



In association with:

Grid Computing
Now!

Knowledge Transfer Network

Examining Grid Technology **New Applications for the Medical Industry**

Tuesday 25th September 2007, Imperial College London

Healthcare providers today like hospitals, outpatient centers and clinics have experienced a recent increase of medical imaging content, as the industry continues the transfer from film to digital formats. The onset of newer technologies such as digital pathology coupled with government regulations concerning patient image retention are forcing providers to spend a larger percentage of their annual budgets on the procurement and management of storage. This seminar will examine how providers will need to rethink the safe storage of sensitive information through the implementation of new architecture strategies in response to these challenges and effectively better address the varied applications of the modern healthcare system.

The Information and Communications Technologies Group (ICT SIG), formed and funded through LTN and the London Innovation Relay Centre (London IRC), focuses on fostering collaboration between academia and industry, while encouraging links between companies and European SMEs in this sector

- 10:00 Registration with tea and coffee**
- 10:30 Introduction to aims and objectives of London Technology Network and the Information & Communications Technologies Group**
Dr Alessandro Faraci, Technology Manager, Technology Team, **London Technology Network**
- 10:40 Introduction by the chair to the potential grid applications for the medical industry**
- ◆ Looking at the main, common use-cases, patterns and scenarios that commercial and academic grids require
 - ◆ Expanding grid possibilities – leading to new applications for industry
 - ◆ Identifying opportunities for collaborative research and partnerships between industry and academia
- Chair: Dr David Wallom**, Technical Director, Oxford e-Research Centre, **University of Oxford**
- 10:50 Exploring how the eHealthcare@Home project aims to integrate invasive and non-invasive monitoring systems using information via a grid infrastructure**
- ◆ Analysing how data from clinical metabolic analysers, digital retinopathy cameras and body scanners is supported by multi-enterprise specialist equipment and databases
 - ◆ Addressing the creation of a risk analysis application and how this enables prioritization of need in focused clinical areas at national service levels
 - ◆ Evaluating the remote monitoring of patients in the home
- Tim Donovan**, Grid, VE & Linux Technical Consultant, Emerging Technology Services, **IBM Software Group**
- 11:05 Highlighting recent technological developments in security and the safe storage of patient records – multiple security infrastructures**
- ◆ Assessing the real world problems and how grid computing can provide solutions
 - ◆ Exploring controlled and audited access to patient records and medical images
 - ◆ Addressing how delegation credentials are securely transferred and subsequently used when accessing resources
- Professor David De Roure**, Head of Grid and Pervasive Computing, School of Electronics and Computer Science, **University of Southampton**
- 11:20 Exploring imaging solutions in the pharmaceutical and medical devices industries**
- ◆ Understanding the challenges of imaging in multicentre clinical trials
 - ◆ Ensuring data quality at all stages through the use of the unique Quality Enforcement system
 - ◆ Use of workflows to provide a full electronic audit trail with regulatory compliance
- Professor Derek Hill**, Chief Executive Officer, **Ixico**
- 11:35 Question and answer session with the audience and speaker panel**
- 12:00 Drinks and networking reception: opportunity to view posters showcasing the latest research and developments in grid computing**



Speaker Profiles

Derek Hill – IXICO

Derek Hill is co-founder and Chief Executive Officer of IXICO. He founded IXICO in 2004 to bring the best possible imaging technology and know-how to the pharmaceutical and medical device industries. Derek also holds an academic appointment as Professor from University College London. He has a BSc degree in Physics from Imperial College London and an MSc in Medical Physics from the University of Surrey, a PhD in medical image analysis from the Medical School of Guy's & St Thomas' Hospitals, University of London. He was appointed professor in September 2004, shortly before co-founding IXICO. His research track record includes image acquisition and analysis, image acquisition and analysis for drug discovery and development, other aspects of image acquisition including motion correction and partially parallel imaging in MRI and motion compensation in PET. He has worked on applications in the study of dementia, heart disease, arthritis, oncology and guiding interventions. Much of this work was in collaboration with the medical imaging, medical device and pharmaceutical industries.

David De Roure – SOUTHAMPTON UNIVERSITY

David De Roure graduated in mathematics with physics from the University of Southampton, UK, in 1984 and obtained a PhD in distributed systems in 1990. He is a full professor in the School of Electronics and Computer Science at the University of Southampton, where he was a founding member of the Intelligence, Agents, Multimedia Group and is currently head of the Grid and Pervasive Computing Group. He is Chair of the Open Middleware Infrastructure Institute UK, and Director of the Centre for Pervasive Computing in the Environment funded by the UK Department of Trade and Industry. His research interest is in the application of knowledge technologies to Grid and pervasive computing. Professor De Roure chairs the Semantic Grid Research Group in the Open Grid Forum and sits on the Grid Forum Steering Group as Area Director for e-Science. He is also a member of the W3C Advisory Committee and national committees including the JISC Committee for Support of Research and the Arts and Humanities Data Service and e-Science programme. He is a Fellow of the British Computer Society.

Tim Donovan – IBM SOFTWARE GROUP

Tim Donovan has been with IBM UK for over 16 years, currently working in the Emerging Technology Services Department, part of IBM's Software Group, based at Hursley Park, IBM's UK Research and Development site. As a Technical Consultant in the field of Grid and Linux Technology, he works on a number of Grid projects. Previously he worked with AIX, Linux and pSeries servers, as part of the IBM Innovation Centre, whose mission is to assist Independent Solution Vendors with IBM's hardware and Software technologies.

Alessandro Faraci – LONDON TECHNOLOGY NETWORK

Dr Alessandro Faraci has been a Technology Analyst in the Physical Science team of London Technology Network since January 2006. He was awarded his PhD in 2005 at Imperial College London (UK), where he was in charge of various medical simulators, and investigating simulation of soft tissue deformation with force feedback. His main research interests are in virtual reality, medical imaging, image processing, real time simulation, and force feedback interaction applied to medical environments. He obtained a BSc in Applied Mathematics and MSc in Statistics from the University of Genoa (Italy) and worked in IT consultancy in Madrid (Spain) where he gained experience in managing industrial clients and supporting them with IT related issues. In his current position, he facilitates academics in top rate university departments of the Greater South-East of England to engage in high innovative technological collaboration with industries in the UK and Europe.

David Wallom – UNIVERSITY OF OXFORD

David Wallom is Technical Manager of the Oxford e-Research Centre and university Campus Grid architect. In his present role he is expected to engage the wider community within various Oxford departments with shared projects as well as through the construction of a campus grid network which makes use of computational and data resources from various different departments, including Computing services, Physics, Biochemistry and the OeRC itself. He is also chair of the UK e-Science Engineering Task force and the UK Campus Grid Special Interest Group. David is also co-chair of the Open Grid Forum Production Grid Services Research Group. Previously he has been the Operations Director for the Centre for e-Research Bristol and senior software developer for SCISYS (Space) Ltd working on among other projects the ESA SpaceGrid system. He has a degree in Applied Physics from Coventry University which included a year in industry at Forschungszentrum Juelich working on the COSY-TOF experiment. He has a PhD in Experimental Particle Physics from the University of Bristol having worked on the BaBar experiment at Stanford Linear Accelerator Centre.

Information and Communications Technologies Group

The ICT group will be supported by a series of networking seminars and workshops focusing on a range of topics from Haptics and Virtual Reality, Grid Computing, Sensors and Wireless Networks to 3D Technologies. Through LTN, members have access to a vast array of academic contacts from within the Greater South-East, a network in excess of 7,000 researchers at more than 60 higher education institutions, as well as thousands of technology opportunities from across Europe.

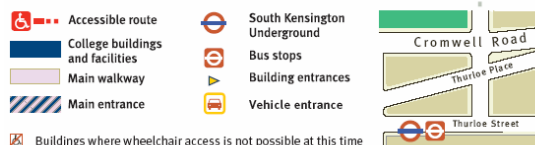
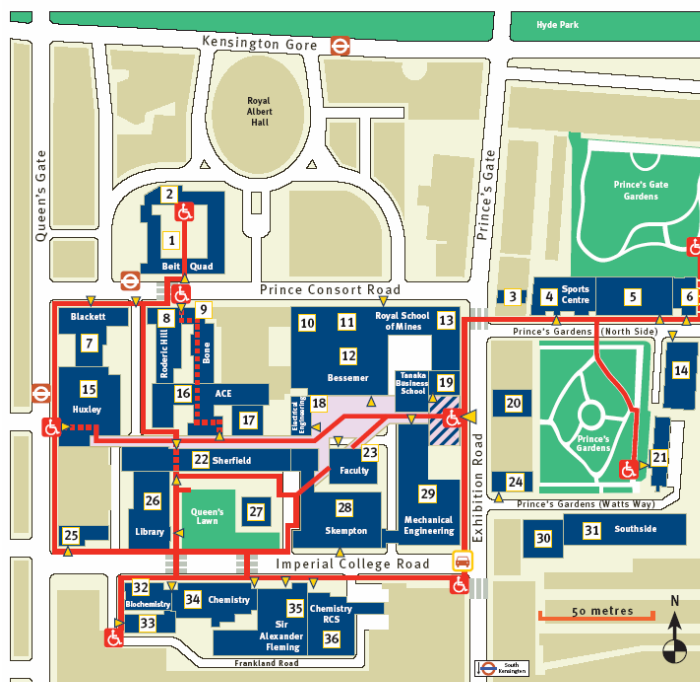
MAIN AIMS:

- ✓ Support technology transfer B2B and between companies and universities.
- ✓ Provide and share information on new technologies, innovation policy and funding.
- ✓ Host (and attend) local and international networking events to create partnering opportunities.

HOW TO GET THERE

The event will take place in **Lecture Theatre 208**, Skempton Building, Imperial College London, South Kensington Campus, London, SW7 2AZ. For further details on the venue and how to get there please call: 020 7589 5111.

Imperial College London, South Kensington campus



1	Beit Quadrangle	10	Royal School of Mines	20	Institute for Mathematical Sciences	28	Skempton Building
2	Imperial College Union	11	Aston Webb	21	Linstead Hall	29	Mechanical Engineering Building
3	College House	12	Bessemer Building	22	Sherfield Building	30	46-48 Prince's Gardens
4	Ethos Sports Centre	13	Goldsmiths Building	23	Faculty Building	31	Southside (under construction)
5	Student Accommodation Office	14	Health Centre, Dentist	24	S8 Prince's Gate	32	Biochemistry Building
6	Garden Hall	15	Huxley Building	25	Conference Link	33	Flowers Building
7	Weeks Hall	16	ACE Extension	26	170 Queen's Gate	34	Chemistry Building
8	Blackett Laboratory	17	William Penney Laboratory	27	Imperial College and Science Museum Libraries	35	Sir Alexander Fleming Building
9	Roderic Hill Building	18	Electrical Engineering	28	Queen's Tower	36	Chemistry RCS
	Bone Building	19	Tanaka Business School				

Train

London Paddington and London Victoria are the nearest main line railway stations.

Underground

The nearest underground station is South Kensington (Circle, District and Piccadilly Lines). Please allow 10 – 15 minutes for this walk. When exiting the tube, walk through the tunnel and turn left out of the stairs on to Exhibition Road.

Bus

9, 10 or 52 to the Royal Albert Hall
 14, 74 or C1 to the Victoria and Albert Museum
 49 to Gloucester Road
 70 to Queen's Gate
 9a to Prince Consort Road

Car

Car parking at the South Kensington Campus is severely restricted and you are advised not to bring a car unless prior arrangements have been made. Charges are applicable. Parking in the streets surrounding the College is at pay and display car parks or parking meters for limited periods only.