedicated full-time staff of technical experts have earned W3C international recognition for their contributions to the Web.

W3C Members, staff and invited experts work together to design technology that ensures that the Web will continue to thrive in the future, accommodating a growing diversity of people, hardware and software. W3C's global initiatives also include nurturing liaisons with over forty national, regional and international organisations around the globe. W3C operations are jointly administered by the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL) in the USA, ERCIM and Keio University in Japan.

W3C Members

Organisations join W3C to work and exchange ideas with more than 350 Members, including the world’s foremost technology companies, who come from more than forty countries and have a broad range of interests. W3C recently instituted a number of changes to its fee structure to encourage participation from organisations in developing countries as well as from EU-funded projects.

W3C Members take a leadership role in the future of the Web, promote their image as innovators participating in a standards body international in mission and impact, and gain early insight into market trends.

W3C Members include vendors of technology products and services, content providers, corporate users, research laboratories, standards bodies and governments, all of whom work to reach consensus on a direction for the Web. Adoption of W3C standards and the reliance of global commerce and information exchange upon W3C Web standards continue to grow. Members have a unique opportunity to participate directly in the revolution that is changing the way the world works and people live.

http://www.w3.org
Throughout 2011 ERCIM traded as ERCIM EEIG while starting up ERCIM AISBL. ERCIM operated with a gross turnover of 32 million €. 69% of these funds came from EU funding of projects which was either disbursed to partners in consortia or held over for disbursement in the next year. The remaining sources of income and activities consuming expenditure are outlined below.
After having successfully grown to become the most recognized ICT Society in Europe, acting as a hub to national ICT research via a national representative member, ERCIM has in 2011 opened membership to allow multiple members per country. Following requests during the last years, it is now possible for a small number of excellent research institutions in ICST per country to become members of ERCIM.

A member institute must be a leading research establishment in its country with excellent links to both its national and the international research communities. All ERCIM members are national centres of excellence and independent of specific commercial ties. They have a strong involvement in the research programmes of the European Union and joint projects with both small and medium-sized enterprises and large industrial companies.

The institutions members of ERCIM in 2011 are presented on the following pages.

**Benefit of ERCIM membership**

ERCIM is a European-wide network internationally recognized as a representative organisation in its field. Members can benefit from easy access to all major ICT research groups in Europe. Members can take part in all ERCIM activities including research projects, Working Groups and in the ERCIM Alain Bensoussan Fellowship Programme supported by the European Union. They can also benefit from ERCIM’s privileged partnership with standardisation bodies such as W3C and ETSI.

For further information about how to join ERCIM AISBL, please contact Domenico Laforenza, ERCIM Vice-President (domenico.laforenza@iit.cnr.it)
AARIT, the Austrian Association for Research in Information Technology (Österreichische Vereinigung für IT-Forschung), was founded in May 2001 as a platform for the Austrian information technology research community. AARIT is a legal entity and an independent non-profit association. AARIT is ERCIM’s gateway to the Austrian information technology research community.

The mission of AARIT is to promote research and development in information technology and related subject areas. To achieve this, AARIT aims to strengthen scientific co-operation among its members on a national level, through international co-operation and through transfer of know-how and knowledge. The activities of AARIT include co-operation with and participation in scientific organisations nationally and internationally. The Association carries out, participates in or commissions research projects, organises meetings and courses, and participates in conferences. Further activities include the granting of fellowships, awards and sponsorships and the collection and exchange of information among members and third parties.

Members
AARIT accepts institutional members only, according to ERCIM rules for membership (European/international research and projects in IT). The institutional members of AARIT cover a wide range of research activities. AARIT members participate in national and European research projects such as ARGO (Austrian GRID Consortium), in Framework Programme and ARTEMS projects, in the areas of image processing and advanced computer vision, safety and security of software intensive systems, embedded systems, natural language processing, telematics, digital libraries, social aspects of IT etc. Institutional members currently are:

- AT: Austrian Institute of Technology GmbH (Vienna, founding member)
- C3T: Central European Institute of Technology (Schwechat)
- CGI: Dept. of Computer Science (Salzburg)
- IFR: Information Retrieval Facility (Vienna)
- Fh-Campus Wien - Competence Center IT Security (Vienna, associated member)
- OCG: Austrian Computer Society (Vienna, founding member)
- ÖNIN: Austrian Research Institute for Artificial Intelligence (Vienna, founding member)
- SBA-RESEARCH - SBA Research (Vienna)
- SRFG: Salzburg Research Forschungsgesellschaft (Salzburg, founding member)
- TU Graz - Faculty of Computer Science (Graz)
- TU Wien
- Institute of Information Systems: Distributed Systems, Database and Artificial Intelligence and Knowledge Based Systems
- Institute for Software Technology and Interactive Systems: Information and Software Engineering Institute, interactive media systems and Business Informatics
- VCP: European Centre for Parallel Computing (Vienna, founding member)
- WPI - Wolfgang Pauli Institute (Vienna)

Several new members are in the stage of joining AARIT.

Informatics and Applied Mathematics at the Italian National Research Council

The Italian National Research Council (CNR) is a government funded organization which conducts research in nearly all the main scientific disciplines through a network of institutes. CNR funding covers the main infrastructures, permanent staff, and some basic research. Individual institutes must find additional funding from national and international contracts. From 2006, the scientific activities of CNR are structured in eleven macro research areas, each one coordinated by a Department. The Department for Information and Communication Technologies is responsible for the coordination and evaluation of the scientific and technical activities of the eight CNR Institutes working in this sector:

- IASI – Istituto di Analisi dei Sistemi e di Informatica, Roma (www.iasi.cnr.it)
- ICAR – Istituto di Calcolo e Reti ad Alte Prestazioni, Cosenza, Napoli and Palermo (www.icar.cnr.it)
- IEIT – Istituto di Elettronica e di Ingegneria dell’Informazione e delle Telecomunicazioni, Torino, Milano and Bologna (www.ieit.cnr.it)
- IIT – Istituto di Informatica e Telematica, Pisa (www.iit.cnr.it)
- IMATI – Istituto di Matematica Applicata e Tecnologie Informatiche, Pavia, Genova and Milano (www.imati.cnr.it)
- IREA – Istituto per il Rilevamento Elettromagnetico dell’Ambiente, Napoli (www.irea.cnr.it)
- ISTC – Istituto di Scienze e Tecnologie della Cognizione, Roma, Padova and Trento (www.istc.cnr.it)
- ISTI – Istituto di Scienze e Tecnologie dell’Informazione, Pisa (www.isti.cnr.it)

CNR in ERCIM
The President of CNR has delegated the ICT Department to represent CNR in ERCIM. ERCIM related activities at CNR are mainly covered by the following two ICT institutes, located in Pisa:

- Istituto di Scienze e Tecnologie dell’Informazione
- Istituto di Scienze e Tecnologie dell’Informazione

The strategic research areas currently covered at ISTI are: software engineering, formal methods for specification and verification, information engineering and information systems, data mining, digital libraries, high-performance computing, dependable computing, wireless and mobile networks, human computer interaction, visual computing, image and signal processing, space flight dynamics, materials and structural mechanics.

Combined Budget
Total funding is €18.5 million per year, of which €6.5 million is from projects: 50% EC projects, 30% national projects, 20% contract research from industry.

Staff
Approximately 220 scientific staff and 100 support staff plus varying number of graduate students.

Contact:
CNR
Viale Roma, 1
56124 Pisa
Italy
Tel: +39 050 312 2678
Fax: +39 050 315 2610
http://www.isti.cnr.it/
Czech Research Consortium for Informatics and Mathematics

CRCIM is a consortium consisting of four major Czech R&D institutes active in informatics and mathematics:

- Charles University, Faculty of Mathematics and Physics, Prague
- Institute of Information Theory and Automation, Academy of Sciences, Prague
- Masaryk University, Faculty of Informatics, Brno
- Institute of Computer Science, Academy of Sciences, Prague.

- Research Topics
  - Informatics: Control Theory, Econometrics, Pattern Recognition, Image Processing, Statistics and Data Processing;
  - Software Engineering and Methodology of Programming, Distributed Systems Design, Computer Networks, Electronic Typesetting, Advanced Man-Machine Interfaces, Data Visualization, Information Systems;

- Mission
  The mission of CRCIM is to perform frontier research and teaching in mathematics, informatics and computer science and to transfer acquired new knowledge to society.

- Strategy
  We concentrate our research on five societally-relevant themes:
  - Earth Sciences and Energy
  - Life Sciences
  - The Data Explosion
  - Society, Logistics
  - Software as Service
  to provide a deeper understanding of problems in health care, climate, communication, mobility, security and service domains.

- International Network
  CRCIM closely cooperates with companies, universities and large technology institutes in the Netherlands and abroad. Together with our partners, we help provide a firm foundation for national and European innovation. CRCIM is also an incubator for senior academic researchers.

- Budget
  Estimated total annual budget: 12 million €
  - 70% basic national funding
  - 30% participation in (inter)national research programmes and contracts with industry.

- Staff
  1120 Researchers / Teachers (estimation).

CWI

Centrum Wiskunde & Informatica

Founded in 1946, Centrum Wiskunde & Informatica (CWI) is the national research institute for mathematics and computer science in the Netherlands. Over 150 researchers conduct pioneering research and share their acquired knowledge with society. The institute has generated twenty-one spin-off companies. CWI is a co-founder of ERCIM.

- Mission
  The mission of CWI is to perform front research and teaching in mathematics, informatics and computer science and to transfer acquired new knowledge to society.

- Strategy
  We concentrate our research on the following themes:
  - Earth Sciences and Energy
  - Life Sciences
  - The Data Explosion
  - Society, Logistics
  - Software as Service
  to provide a deeper understanding of problems in health care, climate, communication, mobility, security and service domains.

- International Network
  CWI closely cooperates with companies, universities and large technology institutes in the Netherlands and abroad. Together with our partners, we help provide a firm foundation for national and European innovation. CWI is also an incubator for senior academic researchers.

- Budget
  Total annual budget: 19.0 million € (2011). Two-thirds of our annual budget is covered by the Netherlands Organisation for Scientific Research (NWO), with the balance coming from national and international research programmes and assignments from industry.

- Staff
  - 156 Researchers
  - 44 Supporting Staff

Contact
CWI
Centrum Wiskunde & Informatica
Science Park, 123
NL - 1098 XG Amsterdam
The Netherlands
Tel. +31 20 592 9333
E-mail: info@cwi.nl
www.cwi.nl
The Fraunhofer ICT Group (Fraunhofer Information and Communication Technology Group) develops joint strategies and visions for application-oriented research on information and communication technology. Employing more than 4,500 people at its 19 institutes and with an annual budget of approximately €210 million, the ICT-Group is Europe’s largest research association for applied research in IT.

It combines the core competencies of the 18 member institutes to create comprehensive IT solutions and offers support in technology transfer activities and research marketing. The complementing core competencies of member institutes cover the full spectrum within the communication technology and IT sector.

The Fraunhofer ICT Group provides its portfolio to partners from all industries and the public sector. The range of services includes customized IT solutions, specialized technology consulting, and preliminary research for new products and services. Being members within international research programs, the institutes are interconnected worldwide with companies and research organizations in the communication technology and IT sector.

The business office of the ICT Group in Berlin acts as a `one-stop-shop` to find the right partner for your needs.

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**Fraunhofer ICT Group**

Anna-Louise-Karsch-Str. 2
10178 Berlin
Phone: +49 30 72 61 56-0
Fax: +49 30 72 61 56-19
info@ict.fraunhofer.de
www.ict.fraunhofer.de

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**Fonds National de la Recherche Luxembourg**

Luxembourg’s National Research Fund (FNR) is a public institution with scientific, financial and administrative autonomy, set up in 1999 in order to further stimulate research activities in Luxembourg.

To fulfill this mission, the FNR develops multi-annual research programmes and ensures their implementation by allocation of the financial means put at its disposal.

Main participating research institutes in informatics:

- Centre de recherche public Gabriel Lippmann
  http://www.lippmann.lu
- Centre de recherche public Henri Tudor
  http://www.tudor.lu
- Université du Luxembourg
  http://www.un.lu
- Interdisciplinary Centre for Security, Reliability and Trust
  http://www.securityandtrust.lu
- Centre de recherche public de la Santé
  http://www.crp-sante.lu

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**ERCIM Activity Report 2011**

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ERCIM Activity Report 2011

The mission of the Institute of Computer Science of the Foundation for Research and Technology - Hellas (FORTH-ICS) is to perform high quality basic and applied research, to promote education and training, and to contribute to the development of the Information Society, at a regional, national, and European level. FORTH-ICS develops innovative products and services, contributes to the creation, transfer, and diffusion of technical know-how, collaborates with recognised companies, creates spin-off companies, promotes incubators and science and technology parks, and performs studies of regional, national and European interest.

FORTH-ICS is one of the seven institutes of FORTH, a major national research centre, functioning under the auspices and partially funded by the General Secretariat for Research and Technology of the Hellenic Ministry of Education, Lifelong Learning and Religious Affairs.

The FWO - Vlaanderen (Fonds voor Wetenschappelijk Onderzoek) activities are aimed at a push back of the frontiers of knowledge in all disciplines, stimulating and funding fundamental academic research at the universities in the Flemish Community and at scientific research institutes.

The Fonds National de la Recherche Scientifique has a mission statement to develop scientific research in general through researchers initiatives. It helps knowledge production and development through individual researchers sponsoring and through research programs within laboratories and departments from universities in the Belgian French Community (Communauté française de Belgique).

The FNRS action is thus mainly centered around researchers training and research development.
NTNU, the Norwegian University of Science and Technology, represents the Norwegian research community in informatics and mathematics, including associated departments at SINTEF, the University of Oslo, the University of Bergen, the University of Tromsø and the Norwegian Computing Centre in Oslo.

The university’s Faculty of Information Technology, Mathematics and Electrical Engineering (http://www.ime.ntnu.no/eng/) has responsibility for ERCIM activities, although relevant research is also co-ordinated within the framework of the strategic research area of Information and Communication Technology (ICT) (http://www.ntnu.no/ict).

Collaborative efforts
NTNU’s research staff is engaged in some 2000 R&D projects, while the university itself hosts between 20 and 30 major scientific conferences in an average year. NTNU has bilateral agreements for student exchanges with more than 200 non-Norwegian universities across the globe. NTNU also has a close working relationship with SINTEF, Scandinavia’s largest independent research institute, which has about 2000 employees. SINTEF was originally established by NTNU, and those origins are reflected in the SINTEF buildings, located on the university campus. This co-location further promotes the synergies that result from cooperative research.

Strategic research
Strategic research areas in ICT:

- Computational Science and Visualization
- Bioinformatics
- Health Informatics
- ICT in the Public Sector (eGovernment)
- Information Security
- Learning with ICT
- Language Technology
- ICT Basics
- eMobility

Contact
Norwegian University of Science and Technology
Faculty of Information Technology, Mathematics and Electrical Engineering
N-7491 Trondheim, Norway
Tel: +47 73 59 80 35, Fax: +47 73 59 36 28
http://www.ime.ntnu.no/

Technology, software and Internet protocols that may work fine in a laboratory setting may fail under real-world pressures of commercial use. Wireless Trondheim, launched in September 2006, makes the inner city of Trondheim available as a working environment to test tomorrow’s wireless technology and services. Trondheim is also a test site for Intelligent Transport Systems. The projects are a cooperative effort among industrial partners, NTNU, the city of Trondheim, the Sør-Trøndelag county council, and the Trondheim Chamber of Commerce.
ERCIM
European Research Consortium for Informatics and Mathematics

TO WIN WE NEED THREE THINGS WE CAN DEFINE: TO KNOW HOW TO WORK, TO FOLLOW OPPORTUNITIES AND TO CREATE RELATIONSHIPS. WE ALSO NEED SOMETHING ELSE, THAT WE FIND DIFFICULT TO DEFINE AND, LACKING A BETTER NAME, WE CALL LUCK."

FERNANDO PESSOA
(PORTUGUESE WRITER AND POET)

CONTACT OF PEG DIRECTOR: PROF. PEDRO GUEDES DE OLIVEIRA 
INESC PORTO, CAMPUS DA FEUP, RUA DR. ROBERTO FRAS, 4200-465 PORTO, PORTUGAL.
TEL. : +351 22-209 400  //  FAX : +351 22-209 4005  //  LCF@INESCPORTO.PT

Two major Polish universities - the University of Warsaw and the University of Wroclaw - established together a new research consortium, 'PLERCIM' in January 2007, which represents Poland in ERCIM. PLERCIM will initiate and coordinate future cooperation between Polish and European researchers in applied mathematics and informatics within ERCIM activities.

The University of Warsaw
The University of Warsaw (Uniwersytet Warszawski, est. 1817), is the largest university in Poland. It teaches over 55,000 undergraduate students and around 2800 PhD students in nineteen faculties. About 17,000 students graduate from the University every year. It offers a broad range of courses taught in Polish and English in 76 areas of study. The Faculty of Mathematics, Informatics and Mechanics, with around 200 faculty members and researchers, is engaged in a wide spectrum of research areas, ranging from pure mathematics and theoretical computer science, to applied mathematics and applied areas of informatics. The Faculty consists of three Institutes: Mathematics (with over ninety faculty members), Informatics (almost seventy faculty members), and Applied Mathematics and Mechanics (with forty faculty members).

The University of Wroclaw
The University of Wroclaw (Uniwersytet Wrocławski, est. 1702) is the largest university in the south-western part of Poland called Lower Silesia. It teaches about 35,000 undergraduate students and about 1300 PhD students in ten faculties. About 9000 students graduate from the University every year. The University offers a broad range of courses taught in Polish and English in over seventy areas of study. The Faculty of Mathematics and Computer Science consists of two parts: the Mathematical Institute and the Institute of Computer Science. It teaches 870 undergraduate students in mathematics, 520 undergraduate students in computer science and 50 students in PhD programmes in both disciplines.

Budget
Total annual budget: €10.5 million, thereof
• 90% basic national funding
• 10% national and international programmes.

Staff
• 400 scientific staff
• 100 supporting and administrative staff.

Contact
PLERCIM Office
Faculty of Mathematics, Informatics, and Mechanics
Warsaw University, Banacha 2
02-097 Warszawa, Poland
http://www.plercim.pl/
SARIT – The Swiss Association for Research in Information Technology

SARIT is a non-profit association with the goals of fostering national and international collaboration within the ICT research community and of promoting the visibility and recognition of ICT research performed in Switzerland.

SARIT was founded in 1989 with the purpose of linking together the mostly small Swiss research groups in computer science and of promoting international collaboration. In 1998, SARIT was completely restructured; all professors in ICT-related topics at Swiss universities and Federal Institutes of Technology became individual members of SARIT together with industry-based ICT research units. Nowadays, after the advent of the Universities of Applied Science, SARIT also has members belonging to these institutions.

SARIT runs a website http://www.sarit.ch/ providing information about ICT-related research activities and events in Switzerland.

SARIT is the Swiss member of ERCIM. For this cooperation, SARIT plays the role of a "virtual research center" combining the efforts of the distributed Swiss IT research community and being its representative to all other ERCIM partners, eg, for the ERCIM AB Fellowship programme.

Swedish Institute of Computer Science

Swedish Institute of Computer Science (SICS) is the leading research institute of Sweden within the area of information and communication technology. Highly qualified researchers conduct applied and fundamental research in strategic areas of computer and communication technologies, in close cooperation with industry and the international research community.

SICS undertakes research assignments for industry and actively participates in R&D programs funded by national and international bodies, such as VINNOVA and the European Commission.

SICS promotes exploitation of research results by cooperating with industry and society, encouraging start-up companies, providing open source software, and by participating in standardization programs, clusters, and media and public events.

MAIN RESEARCH AREAS
- Man-Machine Interaction
- Distributed Systems: Sensor Systems, Cloud, Big Data, and Data Communication
- Optimization and Data Analysis for industrial Applications
- Systems & Software Engineering

STAFF
130 researchers (70 PhDs)

TURNOVER
12.5 million Euro

SUBSIDIARIES
- SICS Swedish ICT Västerås
- Santa Anna IT Research Institute

LOCATIONS
Stockholm (Kista)
Uppsala
Lund
Västerås
Linköping

SICS is a part of the institute group Swedish ICT.
Spanish Research Consortium for Informatics and Mathematics

Mission

The mission of SpaRCIM is the promotion and coordination of Spanish research groups in order to face the challenges raised by current and future problems in computer science and applied mathematics.

Research

The main research areas of SpaRCIM are centered around:

- Formal methods and programming languages: design and analysis of critical systems, quality and security of computing systems, rule-based programming, optimization, parallel and concurrent systems, programmer efficiency.
- Artificial intelligence: machine learning, multi-agent systems, constraint-based reasoning, ontologies, semantic web services, image processing and recognition.
- Information systems: data mining, databases, data warehouses, modeling, decision support systems.

Staff

- Around 500 scientists including over 200 doctoral candidates and 40 postdocs and engineers.

Recent Applications

ENSURE: STFC stores large volumes of scientific data which are expected to increase with the next generation of international scientific facilities. In order to increase the return on the investment in this data STFC encourages the re-use of data for verification of results, but also for meta-studies and to produce new scientific results in ways not intended when the original data was collected. To do this STFC is developing data preservation technologies which go beyond data storage to include the long term management of the data to preserve its usability and to enable the discovery and understanding of archived data for new purposes.

DL-FIND – a library for optimising geometries in atomic and molecular simulations. The DL-FIND software library is used by researchers who investigate the structures of chemicals and the detailed processes of chemical reactions. DL-FIND can be combined with the ChemShell computational chemistry environment, which provides facilities for combined quantum mechanical and molecular mechanical calculations. DL-FIND offers a variety of optimisation algorithms for common tasks, such as finding minimum energy structures or identifying transition states on a reaction path.

Partnerships

Can range from a one-off contract to truly integrated partnerships, collaborating with the Council’s staff.

Budget and Staffing

Budget for IT related areas: € 22 million
- 80% research council contracts
- 20% income from government departments, European Commission, universities and industry.

Around 1900 total staff, 120 IT staff (average whole-time equivalent).

Science & Technology Facilities Council

Research at the Leading Edge

The Science and Technology Facilities Council is one of Europe’s largest multidisciplinary research organisations supporting scientists and engineers worldwide. The Council operates world-class, large scale research facilities and provides strategic advice to the UK government on their development. It also manages international research projects in support of a broad cross-section of the UK research community. The Council also directs, coordinates and funds research, education and training.

The Council has responsibility to ensure that the UK scientific community has access to the large facilities that will enable it to perform high quality, world leading research in the future:

- Central Laser Facility (CLF)
- ISIS pulsed neutron and muon source
- Isaac Newton Group of Telescopes (ING)
- Joint Astronomy Centre (JAC)
- United Kingdom Infra-Red Telescope (UKIRT)
- James Clerk Maxwell Telescope (JCMT)
- Diamond Synchrotron (DLS).
SZTAKI performs basic and application-oriented research in an interdisciplinary setting in the field of computer science, engineering, information technology, intelligent systems, process control, and wide-area networking. The Institute also conducts contract-based target research and development, and provides training and expertise for domestic and foreign academic, industrial, governmental and other partners.

External relationships of the Institute

The international reputation of the Institute is reflected in its prestigious title of “Centres of Excellence” in Information Technology, Computer Science and Control, given by the EU in 2000. It hosts the Hungarian office of the WWW consortium. Researchers of SZTAKI contribute extensively to European scientific co-operation projects. Some research programs are supported by US agencies, including NSF, ARO and ONR.

MTA SZTAKI
COMPUTER AND AUTOMATION
RESEARCH INSTITUTE
HUNGARIAN ACADEMY OF SCIENCES

University of Cyprus

Department of Computer Science

The Department of Computer Science (http://www.cs.ucy.ac.cy) undertakes world-class, high-impact research in many areas of Computer Science, including:
- Artificial Intelligence (knowledge representation, planning, agents, cognitive neuroscience, neural networks)
- Computer Architecture (multicore processor architecture, power and temperature aware micro-architectures, dataflow)
- Databases and Information Management (mobile and wireless data management, sensor networks, information retrieval)
- Computer Graphics (virtual and augmented reality, graphics)
- Computer Networks (fixed, wireless, ad hoc and vehicular networks)
- Distributed Computing and Web Technologies (cloud & grid computing, content distribution networks)
- Software Engineering (context-aware services, middleware, component-based software engineering)
- Theoretical Computer Science (distributed algorithms, fault-tolerance, algorithmic game theory, concurrency theory, formal methods).

Over the last 6 years, the Computer Science Department has been involved in more than 130 research projects funded by both the European Union and the Cyprus Research Promotion Foundation with a total funding of circa 18.5 million Euros. Currently, the Department has 21 faculty members and 64 research staff members. The Department offers a Bachelor degree in Computer Science; five Master degrees in Computer Science, Internet Computing, Intelligent Systems, Advanced IT (professional), and Computer Game Design (jointly with Cyprus University of Technology); and a Ph.D. degree in Computer Science. It hosts an advanced research infrastructure including cloud, grid and high-performance computing resources, advanced virtual reality and visualization equipment, and wireless sensor network and mobile computing facilities.

Department of Electrical and Computer Engineering

The Department of Electrical and Computer Engineering (ECE) was established in 2003. In a relatively short period of time it has managed to establish high quality research, teaching and outreach activities in numerous fields, namely:
- Biomedical Engineering
- Computer Networks
- Digital Hardware Design and Embedded Systems
- Electronics and Microelectronics
- Robotics, Instrumentation
- Sensors, and Nanotechnology
- Intelligent Systems and Control
- Microwaves and Photonics
- Power and Renewable Energy
- Signal and Image Processing
- Telecommunication Systems
- Trustworthy System Design.

As of December 2010, it has 15 full-time academic staff, and this number is projected to rise over the coming years. In the first few years of the department’s existence, the faculty was awarded more than 75 research projects and grants in the aforementioned fields, with a combined budget of approximately €17 mil, 60% of which coming from the EC. This funding success continues, and is considered essential to the future aspirations to be a leading centre of ECE in Europe.

Contact:
Marios Dikaiakos
University of Cyprus
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Tel.: +357 2299 2700
E-mail: marios@cs.ucy.ac.cy
http://www.ucy.ac.cy

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VTT Group in brief


Customer sectors
- Biotechnology, pharmaceutical and food industries
- Electronics
- Energy
- ICT
- Real estate and construction
- Machines and vehicles
- Services and logistics
- Forest industry
- Process industry and environment

Focus areas of research
- Applied materials
- Bio- and chemical processes
- Energy
- Information and communication technologies
- Industrial systems management
- Microtechnologies and electronics
- Services and the built environment
- Business research

VTT’s operations
Research and Development ■ Strategic Research ■ Business Solutions ■ IP Business ■ Group Services

VTT’s companies
VTT Expert Services Ltd (incl. Labtium Ltd, Enas Ltd) ■ VTT Ventures Ltd ■ VTT International Ltd ■ VTT Memsfab Ltd
The scientific fields of competency of the ERCIM member institutes are categorised according to the classification of the American Mathematical Society (AMS) for the mathematics part and Association for Computing Machinery (ACM) for the informatics part.

### Mathematics

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<th>Category</th>
<th>AAM</th>
<th>BEM</th>
<th>BIEM</th>
<th>COIN</th>
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<td>Dynamical systems and ergodic theory</td>
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<td>Integral transforms, operational calculus</td>
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The Web version of this table links to the research institutes and teams active in these fields.

http://www.ercim.eu/activity/expertise
<table>
<thead>
<tr>
<th>Scientific Fields of Competencies</th>
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<tbody>
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<td><strong>Informatics</strong></td>
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<td>B. Hardware</td>
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| 6.2 Arithmetic and Logic Structures | ![ ]
| 6.3 Memory Structures            | ![ ]
| 6.4 Input/Output and Data Communications | ![ ]
| 6.5 Register Transfer-Level Implementation | ![ ]
| 6.6 Logic Design                 | ![ ]
| 6.7 Integrated Circuit           | ![ ]
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| 6.2 Computer Communication Networks | ![ ]
| 6.3 Special-Purpose and Application-Based Systems (D.7) | ![ ]
| 6.4 Performance of Systems       | ![ ]
| 6.5 Computer System Implementation | ![ ]
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| 6.2 Software Engineering (K.6.3) | ![ ]
| 6.3 Programming Languages        | ![ ]
| 6.4 Operating Systems (C)        | ![ ]
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| 6.2 Data Storage Representations | ![ ]
| 6.3 Data Encryption              | ![ ]
| 6.4 Coding and Information Theory (K.1.1) | ![ ]
| 6.5 Files (D.4.1, D.2.7, D.2)    | ![ ]
| F. Theory of Computation         |
| 6.1 Computation by Abstract Devices | ![ ]
| 6.2 Analysis of Algorithms and Problem Complexity (E.6.8.7, F.1.3) | ![ ]
| 6.3 Logics and Meaning of Programs | ![ ]
| 6.4 Mathematical Logic and Formal Languages | ![ ]
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| 6.2 Discrete Mathematics (MSC 05, 06) | ![ ]
| 6.3 Probability and Statistics (MSC 60, 61) | ![ ]
| 6.4 Mathematical Software        | ![ ]
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| 6.3 Information Storage and Retrieval | ![ ]
| 6.4 Information Systems Applications | ![ ]
| 6.5 Information Interfaces and Presentation (e.g., HCI: F.7) | ![ ]
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| 6.2 Artificial Intelligence      | ![ ]
| 6.3 Computer Graphics            | ![ ]
| 6.4 Image Processing and Computer Vision | ![ ]
| 6.5 Pattern Recognition          | ![ ]
| 6.6 Simulation and Modeling (D.3) | ![ ]
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| 6.2 Physical Sciences and Engineering | ![ ]
| 6.3 Life and Medical Science      | ![ ]
| 6.4 Social and Behavioral Science | ![ ]
| 6.5 Arts and Humanities           | ![ ]
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| 6.7 Computers in Other Systems (C.3) | ![ ]
| K. Computing Milieux             |
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| 6.3 Computer and Education       | ![ ]
| 6.4 Computer and Society         | ![ ]
| 6.5 Logical Aspects of Computing | ![ ]
| 6.6 Management of Computing and Information Systems | ![ ]
| 6.7 The Computing Profession     | ![ ]
| 6.8 Personal Computing           | ![ ]

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