

GIBSON INDEX NEWSLETTER

APRIL 2011 – Issue No. 69

Your Monthly e-Newsletter on British Enterprise and Innovation

Welcome to the UK's most comprehensive and best-read Newsletter on Small Technology Companies, Academic Enterprise and Latest Innovation

Is the much-missed DTI Smart Award scheme – which provided modest Government funding to properly vetted SME research projects – about to be re-introduced?

Let us hope so. The new **Grant for R&D** scheme, which comes into effect from 4 April 2011, and organized by the **Technology Strategy Board**, 'will support SMEs across the UK that want to carry out research and development generating new and innovative products and services'.

A national scheme – backed by technology experts who were able to tell the difference between true innovation and fakes, me-toos and duplications – is much overdue. The old Smart Award scheme was the best technology support system in the world, or secondly only to the American DARPA scheme. In the UK Smart was developed to a higher plane at the DTI by that hard-headed Yorkshireman, and ex-IBM guru **Dr Geoff Robinson**, who recently retired as chairman of the **Royal Academy of Engineering's MacRobert Award scheme**, the UK's No 1 award for engineering.

The TSB says "The new scheme supersedes the Grant for R&D scheme previously managed by England's RDAs and will have similar objectives."

The new Grant for R&D scheme will offer SMEs three types of grant – Proof-of-market grants; Proof-of-concept grants, and Development of prototype grants will be used by companies to develop a technologically innovative product, service or industrial process.

The maximum funding available will be £25,000 for proof-of-market grants, £100,000 for proof-of-concept grants and £250,000 for development of prototype grants.

www.gibson-index.com

The Newsletter is compiled and edited by **Marcus Gibson**, former *Financial Times* technology correspondent, who has been covering enterprise and innovation for more than 20 years. The Newsletter aims to highlight developments in at least 100+ companies each month. It is derived from the wide-ranging news-gathering operation that produces the [Gibson Index SME database](#), which now contains profiles on more than 45,600 UK-based technology SMEs.

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COMPANY OF THE MONTH

Cannon Tri-Laminates Ltd celebrates £2m in only second year of trading

Growing fast due to its innovation and expertise in hi-tech textiles, **Cannon Tri-Laminates**, based at Golborne, near Leigh in Lancashire, develops and manufactures specialist textiles that are resistant to everything from chemical warfare agents to a rugby player's boot.

Customers include the **Ministry of Defence**, **Boeing**, **Airbus Industries** and **Gilbert**, which makes rugby balls used in international matches. The company was founded in 2009 and it has established an international reputation, with around 70 per cent of its output exported to 17 countries including China, Korea, New Zealand and the US.

Husband and wife **Duncan and Linda Cannon** are MD and finance director respectively, and son Paul is the production director. Duncan, a chemist who formerly worked for manufacturing giants **Dunlop** and **British Vita**, said: "We have a major development on at the moment for a material I have invented and patented for use in convertible car hoods. The material contains a layer of aluminium so it reflects heat back into the car on cold days, saving fuel and reducing its carbon footprint."

Cannon is currently in negotiations to form a joint venture with a German company to supply a major car manufacturer that should be worth £5.5m a year. Cannon is also the only approved supplier in the world of material used in poisonous gas-resistant hoods worn by **US Air Force** fighter pilots.

Cannon was funded its start-up costs entirely from their own pockets, but Duncan said he was confident there was a ready market for its products. He said: "Even though it was in the middle of the recession, we knew we had a clear run in our specialist markets as most of our competitors had withdrawn from it. "Many of the big players in the industry have been broken up and sold off over the years.

"Those that remained were working with old belt-driven machines from before the war. "The technical knowledge is just not there any more." Cannon has recruited three staff to give it a workforce of 17, and Duncan Cannon says it has could triple current production.

Contact: www.cannontri-laminates.co.uk

SME NEWS – ENGINEERING, ELECTRONICS, TELECOMS

Griffon Hoverwork to move to larger site at Merlin Quay in Southampton

Property developer Merlin Real Estate has agreed a deal that will allow the hovercraft maker to relocate to the 4.37 acre site, comprising of four production bays totalling 66,500 ft², yard, wharf with water access and purpose built offices, is situated in the suburb of Woolston, Hampshire.

Currently located at Hythe Marine Park, Griffon Hoverwork will undergo a phased move and aim to have production established at the new premises by the end of 2011. The relocation is the highlight of a year of rapid expansion for Griffon Hoverwork. Acquired by the **Bland Group** in April 2009, the company has since doubled its employee numbers, taken over the Totton-based firm **Hovercraft Consultants Ltd**, and won several new customers, including the Peruvian Navy.

The recently-signed £32 million contract with the **Indian Coastguard** for 12 large hovercraft made a larger site a necessity. MD **Adrian Went** described how the move will signify a new step forward for the company; "Once we're established at Merlin Quay, the company will improve productivity by focusing on production engineering and lean manufacturing. We are very pleased to have signed the agreement and

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look forward to being in the centre of an area that thrives on the shipbuilding industry.”

The firm’s factory at St Helens on the Isle of Wight will continue to operate.

Contact: www.griffonhoverwork.com

Kent-based mine clearance experts see rapid growth in demand for its services

BACTEC International Ltd recently completed a mine clearance operation in the Falklands and expects to go into Libya when the latest conflict is over.

It is now working in Iraq, the Middle East and Far East clearing ordnance from areas to make them safe for new roads and other infrastructure. Closer to home, the firm is working on World War Two bomb clearance from sites of proposed wind farms in the Thames Estuary.

Kevin Kneebone, MD of BACTEC International, Medway City Estate, was also named **Institute of Directors’** international director of the year for a firm with sales of up to £25m. Mr Kneebone, an engineer, became BACTEC managing director just over two years ago. The mine and bomb clearance firm has boosted overseas sales to around 80 per cent of turnover.

Mr Kneebone said the accolade was perhaps a tribute to his hands-on style. “We don’t send anybody or go anywhere that we are not prepared to go ourselves. I’m delighted and it’s good recognition for the civilians of what we are doing to grow the company internationally.”

www.bactec.com

Aberlink develops super-bicycle spinout based on founder’s passion for the saddle

Aberlink Ltd are makers of co-ordinate measuring machines. Company founder **Marcus Eales** decided a few years back that his Litespeed bike could be improved upon and set about upgrading it himself – and launched the **Qoroz bike**.

Several years on, the range has been expanded. While an elite squad races this very frame in racing events, supporting a process of continuous development that feeds directly back into the design.

Qoroz bikes are designed in the Cotswolds, using the very latest computer-aided design (CAD) and finite element analysis (FEA) systems, and made from the same grade of titanium.

Initially, the low front end and compact stance combine with a steep seat angle to put you over the front wheel a bit more than expected. ‘The Qoroz-badged carbon deep-dish 50mm tubulars bring a considerable turn of speed,’ said one review.

In 2010 the Qoroz bike hit the front pages of ‘Bike Radar’ with an excellent, full review, scoring an impressive 4.5 out of a maximum of 5.

Contact: www.qoroz.co.uk

Arcatech Ltd win £200,000 contract for innovative telecoms testing equipment

Arcatech in Lisburn, Northern Ireland, won the contract from **Telekom Austria** for its testing equipment that had been developed with assistance from Invest Northern Ireland.

Terry Simpson, MD of Arcatech, said the company, now an industry leader in sophisticated software and hardware for the telecoms industry, won R&D assistance of £200,000 to develop a state-of-the-

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art test platform for operators switching from analogue systems to Voice Over Internet Protocol (VOIP) technology.

Mr Simpson said: "The business with Telekom Austria resulted from a direct approach from the company which had heard of Arcatech's expertise. We shaped our technology to meet the company's specific requirements, and in so doing we have developed our product to meet the very latest ETSI standards.

Arcatech is an innovative design and development company committed to providing the 'next generation' of telecommunications test solutions. Its combined hardware and software platforms are used in the laboratories of major multinational companies throughout the world to develop, analyse, test and demonstrate many types of telecom equipment and networks.

Their system is 'the only one able to generate huge volumes of calls for testing'. Around 60 per cent of output goes to clients in global markets such as the US, where it supplies corporations such as **Lockheed**, and South East Asia, where our clients include **Panasonic**. In addition to providing a broad range of telecoms services throughout Austria, Telekom Austria operates in Bulgaria, Belarus, Croatia, Serbia and Macedonia.

www.arca-technologies.com

Renishaw plc buys MTT Technologies to access growth market of rapid prototyping

Based in Stone, Staffordshire, MTT designs, develops and manufactures additive manufacturing and rapid prototyping systems, including selective laser melting, metal casting, and vacuum casting machines and processes.

Renishaw founder **Sir David McMurtry** said: "MTT has a range of interesting technologies including selective laser melting (SLM) equipment which currently has its main markets in aerospace and medical devices, but also has potential for use in other sectors. All its products are complementary to Renishaw's existing technologies and business and we look forward to developing an exciting new business together."

MTT Technologies Ltd has 35 employees, with subsidiaries in the US and Italy, and a branch office in France. Its operations will be incorporated within Renishaw as a new product division and will continue to be based in Staffordshire.

MTT's CEO **Simon Scott** said the business fit between the two companies is perfect: "We're confident that Renishaw will be able to provide us with the ability to fully unlock the potential of SLM allowing us to compete with our peers and aim for a market leadership position. It has recognised the potential of the technology through the achievements we have made so far on limited resources. Renishaw also uses additive manufacturing for its own commercial activities and therefore I believe that Renishaw has a good level of confidence in both the technology and the potential of our team."

Contact: www.mtt-group.com

Scimar wins consortium funding for low voltage drive train for electric vehicles

The **Technology Strategy Board's** collaborative project – a Platform Power Management System and Low Voltage Drive Train for Hybrid and Electric Vehicles (SAFEDRIVE) – brings together an imaginative consortium of auto electronics firm **Scimar**, **John Bradshaw Ltd**, **Metallisation Ltd**, **Green Energy Technologies Ltd**, and the **UK Intelligent Systems Research Institute Ltd**.

Scimar will design and develop the new axial flux DC motors for the project that will compliment its existing Split-Pi technology. The project addresses 'a technology gap though the development of an open platform power management system, with customisable performance and efficiency'.

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The platform will be supported by a modular platform drive motor topology, based on a fully scalable axial flux design (100Nm to 1,200Nm cont. torque). The low cost technology will be sufficiently high torque to drive the wheels at a high speed, without requiring an intermediate gearbox.

To further drive down cost we will use the housing of the liquid cooled drive motor, as a heat sink for a high current power converter. This will be achieved by applying a circuit board directly onto the motor housing, using a thermal spraying technology.

The project will benefit Europe through increased sales of low-emission vehicles and enable our members to reduce development time by 20% and component cost by 40%. The modular drive motor platform will enable our members to manufacture desirable vehicles at a competitive price and reduce the total vehicle cost by up to 13%. In addition, the summary stated, 'it will offset imports by EU manufacturing of new drive motors, increasing European revenues by 257 million and profits by 51 million'.

www.scimar.co.uk

Crushers sells first mobile crushing machine –funded by The Co-operative Bank

In April 2011 Tamworth engineering company Crushers sold its first mobile crushing machine after securing funding from The Co-operative Bank.

The machine, known as The City Jaw 1830, is being sold to **Krossning & Sortering SRC** in Sweden. The unit will be used to crush granite for the development of a wind turbine site.

The Co-operative Bank provided finance for the firm to develop the 20-tonne, electrical machine which crushes bricks and reinforced concrete and granite. In the next five years the business plans to establish a global network of dealerships in more than 40 countries and achieve sales of 50 machines per year, with a projected turnover in excess of £10m. Crushers Ltd currently employs six people and has an annual turnover of £1m.

Martin Lee, senior corporate manager at The Co-operative Bank's North Midlands Corporate Banking Centre in Stafford, said: "We have been Crushers-UK's sole banker since it formed in 2009.

"The sale of its first City Jaw 1830 is a landmark for this young and growing business and because our strategy is to develop long-term relationships with our customers, we very much look forward to supporting Crushers-UK in the future."

Crushers' **Hercules 1830** is a heavy duty tracked self propelled jaw crusher. The fully remote controlled machine has variable speed tracks, hydraulic adjustable jaw setting and is available with optional magnetic separator and dust suppression. The Hercules offers a substantial cost reduction against its nearest equivalent competitor.

Contact: www.crushers-uk.com

Plextek's street lighting controls system to light up county of Suffolk

Telensa Ltd, the subsidiary of electronics firm Plextek Ltd, is fast becoming a leader in the remote control and monitoring of street lighting. This month it was awarded a 5-year, £2.5m contract by Suffolk County Council to control the county's street lights. Telensa's PLANet system will control 56,000 units to regulate switching and dimming. The 14-month rollout of the project is scheduled to begin in April 2011.

PLANet is a wireless system for actively controlling, monitoring and metering large populations of outdoor street lights, so they can be managed with maximum operational and energy efficiency. Telensa's system is highly scalable in terms of its range and capacity, making it particularly suited to large county

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environments like Suffolk.

Will Gibson, co-founder of Telensa, said “Winning the contract with Suffolk County Council is testament to the quality and benefits of our system. The council will soon be able to experience the effective management of operations, maintenance and energy consumption made possible by PLANet across its whole street lighting population.”

Following a period of initial development, Plextek Ltd. spun out Telensa Ltd. early in 2010. It is supported by a Carbon Trust Applied Research grant to develop commercially viable low carbon technology with the potential to cut UK carbon emissions.

Telensa’s PLANet (‘Public Lighting Active Network’) system comprises telecell units installed on individual street lights, which connect into the system’s advanced, wide area wireless infrastructure. PLANet provides comprehensive features for accurately controlling lights’ switching and dimming, together with full energy measurement and fault detection capabilities.

Contact: www.telensa.com

SEEDA Grant for R&D helps fund new engine prototype

In March 2011 a grant from the South East England Development Agency enabled the team behind **ULTRaMo** – Ultra Large Temperature Ratio Motor – to fund the development of a prototype of its ground breaking engine. ULTRaMo is a new engine design that has the potential to yield twice the fuel efficiency of existing engine technology by eliminating the majority of its heat losses.

Out of the possible £100,000 maximum grant allowance, ULTRaMo was awarded £88,740. This money has enabled the company to design a proof-of-concept demonstrator of its engine, which is currently under construction. The internal combustion engine has the potential to halve the carbon output in mechanical power applications, and achieve thermal efficiency of 60% – double that of current engines.

Chrissi Wilkins, MD of ULTRaMo, said “This grant has made a big difference in helping us to develop a working prototype. The ULTRaMo engine has the potential to be the biggest breakthrough the industry has seen since 1876 when Otto built the first practical four-stroke internal combustion engine.

“We’ve already invited 17 leading engine, chemical and materials specialists to evaluate our technology. They have all agreed that our theory is based on sound thermodynamics and presents an original solution to the process of converting fuel into power.”

ULTRaMo is actively seeking technical and commercial development partners across a range of stationary non-utility power generation applications.

Contact: Bruce Balmer: 07708 929 450 – www.ultramo-engines.com

Firm behind ‘rear view’ cycle helmet secures licenses to sell into overseas markets

Washington-based **Reevu** has set up distribution network in Canada, North America, South America and South Africa over the past year, which it said would help to make it a multi-million pound turnover business in the years to come.

The firm has overcome a number of hurdles over the years, including having to find alternative manufacturers after the collapse of the French company which used to make its products. Launched in 2005, the product itself also hit a few snags, with 30% of the customers from the original batch of 5,000 complaining the mirror responded too sensitively to the movements of the helmet and that this ‘affected visibility’.

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Reevu has now introduced adjustable mirrors and said that it was now hoping to sell 180,000 helmets a year by 2015, up from around 10,000 now. The company, which employs four staff in the UK and 40 sales representatives around the world, said that it was concentrating on growing its international sales, after experiencing difficulties in a depressed domestic market, with the helmet currently selling well in **France, Greece, Austria and Norway**.

Billy Morgan, who spent more than £1m developing the patented optical technology behind the helmets, said: "Moving into these new markets will provide a huge boost to the business and doubles the size of the market that we have already established."

"The potential for this product is huge as it has already proven to save lives. Countries like Brazil alone have a huge percentage of the population that are riding around on motorbikes, and it is these markets that we want to grow into."

Contact: www.reevu.com

SME NEWS – CHEMICALS, MATERIALS & ENVIRONMENT

Rolatube Technology benefits from clever maths input from Cambridge University

A long term collaboration between the **Engineering Department of Cambridge University** and Lymington-based **Rolatube Technology Ltd (RTL)** has provided a solid intellectual and mathematical underpinning to all its work.

RTL maintains a permanent presence on campus, with one of their key engineering staff having his office in the Engineering Department. RTL retains full rights to all intellectual property developed within the University.

RolaTube is the brand name for BRC or **Bi-Stable Reeled Composites** products made by **RTL Materials Ltd**. BRCs are now well established as an alternative to orthodox military communications masts for the support of antennas. CEO is **Quentin Compton-Bishop** and Technical Director is **Andrew Daton-Lovett**.

Their small size when coiled, toughness and light weight make them perfect for the modern highly mobile and communications-dependent soldier. Not only are BRC masts small and light, they are incredibly tough. Radio masts made of BRC 'survive everything the soldier can throw at them and just keep working'.

Better still, BRC structures can be rolled up like a tape measure to make them easier to transport and store. A RolaTube mast the length of a lamp post can roll up to fit into a sports bag, for example.

BRC masts, manual and now powered, are also coming into their own for the support of cameras and other surveillance equipment and development of systems for assisting with IED detection and bomb disposal is actively under way.

RTL Materials was set up specifically to exploit BRC technology and has steadily developed the technology from the manufacture of specialised inspection equipment for the nuclear industry (**BNFL** and **AREVA**) to its present broad scope.

The business model is that of an IP development company, researching, developing and then commercializing highly targeted, high value-added uses in industries where BRC-based solutions rapidly enhance operations and cost-effectiveness. To date RTL has combined manufacturing capability for its own products with out-licensing and joint venture collaborations, according to the demands of the particular market sector in question.

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BRC technology began its commercial life in providing compact, reliable means for remote inspection in nuclear power stations. Its first use was by **BNFL Magnox** in inspecting the **Bradwell Station**, where the use of a BRC system cut inspection times for the graphite main core by 80%.

In addition, work is currently under way to develop, with **Surrey University** and **EADS Astrium**, a mechanism for the deployment of solar sails – very large reflective ‘kites’ capable of powering a spacecraft from the pressure of sunlight. A first prototype has been successfully tested.

Thirdly, a system for deploying a tubular sheath directly behind the exhaust nozzle of a jet engine has been developed and tested in collaboration with **BAE Systems**. Testing showed that such a sheath reduced the ability of a heat seeking surface to air missile (SAM) to ‘lock on’ to the heat of the engine exhaust by a considerable factor. The very narrow cone of visibility of the engine’s heat signature would provide real and effective protection against SAMs, for a low cost and in a form that could be retrofitted to almost any type of aircraft.

Contact: www.rolatube.com – 01590 688 019.

Lacerta Technology launches portable device to test quality of thermoplastics

Lacerta is the new company behind **identiPol QA**, a portable device for the cost-effective quality assurance testing of thermoplastics. The identiPol QA is a simple one-stop method in providing a holistic approach to checking the quality of mouldable thermoplastics.

The aim of this unique instrument is to achieve the same analysis as the complex DMA instrument, but in a fraction of the time and simplified enough for mass market use.

Lacerta will also continue the successful instrument development business and consultancy services formerly provided by **Triton Technology Ltd**, which has been sold to the company **Mettler-Toledo AG**. As part of the Triton sale, Mettler-Toledo AG has also acquired ownership of its Dynamic Mechanical Analyser (DMA) product line.

Lacerta will focus on products and services aimed at enhancing process and quality control in the plastics industry. Key to this offering is the identiPol QA, the relatively low-cost device for the identification and rapid quality assessment of virtually any thermoplastic material. Since its launch, customer interest in the identiPol QA has grown steadily with close to 30 units sold to date in the UK and Europe. Recent industry recognition of the identiPol QA includes its short-listing as a finalist in the ‘Best Technology’ category of the **Plastics Industry Awards 2010**.

Lacerta will also provide a range of analytical and contract consultancy services for both materials measurement and instrument design from its premises in **Keyworth** near Nottingham. Drawing from over two decades of experience in the plastics industry, its specialists can offer a range of analytical techniques aimed at characterising and determining the properties of a wide range of materials including synthetic and natural polymers, composites, adhesives, membranes, thin films and coatings. This information can assist customers in the selection of materials and resolution of quality issues for a vast number of applications.

Contact: www.lacerta-technology.com

Ashtree Glass Ltd finds quiet but profitable niche in bus mirrors

In 2011 the firm won both the Medium/Large Business of the Year category and then being named winner of winners **T&A Bradford Means Business awards**.

Founder **Alan Roper** started one of Bradford’s hidden business jewels – Ashtree Glass has become the

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UK's leading niche supplier of rear view mirrors, brackets and arms for buses – and other vehicles such as forklift trucks, construction equipment (customers include **JCB**) and for military use.

Ashtree makes a range of mirrors in all shapes and sizes for different bus types, as well as four ranges of mirror arms, including one which can be set to any single degree, allowing the mirror to be mounted close to the side of the bus to help reduce accidental damage.

The company, which employs 26 people, including four members of the Roper family, is now the UK market leader in bus mirrors, with every British bus builder being a customer.

Ashtree, which exports about 40 per cent of its output, including to Germany, where its main rival is based, and now manufactures the widest range of commercial rear view mirrors in Europe. Last year it produced more than 170,000 complete mirrors, nearly 80,000 replacement glasses and lenses and more than 40,000 mirror arms.

One of its latest innovations is a 'front view' mirror which enables drivers of large vehicles such as coaches and HGVs to see obstacles immediately in front of their cabs. Its design was prompted by an incident involving an HGV vehicle which pushed a car along the A1 without the driver being aware.

"Blind spots are a real problem for drivers of larger vehicles, and we've developed a front view mirror to tackle the visibility issue," said Alan.

Ashtree Glass originally bought and sold replacement mirror glasses for trucks, but a demand for complete mirrors and replacement glasses from the same company led it into production, initially using outworkers.

Originally run from a spare room at Alan's home, the company later outgrew two rented properties before the current factory was bought. Since then the factory has been refurbished so that only the four outer walls of the original building remain.

Contact: www.ashtreeglass.co.uk

Eight19 Ltd appoints Dr Simon Bransfield-Garth as chief executive

Eight19 is developing a new generation of low-cost, flexible plastic solar cells that have the potential to dramatically reduce the manufacturing cost, increase the throughput of solar technology and help address the growing need for renewable power.

Using room temperature printing processes instead of traditional high temperature manufacturing, the cells are predicted to open up new high-growth volume markets.

Plastic solar cells benefit from being based on abundant materials and can be readily crafted into different shapes and colours to meet market requirements, for example for off-grid applications in emerging economies, such as solar powered lighting, or high volume industrial products.

The appointment of Bransfield-Garth follows investment of £4.5m by **The Carbon Trust** and French chemical company **Rhodia SA** in September 2010, to commercialise organic photovoltaic technology originally developed at **Cambridge University's Cavendish Laboratory**, a world leader in plastic electronics technology.

Tom Brown, chairman of Eight19 said: "Simon brings with him over 25 years global experience in building rapid growth, technology based businesses, so he is well placed to drive us forward towards mass production".

Contact: www.eight19.com

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Nanoco plc making 'good progress' to commercialising quantum dot technology

Manchester-based Nanoco develops and manufactures quantum dots – particles which emit light and have the potential to be an essential element of the next generation of TV and computer screens.

Announcing interim results for the six months to January 31, 2011, the company reported revenues of £1.14m, down from £1.6m on the same period last year, with losses of £1.65m, up from £470,000.

Nanoco reported good progress in its development partnerships, including a world first in manufacturing a 1kg batch of dots for an unnamed Japanese corporation, which triggered a £1.24m milestone payment.

Chairman **Dr Peter Rowley** said: "We are also fully aware that it is just a step on the way to Nanoco realising its objective of becoming a highly profitable company through the widespread use of its cadmium-free quantum dots in consumer goods and other applications." Nanoco, which has 44 staff, also raised £14.3m through a share issue in January to continue its work on scaling up production.

Its current production facility in Runcorn has the capacity to manufacture 25kg of dots a year, and it plans to invest £8m in new equipment to increase capacity to 25kg within six months.

Nanoco has also signed a four month extension to its joint development agreement with Japanese firm **Tokyo Electron** to develop solar ink, which can be printed on to material to create solar cells. It had deposits of £18.1m at the end of the period.

Contact: www.nanocotechnologies.com

Datatecnics develops 'unique asbestos disturbance automated alert system'

In April 2011 a unique asbestos disturbance automated alert system (ADAAS) may end the need for organisations to arrange manual inspections and monitoring of asbestos.

ADAAS is a polymer film wall covering that features embedded sensing tracks. Created by Birmingham-based **Datatecnics Ltd**, it can be applied to walls, asbestos insulating boards and almost any other materials containing asbestos.

The covering contains a fine web of micro-conductors, which detect any physical asbestos breaches in real time through a connection to a central control panel. The system then warns of any disturbance that could potentially release asbestos fibres.

Mohammed Zulfiquar, chief executive of Datatecnics, says: "There is a clear market for ADAAS – such as public sector buildings, domestic housing and commercial property. It is estimated that 70% of UK schools contain asbestos – which was the main reason why we developed ADAAS. The technology can also be used for non-asbestos markets, such as nuclear infrastructures, gas and oil pipes, security systems and metal fatigue in aviation."

Installing ADAAS is claimed to be 90% cheaper than removing or monitoring asbestos, and creates no disruption. ADAAS has taken three years to bring to market.

Datatecnics Ltd is predicting rapid growth with the aim to employ '500 staff in the next three years'. The technology is protected by pending worldwide patents. Mr Zulfiquar said: "There is nothing else like ADAAS worldwide, so we are now looking for investment to bring this unique invention to market. We have received interest from a range of organisations, from insurers and manufacturers to the asbestos industry itself."

Contact: Mohammed Zulfiquar, chief executive – mz@datatecnics.com

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Touch tech innovators Peratech Ltd develop 'see-through' version of their material

Based in Richmond, North Yorkshire, Peratech have produced a see-through version of their Quantum Tunnelling Composite material, and named it QTC Clear.

This force-sensing material can be used to create a whole new class of force-sensitive touch screens that can replace current resistive touch screen technologies, or enhance capacitive ones to create superior solutions with more features such as 3D input.

“Both Resistive and Capacitive touch screen technologies have their drawbacks,” said **Philip Taysom**, Peratech’s joint CEO. “Resistive is not very accurate and can’t do multi-touch so it is becoming less popular than Capacitive, but the latter uses a lot of power constraining it to smaller screen sizes. Our new, QTC Clear touch screen design offers the best of both technologies without their drawbacks. It can be made in any size and provides multi-touch, high sensitivity with great accuracy, ultra low power consumption and additional intuitive features with the third dimension of pressure to more easily manipulate and control information on the screen.”

The QTC Clear layer is only 6-8 microns thick with a transparency that is very similar to the existing touch screen technologies. This is sandwiched between two layers of ITO (Indium Tin Oxide), which is in turn sandwiched between two hard sheets, typically glass. It is so sensitive that it can detect deflections of only a few microns so that the top surface can be rigid and robust, eg. glass, unlike current resistive designs that have to be soft enough to deform easily making them susceptible to damage.

Contact: www.peratech.com – 08700 727 272 – info@peratech.com

Editor-turned-entrepreneur starts new company based on special armour material

The well-known veteran of technology and past editor of the ‘Eureka’ magazine, Dr Tom Shelley, has put down his pen and founded **Blast Absorption Systems Ltd**.

The firm was formed in September 2009 to develop and commercially exploit the novel armouring technology developed by architectural designer and inventor **Simone De Gale**.

Simone’s novel approach was identified by Dr Tom Shelley as a potential rapidly deployable retrofit solution to the ongoing problem of improvised explosive devices (IEDs) in theatres where British armed forces operate.

On further investigation, it became clear that the potential was much greater, and aircraft, ships, submarines and even civilian vehicles could benefit from the armour which computer modelling suggests increases blast pressure wave resistance by a factor of 1.8.

Tom introduced his associate **Charles Dawes**, technology consultant and founder of the first UK invention agency in 1980, to bring experienced executives to commercialise it.

It is a unique system of pre-stressing armour components that increase resistance to pressure which numerical models have shown improves performance of up to 80% without increasing weight or bulk.

Conversely, the same level of protection against blast can be achieved using significantly less armour, making the technology highly suitable for applications in aerospace, for armoured passenger cars and in light-role troop protection vehicles.

Contact: www.blastabsorptionsystems.co.uk

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Six businesses in the North West won recognition at inaugural awards 2011

Held in late March at the Lowry Hotel in Manchester, the winners included Daresbury-based **Thinspace**; consumer technology company **VUME**; online payment business **App55**, e-commerce company **MPP Global Solutions** CRM developer **CapsuleCRM** and mobile phone software consultancy **Apadmi**.

CapsuleCRM was the big winner of the night – picking up two awards for Best Northern Bootstrapped Tech Startup and Best Northern e-commerce Tech Company. Capsule CRM is a firm which offers a cheap, easy-to-use customer relationship management system which costs around £8 per user, per month, said co-founder **Duncan Stockdill**.

The awards were founded by **Manoj Ranaweera's Techcelerate Ltd**. He said the ceremony was an "opportunity to recognise world-class technology built in the north".

Technology networking group Techcelerate designs customer relationship management systems for SMEs.

Contact: www.capsulecrm.com – www.techcelerate.org

Dorset-based Telesoft Technologies Ltd to train detectives in 'passive monitoring'

The company has announced it will be training law enforcement and intelligence agencies in the art of passive monitoring for mass intercept and mass location tracking.

Starting at last year's ISS World Asia Pacific exhibition, it held a pre-conference training day in Kuala Lumpur, for law enforcement and intelligence services as well as telecom operators in the Asia Pacific region.

Tim Daniels, Marketing Manager, said the seminar titled 'Understanding passive monitoring techniques for mass intercept and mass location tracking' will outline the current technology and techniques used by the industry for intercept of signalling and voice traffic in communications networks allowing mass intercept and location tracking to assist in the fight against crime and terrorism.

Telesoft Technologies' **HINTON Interceptor** has been deployed for many years in communications networks worldwide to assist in the regulatory compliance of lawful interception as well as the needs of intelligence agencies.

For more than 20 years the leading telecoms operators, SIs, OEMs and application developers have relied on Telesoft's signalling, media and monitoring platforms.

Contact: – 01258 486 518 – www.telesoft-technologies.com

Games firm Fluid Pixel wins accolade at Nokia's Ovi Store for smartphones

This North East company is the first in the region to have its games downloaded two million times from Nokia's Ovi Store for smartphones.

The company produces games such as virtual pet game Animentals and licensed content for the Italian football team.

Only eight UK companies have achieved the feat. It also develops games for other platforms such as iPhone, iPad and Android, including the puzzle game Revolve.

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Fluid Pixel is made up of a five-person team, which is now targeting markets such as Android, Blackberry and Amazon stores. Fluid Pixel founder **Stuart Varrall** said: "We have also released content for the iPhone and iPad, but this extra success on Nokia's platform is a great outcome for the company. Most people have written off Nokia and the Ovi Store, but this makes it clear there is actually a big market waiting for the right kind of content."

In March 2011 Stuart Varrall won the **National DediPower Digital Award**. Fluid Pixel, a business offering innovative applications, games and interfaces for mobile phones, the web and desktops, won the first prize worth over £50,000.

Contact: www.fpstudios.com

Software business ServicePower Technologies hails 2010 as 'transformational'

Stockport-based ServicePower plc has a strong order book at home and in the US and has started to see the benefits of a lower cost base following a restructuring in 2009.

ServicePower develops software that enables companies that organise the repair of household appliances to deploy their staff more efficiently, schedule warranty repairs and installations of big-ticket items.

Chief executive **Mark Duffin** said he was delighted with the firm's results, with revenues for the year to December 31 up from £18.1m to £18.25m and pre-tax profits of £11,000, from a loss of £1.09m a year before.

Around half of its revenues are generated across the Atlantic. Mr Duffin said: "Turning a profit and having the turnaround strategy completed have been highlights of the year, along with signing some significant new contracts and building on existing relationships."

He added: "As the market for outsourced service operations continues to grow, so does our market opportunity. We have entered the current financial year with a strong pipeline of new business, both in the UK and US. We will remain focused in the year ahead on our areas of strength and look forward to capitalising on these opportunities."

Contact: www.servicepower.com

Liquidlogic Ltd said 25% of local authorities in England use its IT solutions

The company said that over the past 12 months it had won 89% of tenders for children's services, making it the largest provider of IT solutions for children's services in England.

Liquidlogic, which was sold by its excellent founding team to **System C group**, said 38 local authorities use its children's services solutions including Protocol Ics and eCAF. Tenders won in the last year include the provision of Protocol Ics to **Bolton, Surrey, Cheshire West and Chester Council**.

Liquidlogic said its products include systems to support early intervention by enabling multi-agency working. They also support targeted case-based processes for children who are referred to social services and help teams working with disabled children.

Ted Brierley, Liquidlogic's MD, said the ideas and feedback of staff and customers had helped to continually improve the solutions to be as user-friendly and effective as possible.

He said that over the past few years there has been a move towards linking up the delivery of services and more recently local authorities had begun to connect children's and adults' services.

Contact: www.liquidlogic.co.uk

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Software security firm Metaforic raises £5 million from investors

Led by venture capital outfit **Scottish Equity Partners** (SEP), the group joins original backers – **Pentech Ventures**, the **Scottish Investment Bank's** venture fund and employees – as investors in the firm. The firm will use the cash to expand its international sales and marketing activity.

Stuart Paterson, a partner at SEP, said: "We are very confident in the growth prospects for Metaforic. It has a very strong management team, which has succeeded in this space before. Its products serve an urgent need for games companies and enterprise software businesses to deploy software solutions that prevent loss of revenue through piracy, or need the reassurance that their software has been hardened against cyber attack."

Paterson expects the firm, which was founded in 2006, to be profitable in the near future.

The company, a spin out from the former Scottish Enterprise-backed **Intermediate Technology Institute** (ITI), was founded by **Andrew McLennan, Neil Stewart and Linda Mackellar**.

Last year, it appointed chairman **Bill Krepick** and chief executive **Dan Stickel**, who previously led Nasdaq-listed IP-protection firm **Macrovision**.

Customers tend to be somewhat shy about the security technologies they use, but some of the biggest names in the industry are now using Metaforic. Earlier this year, SEP made a multi-million-pound return on the landmark \$1 billion (£616m) sale of **BioVex** to **Amgen**.

Contact: www.metaforic.com – www.sep.co.uk – www.biovex.com

Future Publishing selects Grapeshot to be its contextual advertising solution

Having run successful tests at the beginning of the year, **Future Publishing** has consolidated its position at the forefront of online advertising by deploying Grapeshot contextual technology across more than 25 titles.

Grapeshot specialises in real time automatic contextual and user keyword retargeting. Its search algorithms, developed at **Cambridge University**, give online publishers the ability to dramatically increase their page yields. Grapeshot has solutions for display advertising, e-commerce and editorial infrastructure projects. Current customers include: **IBM, Virgin Media, VeriSign, Jumtap, Incisive Media** and **Johnston Press**.

Kurt Edwards, digital commercial director, Future Publishing, said: "During testing, the performance of all the campaigns improved significantly by applying Grapeshot's contextual intelligence and targeting. I believe the market seems to have a real hunger for contextual data solutions. Consequently we have already sold campaigns using Grapeshot. Furthermore we are in discussion with Grapeshot about other projects using their technology."

Andrew Morley, sales director at Grapeshot, said: "Grapeshot's ability to understand the weighting of all the words on a page lends itself perfectly to Future's vertically structured and rich content. We believe that we can help Future harvest even greater value out of their fantastic content and passionate audiences".

Grapeshot technology works by analysing the editorial content that a reader is looking at on a website and serving an ad that is contextually relevant to that content. By targeting readers at a moment when they are interested in the subject of the ad, results in 'improved levels of engagement', without the need to track users across the web.

Contact: www.grapeshot.co.uk

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Warwickshire software firm expands operations by opening an office in New York

Rivo Software said its overseas launch will help grow its North American client base. Based at the University of Warwick Science Park's Warwick Innovation Centre it provides large scale risk management and compliance software.

Rivo now serves a global client base from offices in the UK and USA. With clients in 65 countries, Rivo provides an enterprise level software solution, Safeguard, to manage business risk and compliance.

The six-year-old company said would open the new office to extend its presence within the North American market. Rivo's chief executive **Simon Hook** said: "We already cater to clients in the US and across the world but being based in the UK ourselves we predominantly deal with UK-based, global organisations.

"We believe that by opening this additional office we will be in a position to create a similar presence within the North American market. Initially there will be a small number of staff based at the New York office but we are fully committed to this operation and I see no reason why it cannot grow to be at least the same size as the Warwick office in the next couple of years."

In 2010 Rivo achieved a 650% revenue growth – due to an increasing awareness of business benefits that come from compliance. Rivo Software was listed in the Deloitte Technology Fast 500 EMEA 2010, a ranking of the 500 fastest growing technology companies in Europe, Middle East and Africa.

Contact: www.rivosoftware.com

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Ingenza secures not one but three Technology Strategy Board bioscience awards

Ingenza Ltd has recently received funding from the **Technology Strategy Board** for three new biotechnology projects in the areas of industrial biotechnology and the commercial application of high-throughput genome sequencing.

These projects will directly support and accelerate Ingenza's synthetic biology platforms to develop new synthetic routes to manufacture high value chemicals, such as pharmaceutical intermediates.

One project will develop a highly innovative bioprocess to replace the current petrochemical route to a very large volume platform chemical. The Technology Strategy Board's support will also positively impact Ingenza's biologicals and biofuels manufacturing processes, providing insight to the genomic location of DNA modifications which have yielded process improvements, thereby facilitating further increases in the efficiency and adaptability of Ingenza's world class technology.

Ingenza Ltd, is a leader in the development and application of engineered microbes for industrial use, operating state-of-the-art facilities at the **Roslin BioCentre**, on the outskirts of Edinburgh. Ingenza's team has over 25 years of expertise in molecular genetics, enzymology, fermentation and bioprocess development. The company's high cell density fermentation of improved microbes and industrial bioprocesses are currently undergoing scale-up worldwide.

Contact: **Sarah Graham** at Ingenza: sarah.graham@ingenza.com

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Cipher Surgical wins funding worth more than £1m from network of investors

The company, based at the University of Warwick Science Park's Venture Centre, said it will use the funding to launch a new medical product called OpClear. The OpClear product has been developed to address a common problem associated with cameras used during stomach surgery.

Of the most recent investment secured, £100,000 came from the University of Warwick Science Park's **Minerva Business Angel Network**, and a further £125,000 from **Midven**, the West Midlands specialist venture capital company.

Andrew Newell, MD of Cipher Surgical, said: "Angel investment is vitally important to start-up businesses like ours as other sources of funding are simply not available anymore," he added. "This investment will allow us to market the product to the global medical industry and we hope to have it fully launched by 2014."

Cipher Surgical's first product aims to solve a key challenge facing surgeons in the fast growing field of laparoscopy (keyhole surgery through the abdomen), that of maintaining continuous operative visions. A laparoscope transmits an image of the operative site to a screen, acting as the surgeon's eyes but the lens can become soiled by blood, fat, condensation and other contaminants.

To clean it, which can happen 6-10 times per hour, the laparoscope is removed from the patient and cleaned manually. As a result the surgeon's work flow and concentration is broken and patient risk is increased.

The Laparojet is a patentable disposable which retrofits all laparoscopes and, activated by the surgeon, delivers a jet of carbon dioxide across the lens, to clear instantly. The Laparojet is expected to be launched in Europe in 2012. In the last 12 months the Minerva Business Angel Network has signed nine investments, raising in excess of £2m.

Contact: www.ciphersurgical.com – www.minerva.uk.net

Diagnostics distributor VH BioLtd secures contract with National Blood Service

Gateshead-based company VH Bio was set up in 1992 to supply the healthcare industry with diagnostic kits and reagents to help match donor organs to recipient patients. It is the exclusive UK and Ireland distributor of the kits, which are manufactured in Los Angeles in the US.

The company has grown year-on-year and saw its profits rise by about 80% to £1.1m in the year to 31 March 2009 after securing a second tender to supply the **National Health Service Blood and Transplant Authority**.

Over the past few years it has grown its market share considerably and now estimates it has over 60% of the UK market for transplant diagnostics, with a turnover of £7.4m for the year 2010/2011.

The company, which employs 14 staff, is now expecting to grow its sales to £8m for the year 2011-12. The company recently began supplying diagnostic kits from US medical diagnostics company **Asuragen**, which specialises in kits which detect fragile X mental retardation (FMR1) genes in human DNA.

While 80% of its work is with the NHS, the firm is also heavily involved with university science labs across the country, providing a range of kits and reagents for a variety of molecular biology research projects.

VH Bio used to manufacture synthetic DNA for the molecular biology research market before selling on the operations to US company Integrated DNA Technologies (IDA) in 2008. VH Bio MD **Andrew Hewitt** said: "We work in an extremely niche market, which has helped us to build up a considerable market share over

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the years by offering expert technical help alongside state of the art products. As our products are sourced from the US, we are constantly at the mercy of currency exchanges.”

Contact: www.vhbio.com

Instem Life Science Systems inches ahead with profit up two per cent for 2010

The Staffordshire-based drugs development company, which listed on AIM last year, recorded an operating profit of £2.23 million, up from £2.19 million the year before, with revenues for the year holding steady at £10 million.

It showed a closing cash balance at 31 December of £3.26 million. The group was admitted to AIM in October 201 in order to facilitate its growth strategy.

Instem chief executive **Phil Reason** said: “2010 has been a year of substantial strategic development for Instem. The achievement of the successful IPO in October on AIM provides the platform to implement our ambitions for the future growth of the business.

“Importantly we have maintained our leading position in our niche EDSA market, expanded our addressable market through the launch of a new product suite, Centrus, and grown our impressive blue-chip customer base.

“With plans to launch additional products, enhance customer relationships and increase product penetration with existing clients, we look forward to the future with confidence.”

Contact: www.instem-lss.com

Image Analysis aiming to double its turnover for fourth consecutive year

After releasing its imaging product to clinicians in the health service across Europe,

Image Analysis, based at The Waterfront, Salts Mill Road, Saltaire, has begun selling its **Dynamika** imaging software to hospital trusts and pharmaceutical companies after it gained its CE Mark.

The software aids radiologists and clinicians in analysing MRI scans to diagnose rheumatoid arthritis, as well as other inflammatory diseases. The company is also conducting research to gain approval and use the product for diagnosing cancer.

The software solution, which has previously only been used in research, allows analysis of MRI scans to detect any disease manifestations in seconds, as well as provide a fast, comprehensive and fully-automated way to process the data.

The company, co-founded by **Dr Olga Kubassova**, has enjoyed seeing its turnover double each year since it was set up in October 2007. She said: “The accreditation has obviously allowed us to sell the product to the whole European market. We will be selling not only to the teaching hospitals and the research institutes, but also to the hospital trusts and pharmaceutical companies, so it gives us a wider client base.

“This year we plan to double turnover again, and we have also doubled the number of jobs we have in the company – last year we only had three people and now we have got six people in the company.”

Software architect **Lee Tunnicliffe** said MRI images are currently analysed manually, meaning results are subjective to the reader opinion and experience.

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He said: "With Dynamika a clinician can record and analyse various statistical information from scans taken from the patients during the course of the treatment."

He said the software was most effective when using Dynamic Contrast Enhanced MRI data, which involves injecting the patients with a contrast agent. He added: "By highlighting the areas of interest using Dynamika Workstation, the clinician saves valuable time during analysis of patient data. The effectiveness of a patient's treatment can be quantified by gathering statistics generated using Dynamika during the course of their treatment."

Contact: www.imageanalysis.org.uk

Deliverics Ltd takes part in feasibility study funded by the Tech Strategy Board

It was one of eight British companies are set to receive a total of nearly £200,000 – funding from the TSB which is aimed at helping to stimulate innovation with technologies that will be able to address potential environmental health and safety (EHS) aspects of the development of nanoscale technologies.

Edinburgh based **Deliverics Ltd** is seeking partners to distribute its simple to use, non toxic transfection reagent, **SAFEctin**, a kit for researchers that delivers molecules such as DNA into cells in a non-toxic and efficient manner. This product will help laboratory researchers investigating gene therapy as a route to treat diseases such as cystic fibrosis.

The funding is aimed at helping to stimulate innovation with technologies that will be able to address potential environmental health and safety (EHS) aspects of the development of nanoscale technologies.

The funding will go towards 3-month feasibility studies with a primary purpose of seeding business-led collaboration going into future programmes in EHS-related applications.

In January 2011 Deliverics was awarded a **Smart: Scotland** grant to research next generation transfection reagents for biotechnology applications. Following the award of a £65,000 grant the company has embarked on an R&D programme to investigate further chemical compounds to deliver molecules into and onto cells. The company has a strong background in chemical synthesis and is building on its recent success with its SAFEctin transfection reagent.

Dr Steve Howell, Deliverics CEO added "Since we founded the company we have build a good team of people dedicated to bringing new products to market."

Back in December 2010 Deliverics Ltd, a **University of Edinburgh** spinout, received investment to build gene therapy technology. It received an investment of over £275,000. The company which was formed on the back of a **Scottish Enterprise Proof of Concept** project completed a fund raising round from an investment syndicate comprising of **Upstarts Ltd, Innova Partnerships Ltd, Scottish Enterprise Seed Fund** and a number of individuals.

The company is developing technology that one day may be used to help people with cancer and cystic fibrosis. Its first product was recently launched at the international trade fair, **Medica** in Germany, and is now available for use by researchers to help them study and exploit biochemical processes inside cells.

The company's first product will be SAFEctin, a kit for researchers that delivers molecules such as DNA into cells in a non-toxic and efficient manner. This product will help laboratory researchers investigating gene therapy as a route to treat diseases such as cystic fibrosis. Asier and the team at Deliverics plan to extend their technology into other areas, as well. The market size for the type of products Deliverics is developing has been estimated at '\$2 billion per year by 2012'.

Contact: www.deliverics.com

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Radox Laboratories to create 242 new jobs as part of a £15.8 million expansion

The legendary **Dr Peter Fitzgerald**, MD of Radox Laboratories in Crumlin, Northern Ireland, said the firm was planning to create many more jobs, with investment supported by **Invest Northern Ireland**, which has offered £2.4m of aid.

Radox is one of Northern Ireland's most successful and respected companies. It has grown steadily since it was set up in 1982 and, through a firm focus on research and development, has established itself as a world player with an international reputation for excellence.

The firm specialises in the development of sophisticated chemical and biochemical diagnostic tests and devices, primarily targeted at hospital, clinical and veterinary laboratories. Radox Laboratories now employs over 850 people worldwide, including 620 in Crumlin.

The investment will allow the company to upgrade its facilities and strengthen its sales, marketing and production capability. The new jobs will be created across those functions and will collectively deliver £5.6 million annually in salaries.

Radox Laboratories has an extensive worldwide network of distributors servicing 130 countries and 95% of its products are exported. The company invests over £7m in research and development each year.

Contact: www.radox.com

Rapid Biosensor Systems Ltd enters deal with Ortho Clinical Diagnostics, Inc

Rapid Biosensor Systems Ltd is a privately owned company founded in Cambridge UK as a spinout from **Sentec Consultancy**. The former is exploiting patented technology for rapid screening of infectious diseases.

Recently, the company moved to the **Babraham Research Campus** where much of its technology incubation was undertaken. It plans to explore device concepts based on its platform for other diseases including Bovine TB, Malaria and E.Coli which will facilitate business growth. The company had raised more than £1 million in capital from private investors, government grants and a technology development award from the **World Health Organisation**.

In March 2011, the new deal will bring into production RBS's Breathalyser device for the screening of active tuberculosis. Under the agreement, Ortho Clinical Diagnostics will have an option on worldwide exclusive rights to commercialize the TB Breathalyser which is a device capable of detecting TB in less than five minutes from taking a cough sample.

RBS has continued to successfully develop and patent its immunosensor platform technology which was tested for detecting TB in India and Ethiopia with good results and in an environment where the product will be needed at the point-of-care. The platform offers a low cost, portable, integrated solution which requires little training.

Contact: www.rapidbiosensor.com

Novartis follows Pfizer in announcing swingeing job cuts in UK R&D teams

Novartis, the Basel, Switzerland-based pharma giant, has said a raft of job cuts will take place at its research and development site in **Horsham, West Sussex**.

The 'restructuring plan' will be implemented over the next two years, with the total workforce at the West Sussex site gradually reduced 'from 950 to 550'.

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In a statement from the company, general manager at Novartis, **Sue Webb**, said: "With significant changes in healthcare systems aimed to contain or cut cost, this critical assessment and the subsequent potential changes to the Novartis UK organisation are key to maintain significant investment in innovative drugs and research efforts in the UK."

Though prospects remain undoubtedly gloomy for Novartis employees in Horsham, the company insists all 300 jobs in its Respiratory Clinical Development franchise. Its Respiratory Research team will be retained. Novartis says scientists working on other projects will be offered transfers to alternate sites in Basel, Switzerland and Cambridge, US. Earlier, US drug giant **Pfizer** announced the closure of its Sandwich plant earlier this year, with over 2,000 redundancies.

Major corporations with UK facilities have long been concerned about the tax paid on foreign earnings, prompting British chancellor **George Osborne** to announce controversial plans to offer massive tax reductions for companies engaged in research and development.

Days after announcing cuts at the Horsham site, Novartis has revealed plans to expand its sales force in China this year as it aims to capitalise on the expanding Chinese market by selling more drugs to local hospitals and health clinics. Novartis currently employs around 5,000 people in China, but has not specified how many new jobs will be created.

Contact: www.novartis.com

Medical testing kit maker Omega Diagnostics saw sales grow by 27%

Thanks to a major acquisition and a growing global market for its products, the Aim-quoted company, based in Alva, Clackmannanshire, Scotland, said that revenue for the 12 months to 31 March was expected to be £7.9 million, compared with £6.2m the year before.

In a trading update ahead of its full-year results, chief executive **Andrew Shepherd** said the firm had a global distribution network covering 100 countries and had put a large marketing effort into developing nations. "The in-vitro diagnostic test market is a good market with good levels of growth," he added.

Most of Omega's product groups saw growth, with sales of its food intolerance kits up 21 per cent and infectious diseases tests up 11 per cent. It also benefited from £950,000 of sales of allergy testing equipment since buying part of German firm **Allergopharma** for £5m in November. That part of the business is set for further growth after striking a deal with a French firm last month.

Under the deal, Omega will develop and exclusively distribute allergy tests for one of the machines made by **Immunodiagnostic Systems** (IDS) in France. Shepherd said the IDS deal would take about a year to roll out and would allow a "real transformation" in the business. The IDS contract could see Omega hit a turnover of about £20m by 2013.

Contact: www.omegadiagnostics.co.uk

Astex Therapeutics plc is snapped up by Nasdaq-listed SuperGen

The deal, worth £91m, will leave Astex shareholders with a 35 per cent stake in the company. **Wragge & Co's** corporate partner **Kevin Jones** led the cross-border acquisition, which will provide Cambridge-based Astex with an additional cash sum of \$25m on closing.

A further \$30m will be paid over a 30-month period from the date of closure. The acquisition is conditional upon regulatory and shareholder approvals. Astex Therapeutics focuses on small molecule therapeutics to develop new medicines primarily for the treatment of cancer and viral infections.

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Mr Jones said: "Having worked with Astex since it launched in 1999 we were well placed to advise on this important deal which supports its future growth and provides liquidity for its shareholders. The deal was highly complex, involving a UK scheme of arrangement and drew on our wide-ranging M&A experience and in-depth life sciences expertise."

Contact: www.astex-therapeutics.com

Avacta wins first substantial order from Japan for its Optim drug analysis system

The drug technology company developed the Optim system to help companies develop drugs more quickly, and it signed a distribution agreement with market expansion services group **DKSH Japan**, a £5.8bn turnover group specialises in Asian markets business development.

Avacta's first order for an Optim unit will be shipped to DKSH this month. **Alastair Smith**, chief executive of York-based Avacta, said: "DKSH has in depth understanding of the Asian market as well as an excellent team of sales, applications and support staff. The team has many years experience in selling and supporting complementary technologies to Optim into our target customers which is of significant benefit to Avacta."

Yuji Hirohata, of DKSH Japan, said: "Avacta's Optim system is attracting considerable attention as a tool that allows drug developers to gain a greater insight into protein therapeutics formulation at a much earlier stage of development."

This agreement follows deals with **Pall Corporation** to market Optim in the US, **Isogen Life Science** to distribute Optim in mainland Europe; and with **Cold Spring Biotech Corp** to market the system in the fast growing Chinese and Taiwanese markets.

www.avacta.com

Heptares Therapeutics and Takeda Pharmaceutical Company sign key deal

The deal includes £4.5m up front cash and equity and up to £60.5m in future milestone payments, and royalties on product sales.

The two-year drug discovery collaboration focused on a single G-protein coupled receptor (GPCR), which plays an important role in the pathology of central nervous system disorders. This GPCR has proved intractable using historical drug discovery efforts, due to its instability when removed from cell membranes and the resulting lack of insight into its structure.

During the collaboration, **Heptares** will use its StaR (stabilised receptor) technology to engineer the first-ever thermally stabilised forms of the GPCR as the basis for the drug discovery programme.

Takeda will participate in lead generation and then assume responsibility for preclinical development and clinical development of new drugs candidates. Under the terms of the agreement, Takeda receives worldwide commercial rights to new drugs emerging from the collaboration.

Dr Malcolm Weir, CEO of Heptares Therapeutics, said "As we advance Heptares' internal pipeline of GPCR-targeted medicines, we also plan to pursue attractive external opportunities, such as this partnership with Takeda, to extend our technology broadly across the GPCR universe."

Heptares has raised more than \$35 million from leading venture investors, **Clarus Ventures**, **MVM Life Science Partners** and **Novartis Option Fund**.

Contact: www.heptares.com – Dr Malcolm Weir, CEO – malcolm.weir@heptares.com

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FUNDING & INVESTMENTS

Microsaic Systems plc raises £4m ahead of admission to AIM

Microsaic is the first and only company to have successfully miniaturised mass spectrometry through the development of its patented chip-based technologies.

The firm was established in 2001 as a spinout from **Imperial College London**. Its technologies are protected by 88 patent applications worldwide of which 36 are granted.

The company's first product, the **Microsaic 3500 MiD**, was launched in January 2011. It is a desktop MS system that is smaller, lighter, more energy efficient and cheaper to run than legacy conventional MS systems.

Mass spectrometry is widely accepted as a 'gold standard' method for identifying chemicals. As a result, this technique is used routinely by chemists across a range of sectors including government, energy, utilities, pharmaceuticals, environmental, food and drink, healthcare and industrial chemicals.

Microsaic aims to introduce compact, deployable MS products, based on its core technology, into a series of target markets and applications to replace existing MS systems and expand the global MS installed user base by meeting the significant unmet demand from within other markets.

The company aims to generate recurring revenues through chip consumables. In addition, the company continues to innovate and develop next generation products designed to reach wider markets and target additional applications, providing even greater sensitivity for detecting very low concentrations of chemicals (eg. contaminants, harmful substances or clinical biomarkers) in complex samples (eg. urine, blood plasma and food).

Contact: www.microsaic.com

BiP Solutions launches 'new and improved' SME Engagement Programme

Business intelligence experts BiP Solutions is offering a free service, designed specifically for start-up and small businesses, which will provide the business intelligence and information needed to compete in the current public sector procurement marketplace.

At a time when cost saving is a key focus for businesses, the Supply programme offers a range of free services that will enable companies to improve market presence and achieve business growth. It will help them become ready to tender, with free access to public sector contract opportunities, events, news and resources all relevant to their sector.

The programme can be broken down into three main areas:

- **Contract Opportunities** – users can access new public sector contract opportunities in one chosen region for free
- **Events** – information and booking instructions for events designed to prepare businesses to become ready to tender
- **News and Resources** – information to help keep businesses fully up to speed with public procurement best practice and market developments.

BiP CEO **Ron Burges** said: "We feel that the Supply programme fills a gap in the market and will provide an invaluable service to start-up and small businesses. At present we have approximately 30,000 companies registered for the service and our goal is to grow the programme to include all UK start-up and small businesses."

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Businesses can view at: www.supplytender.co.uk – www.bipsolutions.com

Talis Information is bought by outsourcing giant Capita Group for £18.5m

For the year ended 31 March 2010, Talis made an operating profit of £3.5m on turnover of £7m. **Paul Pindar**, chief executive of Capita, said: “The acquisition of Talis Information will enable Capita to offer a wider set of services to the further and higher education markets and to local authorities, where we have a strong client base.”

Dave Errington joined Talis in June 2003 from **SurfKitchen Inc**, a venture capital-backed wireless mobile software startup based in Zurich and London. As CTO he worked with the founders and management team to refine their technology and business strategy to position the company for growth with early adopting customers, strategic partners and investors.

Previously, he worked for **Sage Group plc** as CTO and before that as Research and Development Director for Sage (UK) Ltd. A further £2.5m could also be payable depending on Talis’ profit performance. Talis provides computer software solutions at its Birmingham base, which employs 42 people. London-based **Capita** said the acquisition would add “valuable new expertise and capabilities” to Capita’s existing products for the academic and public sector.

Contact: www.talis.com

Management buy-out at Fibercore Ltd agreed in deal with parent company Cisco

Based at the Southampton Science Park, Fibercore is a world leader in the design and manufacture of speciality optical fibres, with customers in the aerospace, defence and telecoms industries.

Its speciality optical fibre is also a component in power amplifiers, providing the next generation of high-speed video and data transfer on the internet. The firm employs 30 people at its Chilworth site.

Chris Emslie, chief executive of Fibercore, said: “With H.I.G. Europe, Fibercore has found an investor with deep financial resources and global reach. We welcome them as partners for the next stage in Fibercore’s expansion.”

“Fibercore is a genuine UK export success story and H.I.G. is committed to supporting the business in its continued international expansion and future development.”

The firm employs 30 people at its Chilworth site. Cisco, having undertaken a strategic assessment, concluded that Fibercore was a profitable but non-core activity as they sought to develop other areas of the group.

Fibercore products are used in navigation and stabilisation systems for everything from long-haul airliners, business jets and helicopters, to satellites and space exploration vehicles.

Contact: www.fibrecore.com

Eight British companies to receive a total of nearly £200,000 for nanotech projects

The feasibility studies are aimed at helping to stimulate innovation with technologies that will be able to address potential environmental health and safety (EHS) aspects of the development of nanoscale technologies.

The funding – from the **Technology Strategy Board** and **EPSRC** – will go towards 3-month feasibility studies with a primary purpose of seeding business-led collaboration going into future programmes in

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EHS-related applications.

A secondary aim is to enhance understanding of the priorities in EHS-related issues and solutions from the perspective of UK business. Meeting these aims will make it possible to deliver early stage novel solutions that will place the UK in a strong and competitive position, developing technologies in a global landscape.

The companies leading the feasibility studies are **Intrinsiq Materials Ltd, Paraytec Ltd, Deliverics Ltd, Archimedes Polymer Technologies (UK) Ltd, AvantiCell Science Ltd, Seacoustics Ltd, Naneum Ltd** and **Plastic Antibodies Ltd**. The Technology Strategy Board will invest £166,000 in the eight studies while EPSRC will contribute £30,000 towards academic costs within three of the studies. However, contact details of **Archimedes Polymer Technologies (UK) Ltd** and **Plastic Antibodies Ltd** remain obscure!

Comment: Kent-based Naneum Ltd is probably the best of the bunch.

Contact: www.intrinsiqmaterials.com – www.paraytec.com – www.deliverics.com – www.avanticell.com – www.naneum.com

Energy Technologies Institute ‘seeks developers of carbon-capture technologies’

According to a statement, the ETI’s strategic modelling has highlighted carbon capture and storage (CCS) as a crucial part of the UK’s energy mix alongside nuclear power, offshore wind, bio energy and marine energy ‘if legally binding cuts in greenhouse gases of 80 per cent by 2050 are to be met’.

The ETI expects to invest in the initial development of two promising ‘next-generation’ technologies before selecting the best one for large-scale testing at a combined cycle gas turbine (CCGT) plant. ‘All proposals must be received by 27 June’, a stipulation that will not please many SMEs, and adding to the prevailing impression that the ETI is a ‘Big Boy’s club’, with members such as **Rolls-Royce, BP** and **E.ON**.

The ETI said bidders will need to demonstrate and justify how their approach would enable their technology to reach a state of development that would allow future investors to start engineering the design of a power station using this next-generation technology in 2015, with operation commencing in 2020. As retrofitting of existing power stations is desirable, the request for proposals will target post-combustion technologies with low capital costs.

Dr David Clarke, ETI chief executive, said: “Gas remains the UK’s primary energy source and our estimates suggest we will have around 30GW of CCGT capacity by 2030.

Even though gas is much cleaner than coal, achieving the UK’s CO2 reduction targets in the longer term will still require CCS to be fitted to all fossil-fuelled power stations by the 2030s.”

The overall aim of the project is to develop a technology with the potential to make a substantial reduction in capital and operating costs in the capture plant, which will be ready to catch the wave of CCS implementation in CCGTs expected to occur in the 2020s and early 2030s.

www.energytechnologies.co.uk

Second investment of £300,000 pumped into Michelson Diagnostics

Octopus Investments has added to its initial investment of £1.7m in October 2010 into Michelson, the medical equipment and scanner specialists, whose unique laser scanning technology can image skin and other surface tissue at a much higher resolution.

The £2m investment from Octopus will help fund the manufacture and placement of VivoSight scanners with key-opinion-leaders for clinical and economic validation, and will support the growth of the sales

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infrastructure in the UK and USA. Funds were provided from the **Octopus Titan VCT funds**, the **Eureka EIS Portfolio Service** and the **Octopus Venture Partners**.

Michelson anticipates that the **VivoSight** scanner could revolutionise the treatment of non-melanoma skin cancer, by providing dermatologists with a new way of seeing abnormalities that are hidden below the skin surface.

www.md-ltd.co.uk

'Tech City' in Shoreditch in east London offered £1m in match funding support

The **Technology Strategy Board** is offering companies in the area the opportunity to apply for funding of up to £100,000 for their projects through a competition designed to support and extend the existing east London tech community.

Universities and Science Minister **David Willetts**, who visited TechHub in east London, said: "It is important that we nurture clusters such as the one that has grown up in this area. They are the crucibles where new industries are born, where communities support one another and where companies grow to become globally competitive. This initiative, with strong community involvement and including coordinated help to enable the companies to move fast towards commercialisation, is exactly what clusters need."

The Tech City Launchpad competition for funding, which opens on 6 May 2011, will be open both to companies in the Tech City cluster around **Old Street** and **Shoreditch** in east London and to companies outside the area, though the goal is that the work should take place predominantly in the cluster area.

Elizabeth Varley, co-founder and CEO of **TechHub**, office space for tech companies locally, said: "This initiative is ideal for small and micro companies and start-ups in the Tech City cluster, which often struggle for capital or easy access to finance."

Contact: www.techhub.com – Elizabeth Varley, Co-founder and CEO.

Mace takes high profile £50m Thames cable car contract

Mace plc has won the £50m contract to build a cable car across the river Thames in East London. The project will connect the Greenwich Peninsula and the O2 arena to the Royal Victoria Docks and the ExCeL centre.

Up to 2,500 people an hour will be able to make the five-minute journey of just over half a mile across the river in one of 34 gondola cabins.

Construction work is set to start this summer. The aim is to have the cable car up and running before the 2012 Olympics.

Contact: www.macegroup.com

The first round of the Regional Growth Fund (RGF) announced

It will give cash to 50 successful bids by companies and partnerships 'who demonstrated how they would create jobs and a high level of private sector-led sustainable economic growth in their local communities over the coming years'.

The second round of the fund opens to bids in April 2012, and this round will aim to allocate the remainder of the fund (nearly £1bn). The £450m being invested by the Government through the first round of the RGF is expected to leverage more than £2.5bn of private sector investment.

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Further details on applying and the criteria will be published on the [BIS website](#).

A Full List of Winners are as follows:

- **East Midlands and South East Midlands: 1730 direct jobs, 3140 indirect jobs.**
General Motors UK Limited
Molecular Profiles Ltd
Thales Properties Ltd
- **North East: 5216 direct jobs, 8367 indirect jobs.**
A V Dawson Ltd
Bridon International Ltd
Chirton Engineering Ltd
Cleveland Potash Ltd (CPL)
Connor Solutions Ltd
Cumbrian Holdings Ltd
DUCO Ltd
Durham County Cricket Club Holdings Ltd.
Lotte Chemical UK Ltd
Nifco UK Ltd
Nissan Motor Manufacturing (UK) Ltd
Proctor & Gamble Technical Centres Ltd
SSI UK Ltd
Turbo Power Systems Ltd
- **North West: 5533 direct jobs, 2279 indirect jobs.**
Ames Goldsmith UK Ltd
Bentley Motors Ltd
Bruntwood Ltd and Manchester City Council
Holroyd Precision Ltd, and sister companies
Liverpool Echo
Muse Developments
Pilkington UK Ltd
The Stobart Group and ProLogis, and Halton Borough
Tygavac Ltd
- **South East & East of England: 427 direct jobs, 361 indirect jobs.**
e2v Technologies (UK) Ltd.
South West: 787 direct jobs, 535 indirect jobs
EADS UK Ltd
Messier-Dowty Ltd
South Devon College
West Daily Press and the University of Plymouth
- **West Midlands: 6193 direct jobs, 34,669 indirect jobs.**
Alstom Grid UK
Birmingham Chamber of Commerce (on behalf of Birmingham City Council)
Bosch Thermotechnology Ltd
Jaguar Land Rover
Prince's Regeneration Trust
Yorkshire & Humber: 7628 direct jobs, 2716 indirect jobs.
The Carbon Trust
David Brown Gear Systems Ltd
Deafinitions Ltd

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Doncaster Borough Council
Dunhills (Pontefract) plc
Keepmoat Homes Ltd
Wakefield Council

- National Bids: 35 direct jobs, 44,587 indirect jobs.
Capital for Enterprise Lrs (CfEL) – see below.

Contact: www.bis.gov.uk/rgf

One winner in detail: Oxford Investment Opportunity Network accesses £50m fund

The OION Network was one of five partners in the successful bid submitted by **Capital for Enterprise Ltd** (CfEL) for the £50 million business angel co-investment fund, which was one of only two national bids to secure funding from the **Regional Growth Fund**. The partners in the CfEL consortium expect to set up a co-investment fund that will provide capital to match investments from business angels in high growth companies.

The OION Network was established as one of the first angel networks in the UK and remains one of the few private sector networks. It assists innovative companies across the UK to secure crucial business development funding from £200,000 to £2 million.

The news rounds off a successful year for OION, whose annual results show that it has maintained its track record of deals despite the economic downturn. A total of 17 new deals were completed in the year to 31 March 2011, raising just over £2 million of direct investment from angel members and enabling investee companies to leverage an additional £6.6m from other sources.

In the past three years, OION has helped over 40 companies raise more than £27 million. Investee companies include **Microvisk Technologies** and **Bladon Jets**.

Contact: www.oion.co.uk

UNIVERSITY NEWS

UCL to Lead StartUp Summer – with YouGov and Imperial College London

UCL, working with **StartUp Britain**, **YouGov** and in collaboration with **Imperial College London**, will lead the development of a pilot 'StartUp Summer' scheme to stimulate, encourage and support student entrepreneurs.

Launched by **Prime Minister David Cameron**, StartUp Summer is an entrepreneurs' development programme that will offer students the opportunity to develop their own innovative, business ideas into actionable, start-up business plans. The programme will be open to UCL and Imperial students with a view, in future years, to extend the programme to the national student body.

To apply, students will submit online, either a pitch for a business idea or their skills as a potential team member. Inspiring figures from enterprise will identify the top five business ideas to form the basis for the five start-up projects and act as mentors to support their development. Mentors will support the student with the chosen business idea to select their team members from applicants who have pitched their skills as team-members. Enterprise at UCL is led by **Professor Stephen Caddick**, Vice-Provost (Enterprise) and is delivered by **UCL Advances**, **UCL Business** and **UCL Consultants**.

In a second development at UCL, Universities and Science Minister **David Willetts** launched the new

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EPSRC Centre for Innovative Manufacturing in Emergent Macromolecular Therapies.

EPSRC Manufacturing Fellowships will provide five years support for at least six exceptional engineers and technology specialists from business who are able to bridge university and industrial cultures. Each Fellow will lead a £1 million programme of research.

Contact: UCL Advances – advances@ucl.ac.uk

University of Greenwich engineers complete bomb-disposal robot prototype

Dr Steve Woodhead of the **University of Greenwich's School of Engineering**, based at the **Medway Campus** in Kent, who is working on the project alongside industrial partner NIC Instruments, said that at around 72cm in length and 35cm wide, the robot should weigh in at less than 50kg and achieve speeds of up to eight miles per hour.

He said "If the unit is disassembled – we can take the turret and batteries off it – it is much more portable than the competing units. That means we can get it into the theatre faster, and also that we can get it to places you can't easily get a large vehicle to."

The robot has cameras on board, which relay images back to the operator via a hand-held control, and employs a versatile gripper that can carry and manipulate delicate items. It also includes nuclear, biological and chemical weapons sensors.

Key customers for the finished product are expected to include the defence and security forces of several EU countries. **Dr Woodhead** added: "Because of its relative portability, you can put it in the boot of a car and drive it around, so it does lend itself to civilian applications rather more than some of the larger competing units that require a dedicated vehicle to drive them around in."

Particular scenarios that the robot is designed for include examining suspect items such as IEDs, approaching suspect vehicles and opening the doors to investigate, as well as remote searching of buildings and aircraft.

Dr Woodhead added "One of the things we're looking at is whether we can make the arm long enough to be able to reach overhead lockers on civilian aircraft." The final prototype should be finished within the next two months, after which it will enter field trials and a demonstration for an 'interested civilian EU client'.

Contact: Dr Steve Woodhead, School of Engineering, Director of Research & Enterprise – 01634 883 024 – s.r.woodhead@gre.ac.uk.

Scotland's new research 'super institute', The James Hutton Institute, launched

The institute unites the **Macaulay Land Use Research Institute** in Aberdeen and **SCRI**, Scotland's centre for crop research and breeding, based at Invergowrie near Dundee.

The institute has the job of tackling some of the 'world's most challenging problems including threats to food and water security'. The new research organisation will employ more than 600 scientists, researchers and support staff, making it one of the biggest institutes of its type in Europe and a potential world-leader in agricultural and environmental science in which Scotland already excels.

It is named after the Edinburgh-born founder of modern geology, **James Hutton**, who was one of the leading figures of the 18th century Scottish Enlightenment.

The James Hutton Institute will be home to a wide range of scientific disciplines ranging from cell and

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molecular, environmental and ecological sciences to social economics, geography and information and computer science.

One of the James Hutton Institute's goals is to find ways to balance the demands on the land from farming, industry, housing, tourism and recreation. The Institute's chief executive is **Professor Iain Gordon**, a Scot who has returned from a research career in Australia.

Emeritus James Hutton **Professor Gordon Craig**, said "Hutton wrote that the Earth is a machine fired by heat. It took almost another 200 years for scientists to show that heat not only causes earthquakes and tsunamis, but also moves continents. We live on a planet that both nourishes and kills us."

Comment: quite why this institute has been formed remains a mystery...

Contact: www.hutton.ac.uk

Cranfield University and Statoil set record for subsea welding in deep sea

Remote subsea welding of pipelines has been demonstrated at a record depth of 940 metres of seawater in a recent field test in Norway.

It is the first time that hot-tap welding, a way of connecting pipes, has been done at such depths and is the culmination of around 10 years' research by **Cranfield University** and industrial partner **Statoil**.

The work could have a major impact on the offshore gas and oil industries, said **Neil Woodward**, an engineer for Statoil who is based at Cranfield.

Subsea pipes are found at various depths and, for those up to 180msw, divers may be used for maintenance and repair. But below these depths, mechanical couplings and other remote-welding techniques are necessary.

To investigate the feasibility of operating at lower depths Cranfield University, with **EPSRC** funding, installed the world's highest-pressure dry hyperbaric welding chamber at the University in 1997, able to simulate up to 2,500msw water depths.

In this first phase, the chamber was used for the detailed theoretical and practical research on welding techniques at high pressures and, in 2004, the results demonstrated that welding at these previously unreachable deep-sea depths was indeed possible.

Since 2004, qualification work has been performed by Statoil to determine the practicalities of achieving these depths in the field. This culminated in the first successful deep-sea trials conducted in Norway earlier this year.

Contact: www.cranfield.ac.uk

Funding via Abertay University in Dundee helps six fledgling digital games firms

The group of startups have become the first successful applicants to benefit from a Government-sponsored investment fund run by Dundee's Abertay University in a move to attract some of the private sector funding 'swirling around the sector'.

Abertay's computer games prototyping project will pay out £25,000 to each of the six companies – named as **Bookmarked Games, 14 Principles, Dry Ice Studios, FluffyLogic, Setgo** and **Triple B Games**.

The money will come from a new £10 million scheme – half of which has been earmarked for Scotland

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– that aims to create at least 30 new computer games companies.

The project is funded by the UK Government, the **European Regional Development Fund** and Abertay itself, and marks another boost for the Scottish games sector, which has taken some knocks over the past year.

Nonetheless, **Reloaded Productions**, the US company that acquired the rights for the online multi-player game All Points Bulletin last year after Dundee developer **Realtime Worlds** went into administration, earlier this year announced plans to open a studio in Edinburgh and said that it would create 22 high quality jobs.

That news came after **Outplay Entertainment's** announcement that it is establishing new offices in Dundee to produce games for use on smart phones, social networks and other internet platforms. Both announcements helped restore Scotland's reputation as a competitive location for games firms in the wake of the demise of Realtime Worlds.

Now it is also hoped that hundreds of jobs will be created in new and existing businesses following the launch of the Abertay computer games project.

A spokesman for Abertay, the epicentre of Scotland's digital games industry, said: "A total of 57 applications from across the UK were whittled down to six projects, which demonstrated exceptional business potential." Two of the six, 14 Principles and Triple B, are Dundee-based, and a third, **Dry Ice Studios**, is based in Bournemouth but is moving to Dundee.

Contact: www.abertay.ac.uk

University of Warwick and friends win £1.4m in national solar energy programme

A group aiming to develop the next generation of solar energy harvesting technology is to receive £1.4m from the **Technology Strategy Board** and the **EPSRC**.

The consortium that includes the University of Warwick; the companies **Kurt Lesker**, **Asylum Research**, **New World Solar**, and **Molecular Solar**, and **Imperial College London**, under the project name: Prototype High Efficiency Multi-Junction Organic Solar Cells.

Professor Tim Jones from the University of Warwick said: "We are working with solar cells made from organic semiconductor materials which offer the prospect of very low cost manufacture of lightweight, flexible cells.

"They are made from sustainable materials and can be deployed as flexible sheets that could be used for a variety of applications including: a solar powered mobile phone charger that's rolls up into a shape as small as the size of a pen, micro-lights that can be added to clothing, and a detachable sun-shade for automobile windscreens that powers a small integral fan to circulate air and cool the interior of the car when parked in direct sunlight."

Peter Ballantyne from **Molecular Solar**, a spinout company from the University of Warwick, which will be developing this new technology said: "The low cost and flexibility of this new technology will lead to new applications that will further accelerate the growth of the solar power market, which has seen 40% per year growth over the last 10 years. Just one significant opportunity in consumer applications is the area of mobile phone chargers where over 1.3 billion units a year are produced."

Contact: Prof Tim Jones – 02476 528 265 – t.s.jones@warwick.ac.uk

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Sky Medical Technology joins forces with Barts Hospital and Queen Mary, UoL

Sky Medical Technology Ltd, based in High Wycombe, Buckinghamshire is celebrating the success of a three year programme of applied research with **St Bartholomew's Hospital** and **Queen Mary, University of London**, to develop the company's proprietary neuromuscular stimulation technology.

As the first-of-its-kind, this portable technology enhances the body's own circulation to increase lower limb blood flow for the reduction of venous stasis, a major factor in the battle against **Deep Vein Thrombosis (DVT)**, which kills 25,000 people in the UK each year.

The technology, named **OnPulse** – embedded within a small, portable, one-size-fits-all device – delivers non-invasive electro-stimulation to the common peroneal nerve located in the back of the knee, which activates small micro-contractions of the calf, shin and foot muscles. The mechanism of action causes blood to flow back towards the heart at a volume shown to be 50-70% to that of walking, without the patient having to move or exert energy and without uncomfortable muscle movements.

Independent clinical testing by the **William Harvey Research Institute** (part of Queen Mary, University of London) and Bartholomew's Hospital has shown the technology moves a higher volume of blood, within a resting limb, compared to leading medical devices currently on the market for DVT Prophylaxis.

The inventor, **Dr Arthur Tucker**, of the **Ernest Cooke Vascular & Microvascular Unit** at Barts, said: "We wanted to improve significantly patient care and with this idea came the opportunity to enhance, successfully, lower limb blood flow volume and velocity without causing pain or discomfort to the users."

Co-inventor **Dr Duncan Bain**, of the **William Harvey Research Institute**, Queen Mary University of London), stated "It was the simple notion of stimulating the nerve rather than the muscles directly that brought us the possibility of a safe, effective and pain free device that simplifies and improves patient care."

Bernard Ross, CEO of Sky Medical added "The OnPulse technology leverages a deep understanding of the anatomy and physiology of the human body, biomedical engineering and isometric neuromuscular stimulation. Placing a topically applied, electrical stimulus in the lower leg to mimic the blood flow rates of walking is game-changing. The technology has potentially significant implications for the prevention of DVT in hospitals and the treatment of a range of circulatory disorders."

Contact: Sky Medical Technology Ltd – Sue Davenport: 01494 572 043 – sue.davenport@skymedtech.com – www.gekodevices.com

Aberystwyth University joins with Compton Group 'to cut cattle methane'

Research carried out by academics from Aberystwyth University in conjunction with **Compton Group**, an SME based in **Swansea**, Wales, has resulted in a discovery which could lead both to an improvement in milk and meat production and to a significant reduction in methane emissions from cattle and sheep.

The research team, led by **Professor Jamie Newbold** of Aberystwyth University, found that by adding sandalwood (or a sandalwood analogue) to animal feed the growth of pathogenic bacteria such as E.coli and Listeria in the rumen is reduced. As a consequence, energy which would otherwise be lost through the production of methane is diverted to increased milk and meat production.

At the same time there was a significant reduction in the emission of methane, a greenhouse gas with 23 times the global warming potential of the equivalent amount of carbon dioxide. It is estimated that livestock produce 18% of all global greenhouse gas emissions, more than all forms of transport combined.

Trials in a rumen simulating fermenter (Rusitec) confirmed that **Javanol**, a sandalwood analogue,

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reduced methane production by up to 25%. A reduction of 20% in methane emissions was achieved in field trials with sheep when 2ml of Javanol per day was added to their diet.

Other members of the research team are **Dr Kenton Hart**, previously of **Aberystwyth University** and now at **Harper Adams University College**), and **Dr Ahmed Ali**, research director of the **Compton Group**, based at School of Biosciences of Cardiff University.

Contact: Dr Ahmed Ali – 0750 750 2548 – alia@cardiff.ac.uk; Peter Ballard, Commercial Director – Compton Group – 01792 315460 – peter@comptongroup.com.

LATE DATES FOR APRIL 2011

28 April 2011 – CETC Event: ‘The Recognition Challenge’

Ramsey Moon Conference Centre, Granta Park, Great Abington, Cambridge, CB21 6AL

Developments of the uses of recognition technology as applied to database searches, speech, visual and pattern recognition. Applications will be shown in government, commerce and security organisation down to speech recognition used as an office tool in SMEs.

The first presentation will be given by Dr Sean Blanchflower, Head of Research and Development at the Autonomy Corporation, based in Cambridge – it is the UK’s largest software company. The second presentation will be given by Neil Grant, Regional Sales Director, Nuance Communications, one of the leading developers of speech recognition and OCR (optical character recognition) technology. A recent agreement has been concluded with Dragon Search for iPhone and iPod Touch users to simply speak any search enquiry and find content on the web.

www.cetc.info

29 April 2011 – Last Shuttle ride to ISS for ESA astronaut

Cape Canaveral, Florida.

ESA astronaut Roberto Vittori and the five other astronauts of the STS-134 mission will be launched to the International Space Station on Space Shuttle Endeavour on 29 April to deliver a pioneering scientific experiment. This penultimate flight of NASA’s spaceplane will deliver an instrument designed to track elusive antimatter in the Universe.

Liftoff on the 14-day STS-134 mission is scheduled for 19:47 GMT (21:47 CEST), with the docking to the International Space Station (ISS) due two days later, on 1 May.

The last European to fly on a Shuttle, **Roberto Vittori** will be the first ESA astronaut to make a third visit to the ISS. It will also be his first flight on the Shuttle. On his two previous missions, in 2002 and 2005, he travelled on a Russian Soyuz spacecraft.

Arriving at the ISS, he will meet another Italian ESA astronaut, **Paolo Nespoli**, who has been aboard since 17 December.

www.esa.int

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AND FINALLY...

Celebrities and other fans of 'micro' pigs may have been sold 'a pig in a poke'

"There is no such thing," says award-winning breeder and author of the new *Haynes Pig Manual*, **Liz Shankland**, who said that stars such as the **Beckhams**, **Paris Hilton**, and **Charlotte Church** had no guarantees their mini pigs would remain small.

Commercial pigs can reach weights of more than 100kg and a number of disgruntled owners around the UK have contacted trading standards after their pets swelled into giant porkers.

Ms Shankland, who breeds **Tamworths**, says that unscrupulous breeders have attempted to create a race of tiny pigs by breeding runts with runts, some of which are under-nourished, not fully-grown or closely related.

She said: "These so-called micro or mini pigs are often bred by crossing young pigs from conventional breeds – including Tamworths and **Gloucestershire Old Spots**. These are BIG breeds.

"Some of my Tamworths can weigh as much as 400kg. It's the same principle as two short humans having a child which grows up to tower over them – because one of the grandparents was extremely tall."

She also warned would-be pet pig owners that the animals should not be kept indoors on their own. She added: "If they haven't got access to outdoors, they turn to churning up carpets, wooden floors, and tiles. They also need the company of their own kind. Keeping a lone pig – even if there are other animals around – is just plain cruel. They can be aggressive – particularly uncastrated boars, but also females when they are in season. They should never be left alone with children." Or a celebrity?

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