Keynote Speakers

23th Monday

Title of presentation: ***Value Proposition for Enterprise Interoperability in Manufacturing Value Chains***

José Manuel Mendonça

INESC Porto *and FEUP-DEIG*
MANUFUTURE European Technology Platform

José Manuel Mendonça (53) is a Full Professor at the Department of Industrial Engineering and Management of the Faculty of Engineering, University of Porto and President of the Board of Directors of INESC Porto. He is also a non-executive member of the board of Fibersensing, SA, a member of the Support Group of the Manufuture European Technology Platform, of the Management Board of the MIT Portugal EDAM-Engineering Design and Advanced Manufacturing Program and he is the National Scientific Coordinator of the UTEN-University Technology Enterprise Network.

Abstract: *Manufacturing, generating wealth and jobs by fully exploiting knowledge and resources, is the fundamental enabler and sustainer of Europe's Competitive and Sustainable Development. Manufacturing in Europe provides presently 41,5 % of the added-value (over €1,535 million) and 30,4 % of the employment (34 million people), with each job at the factory floor generating two other jobs in services.*
Manufacturing in Europe is presently under threat and in crucial and urgent need to add value and decrease costs by embedding design and technology, as to compensate for the fierce competition from the emerging economies.
The need to keep manufacturing operations and jobs in Europe calls for industry transformation, as to ensure strong cost reductions, increased flexibility and smaller response times while keeping high standards in product quality with increasing complex novel products.
But the ability to manage increased product complexity, by spreading subcontracting and outsourcing, cannot be achieved without building collaborative networks over the complete supply and value chain.
Enterprise interoperability is thus a stringent requirement in highly competitive manufacturing value chains. And it is also an emergent one if we want to be able to design and deploy a competitively sustainable European Production System, through the use of disruptive technological processes enabled by digital production.

Title of presentation: ***Web 2.0 and Collaborative Working Environments: What can we learn?***

Wolfgang Prinz

Fraunhofer FIT
Collaboration systems *research department in FIT*

Prof. Wolfgang Prinz, PhD (FIT) has a PhD in computer science from the University of Nottingham. He is deputy head of Fraunhofer FIT in Bonn, division manager of the Collaboration systems research department in FIT, and Professor for cooperation systems at RWTH Aachen University. He is carrying out research in the area of Cooperative Work Environments, Social Computing and Web 2.0. He participated in and managed several national research and international research projects and he is currently coordinator of an EC funded project on collaborative work environments (Ecospace).

Abstract: *Web 2.0 applications are becoming more and more widespread, not only for leisure and entertainment, but also for business purposes. As developers of collaborative work environments, we need to ask ourselves, if we consider this wave of new ideas and applications as a hazard that sweeps us away or if we can learn to surf this wave. In my presentation I'll first distill Web 2.0 applications and technologies to identify the basic concepts. Then I'll discuss how these concepts can be used for the design and development of cooperative work applications.*

24th Tuesday

Title of presentation: ***IMS and the Manufacturing Technology Platform Initiative***

Claudio R. Boër

Chairman of IMS – Intelligent Manufacturing System
Director of ICIMSI,
SUPSI - University of *Applied* Science of Southern Switzerland

Prof. Claudio R. Boër obtained a first degree in Mechanical Engineering from the Politecnico of Torino, then a Master of Applied Science of Mechanical Engineering from University of Waterloo, Canada and a Ph.D. of Mechanical Engineering from Carleton University, Ottawa, Canada. He has 16 years of industrial experience in the field of material processing simulation, manufacturing system planning and design, computer aided design and manufacturing. His academic experience was developed as a Lecturer at Federal Politechnical School of Lausanne, Switzerland, and as Associate Professor at Politecnico of Milan, Italy. He gained R&D management experience as Research Director at ITIA-CNR in Milano and then as Project Leader of European Integrated Project EUROShoE developing fundamental results in several fields and mainly Mass Customization of Footwear and Sustainable Development. Presently is a Fellow Member of C.I.R.P, member of Steering Committee of ManuFuture-CH, National Technology Platform for Future Manufacturing, President of SwissIPA, Swiss Innovation Promotion Association, Switzerland. He has published three books and over 230 papers in the field of manufacturing, applied computer science to manufacturing and production management, plastic deformation simulation, applied robotic, Virtual Manufacturing Environment, Extended Enterprise, Mass Customization (in particular footwear).

Abstract: *IMS is an international program to support R&D in manufacturing among the advanced developed countries of Japan, USA, European Union, Korea and Switzerland. As the first government-supported program to offer a multi-lateral global approach to research in advanced manufacturing, IMS continues to innovate and reinvent itself in order to be relevant to researchers around the globe. In its latest response to researchers input from the IMS Vision Forum, IMS has launched the "Manufacturing Technology Platform Initiative", or MTP. The MTP initiative is a unique program that threads research and researchers together in a simple way to solve manufacturing challenges of today and the future. The program not only simplifies the process for organizing research under the IMS banner, but it also promotes a spark of new ideas through wider networks that are created. MTPs are focused knowledge sharing platforms for researcher groups that are already engaged in a specific R&D domain. There is overlap in much research that is conducted. Rather than duplicate work, an MTP initiative seeks cooperation to conduct joint research in projects that are already running. This ultimately saves resources for the "golden nuggets" of their research, and finds common solutions to manufacturing challenges in the process. MTP's also provide an opportunity for researchers to meet, exchange information, and generate new ideas for research.*

Title of presentation: ***Living Labs, ENoLL : "Research" Challenges***

Angelos Ktenas

Senior Policy Coordinator
Information Society and Media DG, European Commission

Dr. Angelos Ktenas holds a Chemical Engineer Degree from the Ecole d'Application des hauts polymers (Strasbourg) and a Ph D in Chemical Engineering from the National Metsobio Technical University (Greece). After 15 years of managing positions in Chemical/Petrochemical industry and Greek Administrations, he has been during 9 years member of successively two cabinets of EU Commissioners. Since 1999, he is holding different leading positions in the DG Information Society at the EC, in particular in the Areas of: Application relating to Business, eBusiness, ICT for Business, New Working Environment, and lastly New Infrastructure Paradigms & Experimental Facilities, as Senior Policy Co-ordinator.

Abstract: *What are the challenges in basic research still to be addressed by Living Labs and the European Network of Living Labs to further improve the concept ? How can the European Union assist in this? To this purpose I will present a roadmap of potential funding instruments in the period 2009 to 2010 proposed by Research (FP7), Innovation (CIP) and Regional Funds.*

Title of presentation: **New Value for share holders: How the corporation sees the University**

Randall Wright

Massachusetts Institute of Technology
MIT In2dustrial Liaison Program

Randall S. Wright is a Senior Liaison Officer with MIT's Industrial Liaison Program. He manages the interface between the managements of companies, headquartered in the United States and Europe, and the senior administration and faculty of MIT. As a Senior Liaison Officer for MIT, he takes part in the analysis of business, technology and commercial problems within companies, and translates these problem needs into faculty resources at MIT. His work has included securing consulting help to corporations for restructurings, cost reduction programs, and new product development. He has also administered strategy sessions for the top managements of corporations that have been held at MIT. He has also helped corporations to develop research programs with MIT laboratories. Prior to becoming a Senior Liaison Officer for MIT, Mr. Wright was a Marketing Manager for Pfizer, Inc., a major U.S. pharmaceuticals company. He was also a Strategic Planning Analyst for Pennzoil Company--a Fortune 500 oil and natural resources company.Mr. Wright has been an invited speaker to deliver keynote addresses at many innovation conferences and technology parks in Europe over the past ten years. He holds a BME with distinction from the University of Minnesota, an MS in metallurgy from MIT, and an MBA from the University of Chicago Graduate School of Business.

Abstract: *Corporations generally decline or fail because they fail to generate new value for shareholders. This value generation often takes some form of innovation. Many executives believe that a vital relationship with a university can play an important role in a corporation's continuing to generate new value. Yet, why do some corporations manage to develop successful relationships with universities and others do not? Randall Wright, Senior Liaison Officer with MIT Office of Corporate Relations, proposes that the single most important factor is how the corporation views the university. Based upon his twenty years experience at MIT he has found that corporations either view the university as a vendor or as a source of consultative knowledge. Viewing the university as a vendor produces minor outcomes for the corporation; viewing the university as a source of consultative knowledge can produce major impacts on a firm's development of strategy and initiatives to improve ROA. Factors that universities need to consider to create meaningful relationships with corporations are discussed. A list of seven practices that corporations should adhere to in order to develop successful relationships with universities is presented.*

25th Wednesday

Title of presentation: **The Future Internet: a vision from European Research**

Cristina Martinez

Senior Administrator
responsible for Enterprise Interoperability research
Information Society and Media DG, European Commission

Cristina Martinez is graduated in Science Philosophy (Cum Laude), in Communication (Cum Laude and Major) and has an MSc in Telematics (Cum Laude) from the Free University of Brussels. She spent two years in the United Nations Office headquarters working for an IT track and trace development project for Africa, Asia and Latin-America. She joined the Andersen Consulting company in 1998 to work for the eCommerce group of the Technology department as a solutions engineer. She became a member of the staff of the European Commission in 2002 and is currently Administrator for Research in the Enterprise Networking Unit of the Information Society Directorate-General. In addition to her managing role for research projects in the ICT area, she devotes most of her time working on policy aspects related to the future of Business Collaboration and Interoperability. She is head of the Enterprise Interoperability cluster responsible for giving research directions in the Interoperability domain. Cristina Martinez is married, with two children.

Abstract: *The infrastructure of the Internet has and will continually evolve to support and enable new services, trends and businesses. Europe is committed to take a leading role in exploring the emerging visions for the Future Internet that will drive the requirements for its underlying network and service infrastructure. Also, ICT is evolving from a facet of business operation and a collection of consumer gadgets to a critical infrastructure that underpins the economy and society. In parallel, the mechanisms for and even the nature of innovation are changing. The next EU Work Programme for Research in ICT will reflect this unavoidable move towards a larger share of the economy/social activities moving on line, with a need to make the Internet capable of supporting a larger number of usages whilst remedying to the current deficiencies in terms of presentation, security, trust, scalability, mobility, etc. All the "visions" presented would then become use cases in relation to an all-encompassing research objective federated under, and driving the requirements towards, a "Future Internet" Challenge.*

Title presentation: **Challenges in Developing Collaborative Workspaces for Solving Complex Problems**

Terrence Fernando

Scientific Director of the Think Lab
Director of the Future Workspaces Research Centre

Professor Terrence Fernando (University of Salford) is the Technical Manager of the CoSpaces project and the leader of Cluster 3 (Collaborative Workspace Applications). He is the Director of the Future Workspaces Research Centre at the University of Salford and the Director of the North West Research Centre for Advanced Virtual Prototyping, which is a regional multi-disciplinary research centre involving several research teams from four prominent Universities in UK. He has a broad background in conducting multi-disciplinary research programmes involving large number of research teams in areas such as distributed virtual engineering, virtual building construction, driving simulations, virtual prototyping, urban simulation, and maintenance simulation. At present he is leading a group of researchers to deliver industrially relevant research projects for the engineering and the construction sectors. He has successfully completed several national and European projects and currently co-ordinating the Future_Workspaces roadmap project. As a part of this roadmap project, Prof. Fernando has brought together over 100 companies and research centres, from areas such as aerospace, automotive, building construction, multi-modal interfaces, system architecture, networking, human factors etc, to define a 10 year European vision for future collaborative engineering workspaces. His multi-disciplinary background, experience in technical management, strong links with industrial partners and the leadership in developing the Future_Workspaces roadmap will be invaluable in providing a strong technical leadership within the CoSpaces IP. He is also playing a key role in the MOSAIC SSA and the INTUITION NoE to develop future research agenda for collaborative work environments.

Abstract:*This talk was mainly focused on industrial, human and technical challenges in creating collaborative workspaces for sectors such as aerospace, automotive, construction and urban planning. It initially took the complexity of designing aircraft as an example and illustrated the distributed nature of the team, need for maintaining large amount of information during the lifecycle and the need for assessing various design view points to ensure successful delivery. This part of the talk was mainly focused on creating an appreciation of the need for collaborative tools for design teams to work together more effectively. The talk then went on to explain the barriers and challenges in terms of deploying collaborative technology with in engineering organisations. Issues such as unwillingness to adapt to change, generation gap/change, lack of social cues, misunderstandings of language, unfamiliarity of collaborators with one another, cultural barriers, lack of training/guidelines and lack of accessibility for technology were considered as the current barriers to deploy collaborative technologies in industry. It was suggested that there are several drivers which might force people to overcome those barriers in order to survive in the future. Some of the examples of these barriers are global competition, migration of design and manufacturing facilities to low cost markets (Eastern Europe and Far East) and new economical powers (China, India) and the need for implementing concurrent engineering to achieve low cost and high quality products on time.*

The talk then focused on the creating a collaborative workspace for distributed engineering organsiations. It first discussed the future scenarios developed by the project and discussed the need for innovative technologies for supporting collaboration among stakeholders. The scenario presented in the talk included a DMU scenario in aerospace, design of a toilet for disable people, design of car mirrors and a mobile maintenance for aircrafts. The following issues were identified as the key challenges in creating a collaborative workspaces for these scenarios : Information Sharing, Creation of Workspaces to Support Different Working Styles, Virtual Infrastructure, Enhanced Sense of Presence, Physical Environments, Communication of View Points.