UK IRELAND News & Views

by Heather Hobbs

CBI Backs Call For Companies to Enter UK's Top Business Honours Scheme

Outstanding businesses from the applied science sector are being urged to act now for the chance to win the UK's ultimate business accolade – a Queen's Award for Enterprise.

Many businesses across the UK will have already received invitations to apply for an Award in any of three categories – International Trade, Innovation or Sustainable Development. The deadline for applications is midnight on 31 October 2004.

Digby Jones, Director General of the CBI, says all successful businesses, regardless of size or sector, should consider applying for an Award:

"The Queen's Awards play a vital role in championing exceptional achievements and advances in all areas of British business. I believe the Queen's Awards for Enterprise are something all UK companies should aspire towards. It's a marvellous scheme for encouraging and rewarding business success and best practice."

Alongside the prestige of winning and a reception at Buckingham Palace, a Queen's Award brings with it genuine business benefits – notably extensive publicity, boosts to staff morale and very often, increased business. According to recent research amongst past winners 90% felt that winning a Queen's Award had brought their company added commercial value.

Dr Alan Irvine, CEO of ORION Clinical Services Ltd, which won a Queen's Award for International Trade in 2003, commented:

"The receipt of The Queen's Award represented a very significant step in the history of our company. Through The Award we have gained national and international recognition both with our existing clients and with new business contacts. The Award is judged to be prestigious and is seen both internally and externally as being synonymous with success and quality".

Circle no. 348

Tripos celebrates opening of new research facility

HRH Prince Andrew Duke of York opening Triops Discovery Research Centre, Bude, Cornwall

His Royal Highness The Duke of York has officiated at the July opening of a new £16 million drugs research facility in North Cornwall in his capacity as UK Special Representative for International Trade and Investment.

American-owned Tripos has completed a major expansion at its Discovery Research Centre in Bude, adding more than 65,000sq ft of Laboratories and offices, while creating 100 new high-tech jobs. During his visit, HRH Prince Andrew was also given a comprehensive tour of the new facility.

The expansion was assisted by £1.3 million from the South West Regional Development Agency and £2.4 million in the form of a Regional Selective. Assistance grant from the Department for Trade and Industry.

At the ceremony, Dr John McAlister, CEO and President of the company said: "Tripos is proud to be part of the Bude community and honoured that His Royal Highness The Duke of York is participating in the inauguration ceremony at the Tripos Discovery Research Centre.

We're excited about the innovative research we are doing here as we continue to help our customers transform their ideas into new products to treat diseases."

Geoff Wilkinson, chief executive of the South West Regional Development Agency, said: "This expansion has proved to be a huge boost for North Cornwall and demonstrates the region's ability to attract high value-added, knowledge-based industries in a sector that remains a key target for the South West RDA."

Danielle Atkins, investment manager with inward investment service Cornwall Pure Business, said: "Cornwall is developing as a centre of excellence for companies in the healthcare, medical and pharmaceuticals sector, as increasing numbers of business are drawn to the talented skills, services and support networks that the county offers. This coupled with a work/life balance second to none offers a perfect environment for health-related businesses to thrive."

The company was a Queen's Award winner for Enterprise in the category of International Trade in 2000 and in the category of Innovation in 2003. Around a third of the company's employees are local people drawn from the Bude area, and the remainder include international scientists from France, Germany, Spain and Austria.

Tripos acquired what was formerly Receptor Research Ltd in 1997 and since then the organisation has grown from just 12 employees to more than 170.

Circle no. 349

Royal Holloway physicists connect up to the grid

The Physics Department at Royal Holloway, University of London has just installed a 'PC Farm' – technology that is part of a wider project set to revolutionise the way we use computers in the future.

Supplied by Compusys and funded by SRIF*, the PC Farm consists of 75 PCs linked to similar PC Farms in the UK, creating a 'supercomputer' capable of dealing with over 10 petabytes of data – the equivalent of more than 20 million CDs.

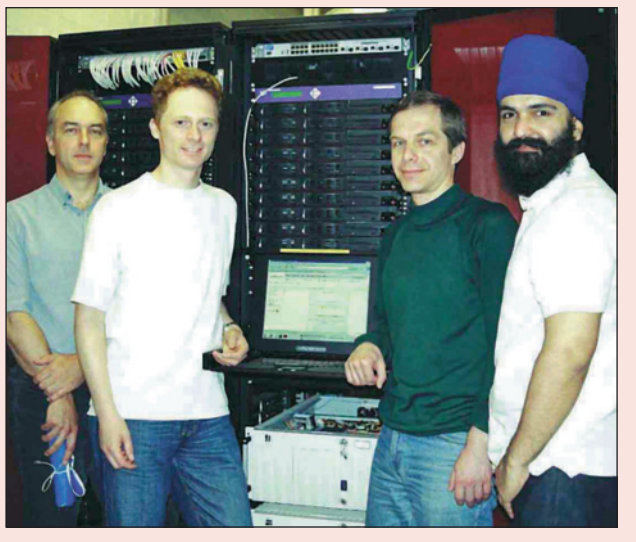
Deployed by a collaboration of UK Universities and research laboratories, and CERN*, the PC Farms will give scientists access to a computing grid with power equivalent to 70,000 of today's fastest computers. In what will eventually become a worldwide operation, scientists will be able to harness storage, software, processing power and programs from computers across the globe. In the future, this computing grid could become accessible to the public in the same way as the internet, allowing us to tap into vast amounts of processing power and storage, and providing almost limitless commercial opportunities.

Royal Holloway's Centre for Particle Physics will use the technology to facilitate its research using the world's largest particle accelerator, the Large Hadron Collider (LHC), which is being constructed at CERN, in Switzerland, and should be operational by 2007. The project will generate huge amounts of data, and this has triggered the need for a computer powerful enough to cope with it.

Dr Simon George, Research Officer within the Centre said: "Particle physics experiments are a challenging testing ground for new computing technology that within a few years will be regarded as a common feature of everyday life, as was clearly illustrated with the World Wide Web, initially developed at CERN."

The LHC, located in a huge underground cavern on the France/Switzerland border, will accelerate and collide protons to produce subatomic debris, enabling scientists to examine the composition of rare particles and providing an insight into how the universe was formed. The network of PC Farms across the world will provide the means to examine millions of such collisions.

The Royal Holloway Centre for Particle Physics is working closely with four other London-based universities on the project. These universities have been funded by the SRIF award for London E-science, while the total project is funded jointly by PPARC*, HEFCE*, SHEFC* and the European Union for a total of £33 million.



Staff from the Centre for Particle Physics, from left: Barry Green, Simon George, Grigori Rybkine, Sukhbir Johal

Circle no. 350

Olympus teams up with a Cardiff hospital in Ethiopian project

Julie Morgan MP with Velindre Trust Hospital staff.

Eight Olympus microscopes from the Velindre Hospital Trust in Cardiff have been sent to a health centre in Woreda 13, in the Ethiopian capital of Addis Ababa, that works to reduce pregnancy related deaths.

Cardiff North MP Julie Morgan appealed to hospitals to donate their microscopes after a visit to Ethiopia.

The Velindre Hospital Trust is currently using Olympus' more ergonomically designed microscopes, and offered the Health Centre their previous microscopes that were still in good working condition. Olympus has provided the packaging to send them to Woreda 13.

The microscopes will help the medical team at Woreda 13 to improve their health management system and train midwives and birth attendants.

Circle no. 351

Einstein Year – A chance for UK Business to help Physics, Raise Profile, and Reach Future Recruits

The Institute of Physics (IoP) is calling on businesses and organisations from across Britain and Ireland to support physics by participating in next year's 'Einstein Year'.

2005 is the International Year of Physics, exactly 100 years since Einstein made three of his most important discoveries, including special relativity (and the iconic equation e = mc2).

The Institute of Physics is using this anniversary to raise the profile of physics in a bid to attract desperately needed students to the subject and make the wider public aware of the ways in which physics touches and improves our everyday lives.

Physics is vital to the future success of the UK's economy, helping generate new business and industry and providing a flow of highly-qualified graduates for a variety of employers – not just in scientific industries but in the financial and high-tech services.

Yet physics graduates – among the most sought after graduates – are in short supply. This problem is compounded by a lack of careers advice for young people. This means they are not made aware of the high demand among employers for the type of skills possessed by physics students such as numeracy and analytical problem-solving abilities.

Einstein Year provides an ideal opportunity for businesses in the UK to be more proactive – engaging and enthusing young people in the subject-through sponsorship and outreach work either organised through the IoP or with partners, or though communuity-based activities.

The Institute of Physics' communications team is leading the way, using the centenary of Special Relativity, the basis of much of modern science, to celebrate the role of physics through a raft of innovative events and activities including:

- A free computer game bringing Einstein's theories to life, sent out over the internet – available for sponsorship
- Exciting experiments on the move with 'Lab in a Lorry' – touring the UK and Ireland throughout 2005 – sponsored by The Shlumberger Foundation
- The Rambert Dance Company are producing a new work based on Einstein's theories, supported by Arts & Business South West
- Einstein Birthday parties – on March 14th, during Science Week

The Institute are keen to hear about, and help promote, additional ideas from representatives in fields such as engineering, aerospace, construction, design and technology – anyone in fact who would like to use Einstein Year to raise awareness of their business.

Lord Sainsbury, Minister for Science and Innovation, and an Einstein Year patron commentated, "This is a great opportunity to inspire and encourages physicists of the future. I fully support this initiative and encourage everyone to participate."

Circle no. 355

New Clean-Room Systems Enables Doping of 200mm Wafers

Southampton, UK-based Innos has invested a further one million pounds in its 1000_m microelectronics cleanroom. The purchase of a Varian E500HP high performance ion implantation system allows alteration of the near surface properties of semiconductor materials; it will enable doping of 200mm wafers, safe gas handling (SDS), low contamination (metals and particulates), variable implant angle, wide energy range and large dose range.

CEO of Innos, Stephen Byars comments, "The continued investment in technology is part of our ongoing commitment to work with industry, to push the boundaries of silicon innovation. Innos currently has a number of research projects in process in areas such as silicon-based devices, photonic devices, MEMs and quantum technologies."

The installation of the new implanter follows Innos' recent announcement of a five million-pound investment in the UK's first JBX-9300FS electron-beam lithography system that enables Innos to provide R&D to below 10 nanometers.

"We have established a fully-equipped facility, that is manned by a highly-skilled team with unrivalled materials expertise," Mr Byars added.

Circle no. 352

Cambridge University Chooses New Software to Speed Genetics Research

Cambridge University's world leading pathology Department has installed Bluefuse for Microarrays, the first software product from locally-based bioinformatics company BlueGnome, to help speed its genetics research programmes.

Dr Nabeel A Affara, Group Leader Human Molecular genetics Group in the Pathology department believes that BlueFuse will also improve accuracy of results and reduce the tedium of much of the analysis for his team

"One DNA microarray contains around 17,000spot shaped features. Currently researchers have to manually examine each spot to make a judgement on the quality of each feature. A researcher could spend two hours fitting a grid on a single microarray slide and ruling out bad features. BlueFuse takes just 20 minutes to do it automatically, with greater accuracy and consistency," he commented.

"Also, unlike other software we have trialled, which looks primarily at the shape of the spot, BlueFuse can distinguish signal from background very effectively. This means that data that would previously been discarded due to contamination, will now be considered and BlueFuse will effectively extract useful information from all the features on a microarray," he added.

Dr Affara said that researchers were also planning to re-examine large data-sets in the hope of uncovering promising information in data which had previously been discarded.

"The evaluations we have carried out with the beta versions of BlueFuse show a major improvement upon the techniques we have used previously. We are getting more data, which means (the software) is doing a better job of quantifying the lower expression genes. This is where new biological findings will come from, and so is particularly exciting for our researchers."

Dr Nick Haan CEO of BlueGnome believes the software has far reaching implications for research and commercial biotech organisations because the software was capable of increasing the throughput of first stage experiments, thus reducing time and costs and helping to get drugs to market sooner.

Circle no. 353

Cancer Research Technology Ltd Expands Drug Discovery Infrastructure

Cancer Research Technology Ltd (CRT), a drug discovery company based in London and wholly owned by the charity Cancer Research UK is implementing ID Business Solutions' (IDBS) ActivityBase informatics platform to manage its chemical and biological drug discovery data. Working at the critical interface between academic research and the pharmaceutical industry, CRT's role is to accelerate promising discoveries from the 200+ academic research projects funded by Cancer Research UK, into effective therapeutics in the clinic.

Until recently, most of CRT's successes have been in the development of novel techniques, for example, new types of high-throughput screens for DNA repair enzymes. Now, CRT is expanding its screening and lead optimisation capacity, aiming to deliver significant new chemical entities for development by partners in the pharmaceutical industry. "Improving potency is one of our main goals but we want to be sure that improving potency doesn't create problems in, for example, one of our selectivity, ADME or toxicity assays. Therefore, being able to track all that data against a structure is absolutely vital," said Dr. Tim Hammonds, group leader for assay development and screening. "We needed a robust informatics platform that could integrate both our chemical inventory and all our biological data easily since we have limited IT backup," added Dr. Tony Raynham, Head of Medicinal Chemistry. "We know ActivityBase is the industry standard for biology, but we knew less about the chemistry side so we pushed hard to satisfy ourselves that it was equally strong. We chose ActivityBase because it is a mature product that gave us the best all-round solution," he commented.

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