

# GIBSON INDEX NEWSLETTER

FEBRUARY 2011 – Issue No. 67

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

Please enjoy the February 2011 edition of the monthly Gibson Index Newsletter.

### SMEs and spiralling fuel prices:

Two years ago a typical 55 litre tank of **diesel** would have cost nearly £54 (at 98p/litre). Today it costs 35 percent more at £73, as diesel prices soar past 133p/litre – or more than £6 a gallon.

The main driver for these increased fuel prices are the cost of a barrel of oil – Friday's close was \$103. The weakened pound and fuel duty haven't helped, and but the unstoppable tide of dissent against authoritarian regimes in the **Arab world** may push prices far higher than those of today.

The **Bank of England** thinks UK inflation has risen to 4 percent – but overseas economists think it could, like diesel prices, be much higher – perhaps north of 10 percent if basic items such as food, raw materials and energy costs are highlighted.

As well as powering many people's cars, diesel is used for the vast majority of commercial transport. High diesel prices therefore have a significant impact on UK industry and public services – affecting the cost of everything from local buses and trains, to the transport of food and goods. UK prices are among the highest in Europe.

**Will Bradley** from fuel price comparison site **Whatgas.com** points out that the smart motorist can still make savings if they know where to go. "We frequently receive reports of petrol stations within a few miles of each other selling fuel with a 5-10p/litre difference. For a typical diesel car driver doing 15,000 miles a year in a 40mpg diesel car, that's a potential saving of around £170."

The financial burden is set to get worse, as motorists are being hit by a 1p plus inflation rise in fuel duty in April, which may add a whopping 5p to a litre of diesel.

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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 43,500 UK-based technology SMEs.

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**The Newsletter** is distributed in PDF format – in order to keep it readable, full of intelligence, rapidly searchable and free of data-heavy photos and illustrations. Subscribers can also receive the companion to the Newsletter, and a monthly **Events Diary**. If you wish to submit a story – please email it to: [news@gibson-news.com](mailto:news@gibson-news.com).

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## COMPANY OF THE MONTH

### **Cella Energy's hydrogen-based fuel project attracts heavyweight backers**

**Stephen Volker**, CEO of Cella Energy, which is developing the technology, said: "We have developed micro-beads that can be used in an existing gasoline or petrol vehicle to replace oil-based fuels – it will run in existing cars and engines at the fraction of the cost of conventional petrol.

"Early indications are that the micro-beads can be used in existing vehicles without engine modification. The materials are hydrogen-based, and so when used produce no carbon emissions at the point of use, in a similar way to electric vehicles."

A tankful of the artificial petrol, which has yet to be given a brand name, is expected to last 300 to 400 miles, in line with conventional fuel.

With hydrogen at its heart rather than carbon, it will not produce any harmful emissions when burnt, making it better for the environment, as well as easier on the wallet.

The first road tests are due next year and, if all goes well, the cut-price 'petrol' could be on sale in three to five years.

Cella is a spinout from the **Rutherford Appleton Laboratory** at Harwell, Oxford. The lead A round investor in the company is **Thomas Swan & Co Ltd**, a specialist UK chemical and nanotech company established in 1926.

Thomas Swan has backed many other successful, high risk technology projects. Its Advanced Materials Division develop high specification materials for emerging technologies with particular focus on carbon nanomaterials and advanced coatings.

Work began on the technology in 2007 led by **Professor Stephen Bennington** and **Dr Arthur Lovell** at the 1,200-person **STFC ISIS** facility at the Rutherford Appleton Laboratory and at the **London Centre for Microtechnology** at **University College London**.

The work at UCL was led by **Professor Neal Skipper**, who is **Professor** of Physics and a founder member of the Condensed Matter and Materials Physics group (CMMP) at **University College London**. In addition **Professor Bill David** from STFC and **Dr Martin Owen Jones** from **Oxford University**, have provided valuable insights into advanced complex hydride materials.

Professor Stephen Bennington, the project's lead scientist, said: "In some senses, hydrogen is the perfect fuel. It has three times more energy than petrol per unit of weight, and when it burns, it produces nothing but water. Our new hydrogen storage materials offer real potential for running cars, planes and other vehicles that currently use hydrocarbons."

The fuel is expected to cost around \$1.50 a gallon, or 19p a litre. Even with fuel taxes, the forecourt price is likely to be around 60p a litre – less than half the current cost. That would bring the price of filling a 70-litre Ford Mondeo down to around £42.

Energy from hydrogen can be harnessed by burning the gas or combining it with oxygen in a fuel cell to produce electricity.

But current methods of storing hydrogen are expensive and not very safe. To get round this, they have found a way of densely packing hydrogen into tiny beads that can be poured or pumped like a liquid.

[www.cellaenergy.com](http://www.cellaenergy.com)

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### **Rakon UK Ltd wins top prize in the Lincolnshire Echo Business Awards**

The firm employs almost a 100 people in its state-of-the-art manufacturing facility.

In 2010 Rakon announced the world's smallest OCXO. It produces technology that forms the basis for a range of devices which, in simple terms, generate ultra-accurate high frequency signals.

The signals are ideal for use in the world's burgeoning wireless telecommunications basestation networks – supporting everything from smartphones and iPads to wireless PCs.

Rakon is a global leader in what it does and has managed to “float” over the global downturn. With its future looking brighter than ever, the firm turned over more than £16 million last year and looks set to beat its current £22 million target.

Major customers include **Nokia**, **Ericsson** and China's **Huawei** – three of the world's top-five telecoms infrastructure companies.

Founded in New Zealand in 1967 by **Warren Robinson**, Rakon became the leading supplier of GPS TCXOs to the world market in 1991. Since then the GPS market has evolved from low volume niche applications to a high volume consumer-based market.

Rakon has maintained market dominance and has excelled in transforming high precision, niche technology into high volume cost effective solutions, while still maintaining the highest performance and quality. Its leadership has been achieved through unique proprietary processes, continual innovation, expert consultation and constant technology advancement.

Holding a 12-month technological jump on our competitors, Rakon backs its ingenuity with quality control, achieving the highest international manufacturing standards. Close customer relationships have been a feature of its success – with many having spent 10 years or more with Rakon. The company outsells competitors from Japan, USA and Europe with Rakon products being found in mobile phones and GPS systems.

Rakon became a publicly listed company on the **New Zealand Stock Exchange** in May 2006. Back in March 2007 Rakon acquired the frequency control products division of **C-MAC Micro Technology**.

[www.rakon.com](http://www.rakon.com)

### **Linn Products recovers as it moves into the digital streaming marketplace**

The Scottish hi-fi manufacturer pioneered the concept of high-end audio, but in 2008 it suffered with the biggest crisis in its near-40-year history.

Sales and workforce were cut in half. In an effort to save the business, **Gilad Tiefenbrun**, son of the company's owner and founder **Ivor**, and now MD of Glasgow-based Linn, discontinued making CD players in a dramatic turn to a new and unproven marketplace.

The firm has staked its future on a new generation of digital stream (DS) products that store an entire music collection in one slim box. It believes they will make CD players redundant.

Mr Tiefenbrun said the company had “just scratched the surface of a global megatrend” that will see people hook up their DS players, iPads and TVs in a single home entertainment network. There has never been a better time to get into digital streaming. We pioneered it and we have got the best sound.”

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Although the firm's size and performance are still well below the pre-2006 crisis, Linn bucked the recession with a 5 percent increase in turnover in the year to 30 June, to £17 million. Profits increased 13 percent to £1.6m.

Newly filed accounts also reveal that Linn has slashed its debt with **Lloyds Banking Group** from a high of £6.8m to having a modest net cash balance.

Tiefenbrun added: "As we chose to do less in consumer electronics like the CD player, a lot of which you have to buy in from the US, Korea or China, we replaced that with all our own streaming technology that means we are adding value rather than buying in stuff and packaging it."

Linn has signed up new partners in Korea, Malaysia and Thailand and has plans to target Taiwan, Singapore, Vietnam and Indonesia. The annual report showed that Tiefenbrun enjoyed a 36 percent increase in his salary to £465,175.

[www.linn.co.uk](http://www.linn.co.uk)

### **Spy gadgets firm Datong increased revenues by 80 percent to £14m**

As demand for counter-terrorism products rises, the Leeds-based company's operating profit before exceptional items was £800,000, compared to a loss of £1.16m in 2009.

The group's intelligence gathering systems are being deployed across a number of markets, with intelligence being seen as a key component in strategies to deal with terrorism, border control and criminal activity.

A statement from the company said 'Implementation of these activities by our customers provides substantial opportunities for Datong on an international scale'. **Dean Blood**, the chief executive, said "The timely conversion of key market, new product and strategic developments in the period has resulted in a return to a full year operating profit.

"The delivery of our diversification strategy, coupled with the encouraging signs of a recovery in our core US market, has resulted in an equally strong final half year performance. This has produced a significant reduction in the seasonality of the business noticeable in previous years, a trend the board expects to continue.

"Intelligence led customer operations are a key attribute to countering terrorism, targeting organised crime and preserving national security. Datong is well positioned to support the concentration of forces across our markets on an international scale, especially in demanding operating environments. Our expanded portfolio of products, which was launched in the period, has been well received and will deliver on its business plan."

[www.datong.co.uk](http://www.datong.co.uk)

### **Cygnum Timber Frame launches 'revolutionary closed panel timber frame system'**

Combining its timber engineering expertise with a new capacity for creating high performance recycled insulation, the company's new **Precision** range closed wall panels contains cellulose insulation – composed of 80 percent recycled paper.

With this development, **Cygnum** is Europe's first timber frame manufacturer to produce and install its own insulation at source, signifying the company's commitment to innovative timber frame manufacturing.

By producing and installing its own cellulose, from locally sourced waste paper, Cygnum delivers complete panels to the construction site. This minimises the overall carbon footprint through reduced transport,

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reduced packaging and reduced waste.

Quality insulation is integral to the use of timber frame during the construction of a sustainable building. Closed panel systems, when insulated with high performance cellulose, can deliver outstanding levels of energy efficiency.

To meet and exceed environmental building regulations, Cygnum's Precision range will incorporate a low-cost, robust process for transforming paper material into cellulose insulation fibres.

The company has developed this process as part of the **InsulaTFH** project, which is funded by the EU's **ECO-Innovation programme**. ECO-Innovation supports the commercialisation of practical initiatives which have the potential for major reductions in environmental impacts.

[www.cygnum.co.uk](http://www.cygnum.co.uk)

### **Gripple Ltd's third royal visit in its 21-year history**

Sheffield businessman **Hugh Facey** turned the tables on the Royal Family when the **Duke of Edinburgh** officially opened his company's new factory in the Lower Don Valley.

Normally, it is the Royal Family that praises the companies it visits and Prince Philip did just that, as he also presented a **Queen's Award for Sustainability** to Gripple, the company Mr Facey launched in Sheffield around a quarter of a century ago.

In the past the Prince of Wales, Prince Andrew and, now, Prince Philip, have opened all three factories run by Gripple and its sister company, **Loadhog**. Gripple's Royal connections go back 21 years to when the firm won the **BBC Tomorrow's World** Prince of Wales Award for Innovation.

"It gave the Gripple product a tremendous boost and helped us to establish ourselves in foreign markets," said Mr Facey, adding: "I did not realise at the time how much support we would receive from all the members of the Royal Family."

The new Hawke Street factory will be shared by Loadhog and Gripple's innovation, prototyping and product development division. The extensively refurbished plant is, like Gripple's 160 year old **Savile Street East** factory, a former gun works which was visited by the present Queen's grandfather, **King George V**, in 1916, two years after it opened.

Gripple and Loadhog are both beating the down turn. Gripple's sales are up by 15 percent this year, while Loadhog is expecting to record a 60 percent increase in sales and only last week won a £1.5 million order from **Australia** for its innovative Smartstak system that prevents stacks of glass bottles from collapsing while being transported.

Gripple and Loadhog employ 350 people and have sales worth £35 million sales, 80 percent of which is exported. They maintain a reputation for innovation and currently have 15 new products under development.

[www.gripple.com](http://www.gripple.com)

### **Ricardo constructs new state-of-the-art, high performance engine assembly plant**

At the company's **Shoreham Technical Centre** the engine facility has been designed to provide a near clean room production environment in which each and every process is carried out according to strict quality principles and within a comprehensive 'no faults forward' culture.

Ricardo-designed transmissions are made for the iconic **Ford GT** and the **Bugatti Veyron** supercar, as

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well as numerous driveline systems and components for the highest levels of competitive motorsport.

At the core of the new 600-square meter building is a 10-station vertical conveyor based mini-line supported by incoming materials inspection and line-side delivery of components.

Each station is equipped with a 'human-machine interface' (HMI) providing guidance to each operator on the precise sequence of operations required at each stage. The tools and assembly equipment used at each station are instrumented and provide data – down to the level of the torque applied to each fastener – directly into a central warranty database for each engine built, and hence provide complete finished product traceability.

The assembly centre will be capable of producing up to 4000 engines annually across two daily shifts. The facility has been designed and configured around the requirements of its lead customer, **McLaren Automotive**, for whom it will act as the production supplier of the all-new McLaren M838T 90 degree, V8 twin-turbo engine.

The high-performance (600 PS), low emissions (279g/km CO<sub>2</sub>) engine has been designed and developed by McLaren Automotive in partnership with Ricardo, and will power the **McLaren MP4-12C** high-performance sports car that is due to go on sale from May 2011. Ricardo CEO **Dave Shemmans** said: "The successful design and construction of this facility is highly complementary with our existing production facilities for motorsport and niche vehicle drivelines and transmissions."

[www.ricardo.com](http://www.ricardo.com)

### **Wakefield company seeks to turbocharge repair of UK's battered roads**

**Route One Highways Ltd** specialise in highways repairs after creating a quick and cost-effective solution to fixing potholes. Snow, ice and freezing conditions lead to the expansion and contraction of road surfaces creating significant damage to the road network.

The recent cold snap is believed to have caused more than £100m-worth of damage to UK roads. Route One, established in November 2005, has developed a turnover of more than £3m. The majority of its work is with the **Highways Agency**, but the company is keen to expand services into the private market, such as distribution and retail depots.

Route One has developed innovative and cost-effective road repair systems which have enabled them to create a profitable business operating on a national scale.

In 2010 it introduced **Texture-Screed** is a flexible thin veneer repair system for asphalt surfaces. It permanently fills voids, pot-holes, ravelled surfaces, stressed areas, minor cracking and other defects in the asphalt surface.

Texture-Screed is screeded onto the prepared asphalt surface. It permanently fills voids, pot holes, ravelled surfaces, stressed areas, minor cracking and other defects in the asphalt surface. The material can be applied in layers to fill minor pot-holes in otherwise sound asphalt surfaces. A fast curing, high friction repair that prolongs the life of the road surface. The blend of Texture-Screed produces a thermo-setting, impervious and impact resistant load bearing repair.

Once cured, Texture-Screed remains slightly flexible and leaves a high friction finish at the surface. Texture-Screed withstands high volumes of traffic. It cures in less than 30 minutes allowing the road to be opened with the minimal disruption to the road user. Texture-Screed is supplied in a range of colours making it a suitable repair able to 'blend-in' with all asphalt surfaces.

To help support the expansion Route One has received a £100,000 business loan from **Finance Yorkshire**. The money will be used to develop a new brand strategy for the company, redevelop their

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website and take on new sales staff.

**Matthew Pert**, director of Route One, said: "In the last five years we have built-up a solid business which has been profitable since day one. The investment from **Finance Yorkshire** will enable us to take the company on to the next level.

"We work closely with the Highways Agency, helping to repair motorways quickly with as little disruption to the network as possible, and this will continue. However, to take the business even further forward we see the private market as a key area.

[www.routeonehighways.co.uk](http://www.routeonehighways.co.uk)

### **Soil Machine Dynamics (SMD) aiming to push turnover from £60m to £100m**

Its traditional business of subsea trenching will operate from Wallsend, while it is also involved with renewable energy projects such as the creation of the world's largest free stream tidal turbine last year.

**Andrew Hodgson**, CEO of SMD, said: "SMD is at the forefront of new engineering technology in different fields which we hope will benefit the region economically for many years to come." Intersect 19 at Tyne Tunnel comprises four high-bay units ranging from 23,000 sq ft to 49,500 sq ft. Tenants include Scottish linen hire services company **Fisher Services**, which expanded from a 29,500 sq ft unit to a 49,500 sq ft unit last July.

SMD also expects to increase its 250-strong North East workforce after taking a long lease on a 29,500 sq ft industrial unit at UK Land Estates' Intersect 19 development, complementing its other sites in Wallsend's Davy Bank and the Cobalt Business Park.

Joint MD **Mike Jones** said: "We're seeing growth across our markets, particularly in oil and gas. The period 2009/10 was a particularly tough time for the sector, but we managed to buck that trend.

"The fact the price of oil is going in the right direction again is good for us. There is a shortage of oil and other minerals and that requires subsea technology. The increase in renewable industry is also good for us.

"Our turnover grew from £42m to about £60m last year and this year we're looking to increase that to more than £100m. That's going to require a lot more staff."

Jones said the company had re-organised to focus on five key areas in the future. He said it became the world's number one supplier of the remote operated vehicles that replace divers in deep waters last year, and the facility at Intersect 19 will be used for work in this area.

It is also helping an Australian mining company to recover rich mineral deposits from the sea bed using a world-first system, and acquired Yorkshire's **Hallin Robotics** early last year to break into the nuclear decommissioning market.

Jones said "it's possible" the company would make further acquisitions in future if they were "a suitable fit", but added it was focusing on organic growth. Last year, SMD recruited 130 staff, and opened an office in Houston to build contacts in the US market. It also has a support facility in Brazil, as well as an office in Singapore.

[www.smd.co.uk](http://www.smd.co.uk)

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## Roke Manor Research develops 'SmartSwitch' for smartphones

**Siemens'** radio research arm, Roke Manor Research, based near Southampton, has pioneered the world's first intelligent network congestion and traffic manager that requires zero infrastructure investment from network operators. By maximising battery life, SmartSwitch also allows smartphone manufacturers to significantly improve reliability and consumer satisfaction.

Unlike other connection managers, SmartSwitch only exists on the mobile device. This means that it can be configured for mass market deployment without the need for operators to invest in infrastructure or additional capability.

SmartSwitch is also optimised to provide network operators with intelligent selective offload and traffic shaping. By using context aware network selection, SmartSwitch intelligently selects alternative networks, such as Wi-Fi, based on traffic type and preset policies.

As SmartSwitch is application aware, this gives operators the ability to reduce congestion in known problem coverage areas and ensure that traffic from value-added applications is not lost. Other connection managers currently rely on a priority connection process, which can result in the loss of valuable traffic to other competitive networks, as well as adversely impact battery life.

**Ben Toner**, Business Sector Consultant, Roke Manor Research, said: "A constant battle within the telecoms industry is to deliver smartphone users better applications but within the constraints of battery capabilities. Users cannot tell how long their battery will last and may run out of power before they get to a charger, yet they still expect to browse the Internet whenever they want and have instant access to applications such as email and social media. SmartSwitch will give mobile devices the intelligence to understand a user's individual preferences and manage battery life against that." Roke will be demonstrating SmartSwitch at this year's Mobile World Congress.

[www.roke.co.uk/smartswitch](http://www.roke.co.uk/smartswitch) – 01794 833 000 – [ben.toner@roke.co.uk](mailto:ben.toner@roke.co.uk)

## Aircraft Medical Ltd wins judgment in favour of long running patent infringement

The dispute was between Aircraft Medical Ltd and US rival **Verathon Medical Inc**, a subsidiary of **Roper Industries Inc**.

Heard in the UK at the **Scottish Court of Session**, Verathon unsuccessfully claimed that the McGrath Series 5 video laryngoscope infringed its UK EP '131 patent – the 'Glidescope' patent). In a comprehensive judgment, **Lord Hodge** ruled that Verathon's patent does not prevent Aircraft Medical's production activities and global exports of the McGrath Series 5.

As a counter claim during the litigation, Aircraft filed an action challenging the validity of the UK EP '131 patent. The court also upheld Verathon's patent, but in other findings ruled that the claims do not cover laryngoscopes with curved blades such as the McGrath Series 5. As a result, Verathon's patent has no commercial relevance to Aircraft's current and planned products, including the new McGrath MAC video laryngoscope.

The Court also refused any award of damages to Verathon due to Aircraft's success in the infringement action, despite their original claim for £37 million. Both parties are entitled to claim modest costs associated with their respective defences.

**Matt McGrath**, founder and CEO of Aircraft Medical said "This ruling fully vindicates our long-held conviction that the McGrath products do not infringe Verathon's patents. Our technology is world-leading and we look forward to continuing the global roll-out of our video laryngoscope products."

[www.aircraftmedical.com](http://www.aircraftmedical.com)

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## Leading digital security expert joins miiCard as Technical Architect

**Stuart Fraser**, co-founder of specialist IT security consultancy **DNS**, has joined miiCard, the pioneering digital identity startup.

Over eight years, Stuart helped DNS become the largest provider of security services in the UK before the company was sold last year to **SecureWorks**, now in the process of being bought by Dell.

miiCard is a unique digital passport for the consumer that proves “I am who I say I am” in real time, for the first time. Owned and managed by the individual, miiCard allows the consumer to track, monitor and so, for the first time, take control of their online identity. Stuart will be responsible for the design and implementation of miiCard’s security token service which will verify user identity to **Anti-Money Laundering, Know Your Customer Regulations and the Proceeds of Crime Act** standards.

Drawn to the challenge of developing a global digital passport that proves the user’s identity and becomes stronger the more it is used, Stuart says: “As the threat of internet fraud and identity theft increases it is critical that we find some way of being able to take control of our digital identity.

He said “Every day we give away our personal data to companies around the world, from **Facebook** and **Google** to banks, retailers and government agencies. And once we have given it away, we have no control over what happens to our identity. It is vital that we find a way of taking control back and I am very excited about the implications of miiCard for the future of digital identity.”

Stuart’s early career began in the energy sector working for **Conoco, BP** and **Scottish Power** before becoming founder director of DNS. Following the sale of DNS, Stuart returned to his studies, recently completing the **University of Edinburgh’s** MSc in High Performance Computing – specialising in scaling and super computers.

[www.miicard.com](http://www.miicard.com)

## BMT Defence Services seeks new staff as contracts mount up

One of Bath’s most successful firms is mounting a recruitment drive despite its industry being in the firing line for massive public sector cuts.

BMT Defence Services is looking for employees from software developers to submarine engineers as it attempts to rise above the Government’s £4.7 billion reduction in defence spending over the next four years.

The firm – which has just been recognised as one of the 500 fastest-growing companies in Europe – has not put a precise figure on the number of staff it wants.

But it says the quality, skills and commitment of its staff should ensure that its future as a defence engineering and design consultancy remains secure. As well as highly qualified experts, the firm is also expecting to take on up to nine graduates, as it works with the **Ministry of Defence** and governments around the world.

Business development director **Eugene Morgan** said they were looking for the very best people. He said work in the sector presented some of the most fascinating challenges in the engineering and IT worlds.

Its parent company **BMT Group** received an award from former German Chancellor **Gerhard Schröder** at the European Parliament in Brussels. **Peter French**, chief executive of BMT Group, said: “Being recognised as one of the fastest growing European companies and featuring in such prestigious league tables is an honour for us.

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“Our business growth has helped contribute towards job creation and competitiveness in today’s European market which gives us immense pride, especially in such difficult economic times.” The firm has just bought an Australian marine engineering company, **JFA Consultants**, based in Perth.

[www.bmt.org](http://www.bmt.org)

### **Intelligent Energy plc takes next step to cleaner, more efficient motorcycles**

The clean power systems company developed the world’s first fuel-cell motorcycle, and it is now testing the latest version of the project. **Intelligent Energy** is also the key partner in the consortium building the hydrogen-fuelled hybrid taxi that recently attracted worldwide media interest.

The partners are poised to deliver a fleet of the zero-emission hybrid black cabs on London’s roads by 2012. The ENV was the first hydrogen-fuelled, hybrid electric motorcycle that performed much like any other apart from the fact it is near silent and emits only water vapour.

After its development, Intelligent Energy (IE) partnered with the **Suzuki Motor Corporation** to provide the fuel cells for a new generation of zero-emission motorcycles under development in Japan and at IE’s headquarters at **Loughborough**, central England.

The scooter is equipped with the latest version of IE’s unique and proprietary air-cooled, clean fuel-cell power systems and is fuelled from a cylinder of hydrogen that can be filled in a few minutes and gives a range of 350 kilometres.

“The zero-emissions **Burgman** fuel-cell scooter is the latest product of the successful commercial relationship between Suzuki and Intelligent Energy,” said **Dr Henri Winand**, IE’s chief executive officer.

The first public road tests of the scooter were conducted at Loughborough then extended to controlled fleet tests in cities such as London where zero-emission vehicles such as a fuel-cell scooter have the greatest initial potential.

Other partners and customers include **Scottish & Southern Energy** with whom Intelligent Energy has formed a joint venture to commercialise fuel-cell combined heat and power systems.

Intelligent Energy’s other recent successes also include supplying the fuel-cell system to **Boeing** that powered the world’s first manned fuel-cell aircraft.

The company also recently supplied **Airbus** with a multi-functional fuel-cell auxiliary power unit aimed at on-board power and other loads in future commercial airliners.

[www.intelligentenergy.com](http://www.intelligentenergy.com)

## **SME NEWS – CHEMICALS, MATERIALS & ENVIRONMENT**

### **EADS Innovation and Glasgow University work to create hydrogen storage systems**

Glasgow University chemists are working with EADS to alter the design and material composition of a storage tank to prove the feasibility of using solid-state hydrogen for aircraft and cars.

If the developments to the tank structure are successful, EADS is planning to fly an unmanned hydrogen-powered test aircraft in 2014 with a longer-term view of introducing commercial aircraft powered by hydrogen.

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**Duncan Gregory**, professor of inorganic materials at the School of Chemistry at Glasgow University, is leading the research. He is using nanotechnology to alter the structure of the **Hydrisafe** tank, which is a new design under development by **Hydrogen Horizons**, a Scottish-registered start-up company.

The university and **EADS Innovation Works** (IW) have secured funding from the **Materials Knowledge Transfer Network**, and the **EPSRC**. This will allow a student to carry out a four-year PhD project, spending time at the university and the company's offices in Ottobrunn, Germany.

According to EADS, the research will involve testing the Hydrisafe tank with alternative hydrogen storage materials. The tank currently uses the lanthanum nickel (LaNi5) storage alloy. The research will look into replacing LaNi5 with other hydride materials such as magnesium hydride (MgH<sub>2</sub>), which has been modified at the nanoscale to allow it to receive and release the hydrogen at an even faster rate.

Modifying the construction of the tank will extend its longevity, making it suitable to have a solid-state hydrogen storage system that can feed a fuel cell at the required energy densities required on an aircraft.

EADS IW and Gregory's team are seeking funding from the European Union to build a European-wide team of academic and industrial partners to examine the wider issues relating to using hydrogen on an industrial scale to power aircraft and car engines. There is a recognition that while there is a strong potential for the adoption of fuel cells into the portable fuel-cells market, key barriers to delivering this are the safe, efficient and cost-effective storage of hydrogen.

**Hydrogen Horizons Ltd**, Blue Square House, 272 Bath Street, Glasgow G2 4JR

### **Airline Easyjet seeks big savings from nano-coating applied to air fleet**

Executives are hoping the American-design material will reduce drag as the plane flies through the air, increasing fuel efficiency and save cash.

The coating has been used on US military aircraft for years – the polymer needed adds just 4oz (113g) to the overall weight of each jet. The coating is applied and distributed in the UK by **TripleO**, based at Creekmoor, Poole, in Dorset. Before the slippery surface is applied, they give the plane a "polarising wash".

Easyjet's planes are the first civilian aircraft to get the treatment Easyjet says this opens the pores of the surface to be treated and electrically charges it with a positive polarity, thus allowing the polymer to bond to the existing paint surface.

The extra shiny layer reduces the build-up of debris on the plane's main structure, the leading edge of the wings and other areas, thus reducing friction and drag on the surface of the aircraft.

The manufacturers say it could lower Easyjet's fuel consumption by up to 2 percent. It may not sound like much, but in aviation terms, it amounts to a payload.

Last year, 40 percent of the company's costs were on fuel, a bill of more than £730m. If the polymer had been applied across the company's fleet, and if it had reduced costs by the suggested 2 percent, Easyjet could have knocked £14m off that.

MD **Paul Booker** set up Triple0 in 2002 – and pursued his long standing dream. After 26 years in corporate life, latterly with Volkswagen, he saw a chance to bring his client experience into his own car body repair business.

<http://tripleops.com>

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## Canadian maker of rooftop wind turbines planning to launch in the UK next year

**Cleanfield Energy** sees the UK as a ripe market because of high electricity prices and the feed-in tariff program reduces the payback period for consumers buying renewable energy products. It is applying for the MCS certification and testing its V3.5 vertical axis wind turbine (VAWT), which are requirements for qualifying for the feed-in tariff program.

Cleanfield Energy claims to have pioneered a turbine that can be placed on or near the buildings that use the power it generates. "The market potential for urban wind is quite massive," said CEO **Tony Verrelli**. The company's proprietary VAWTs are designed and engineered specifically for the variable and chaotic winds that are characteristic of urban environments, the manufacturer claims.

"Working with **McMaster University**, and with funding from the **Ontario Centres of Excellence**, we were able to develop this advanced technology which is now attracting the attention of leading architects, engineers, real estate owners and operators," said Verrelli. To date, Cleanfield's wind turbines have been installed in the **US, Canada, Slovenia, China and Ireland**. "We expect to be in a number of new markets in the months ahead," Verrelli added.

Traditional wind turbines rotate on a horizontal axis. Rotating on a vertical axis instead offers critical advantages in urban environments, Cleanfield says. VAWTs can capture energy from the wind independent of the direction, not requiring any yaw mechanism.

This is significant within the urban area since the wind is characteristically veering in direction. VAWTs also typically operate at lower rotational speeds, reducing or eliminating the turbine vibrations and noise.

[www.cleanfieldenergy.com](http://www.cleanfieldenergy.com)

## Closed Loop Recycling plans to double capacity at Dagenham plant

As a result of a joint agreement with the **London Thames Gateway Development Corporation**, Closed Loop Recycling will purchase three acres adjacent to its existing site on the **London Sustainable Industries Park** at Dagenham to build a factory extension. The expansion will support plans for partner brands, such as **Britvic**, which is using the factory's output for Drench water bottles.

Construction on the site is scheduled to commence in autumn 2011 and when finished will result in increased food-grade HDPE output, improved sorting facilities and better economies of scale. "There is massive demand amongst major brand owners for more sustainable packaging solutions and this expansion further enhances the UK's fast growing sustainable industry" said **Chris Dow**, MD of Closed Loop Recycling.

"In addition to our wide range of customers, such as **Marks & Spencer, Britvic, Nampak and Solo Cup Europe**, we have fantastic support from our waste partners such as **Veolia** and **Shanks**.

"It is the increased demand for rPET and rHDPE from these big brand owners and packaging companies, as well as better collection rates and increased recycling by consumers that is continuing to drive the market for food grade plastic."

The Dagenham plant has been operating since December 2008. Its current capacity allows the production of 35,000 tonnes of mixed plastic bottles, producing 11,000 tonnes of rPET and 6,000 tonnes of rHDPE per annum.

The company is also continuing with its plans to open a second food-grade facility on Deeside, North Wales. Once completed, this facility will process up to 50,000 tonnes of recycled plastic bottles a year.

[www.closedlooprecycling.co.uk](http://www.closedlooprecycling.co.uk)

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## **Pedestrian deaths and serious injuries by cars may be cut by novel bonnet design**

The highly innovative materials firm **Cellbond**, based in Huntingdon, Cambridgeshire, has collaborated with researchers at **Anglia Ruskin University's Engineering Simulation Analysis and Tribology (EAST)** group to develop and test a prototype.

Pedestrians account for 20 percent of all traffic fatalities in Europe and 14 percent in the US – with the majority being caused by head impacts. Statistically, 65 percent of pedestrians who impact or roll on the bonnet of a car that is going more than 40mph are killed or suffer serious injury.

In such a crash the pedestrian is initially impacted by the car and then by the ground, and most fatalities and head injuries occur when there is insufficient clearance between the bonnet and stiff underlying engine components.

“Manufacturers are packaging vehicles a lot more compact in order to make them as light as possible. In recent vehicle designs the bonnet is very close to the engine block, so the bonnet acts like a brick wall,” said the multi-talented **Prof Hassan Shirvani**, director of Anglia Ruskin University's EAST group, who has been responsible for a series of highly innovative technology collaborations with SMEs over the past decade.

There have been attempts to mitigate this through so-called active deployable systems that literally pop up on impact to increase the gap between the bonnet and engine block. **Jaguar** has such a system in its recent XK models.

However, Cellbond's design differs in that it is based on a passive approach, using the gap between bonnet and engine block more efficiently to absorb kinetic energy.

‘The bonnet preserves the global stiffness but also localises the load when it's applied on it. So when the bonnet is hit by the head it deforms locally and absorbs a huge amount of energy before it reaches that solid part with the engine,’ said **Dr Mehrdad Asadi**, the engineer at Cellbond who headed the project.

This is achieved using a three-layered design comprising an inertia absorber sandwiched between aluminium sheets with a specific etched geometrical-grid pattern, which was devised in computer simulations.

The patented Cellbond car bonnet design has now been tested and verified in a EuroNCAP-certified test house. The majority of car test standards and protocols use the ‘Head Impact Criteria’ to measure the severity impact on human heads and to restrict the criterion to certain numbers. Prof Shirvani said that a ‘major motor manufacturer’ will be using the bonnet in its next generation of models. Test results show that Cellbond's design reduced the ‘Head Impact Criteria’ by 50–60 percent compared with standard bonnets.

[www.cellbond.net](http://www.cellbond.net)

## **Solutions Group plc launches a new company to enter electronic manufacturing**

The new company, **Precision Manufacturing Ltd** – PML, is to provide high quality contract printed circuit board and box build assemblies for the electronics and electromechanical industries in the UK.

Services ranging from low volume rapid prototyping of PCBs through to very high volume mass PCB manufacturing are on offer. Prototype boards can be manufactured in as little as three days using dedicated prototype high availability lines.

Fully developed and tested designs can be mass produced with a line that can automatically place up to 45,000 components an hour. PML provides a full service to companies designing and fabricating electronic devices.

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At the design stage PML's production engineers uses its considerable production engineering resources to fine-tune designs. This ensures a high quality fully developed final design which can be rapidly and repeatedly manufactured to produce finished products with high quality and reliability.

**Grant Lester**, PML's dynamic MD, said "We are experts at rapidly taking designs from the engineer's screen to reality and we are now offering our extensive expertise and skill to the UK electronics industry.

**Eldon Lindsay**, PML's director of sales, said "We have invested heavily in automated equipment and robots to meet customer demands for economical fabrication spanning from low volume rapid prototypes to very high volume mass production. PML is a major asset for UK design and production companies."  
[www.precision-mfg.co.uk](http://www.precision-mfg.co.uk)

### **TDSi Energy Saving Switch offers operators chance to cut consumption**

Access control specialist **TDSi** has launched an intelligent energy saving switch which gives commercial and public building operators the ability to make significant energy and cost savings.

**Duncan Gooch** at TDSi said that while a number of organisations (most notably hotel operators) already use 'energy saving switches', which allow lights and electrical equipment to be used only when a card is inserted into a wall switch, these devices have been proven to be only partially successful.

Whilst they do require a card to be inserted, in practice, this can simply be a business card which can be left in place whether the room is occupied or not, with all the room lights and electrical equipment left on.

Recognising that this is essentially a positive, energy saving product, but one which has some fundamental flaws, TDSi has developed a new solution that will only operate when a designated MIFARE or Proximity card is inserted.

Drawing on proven technology, the new TDSi Energy Saving Switch, which was previewed at this year's IFSEC exhibition, incorporates either a proximity or a MIFARE reader.

Only when a specific card has been recognised, does the unit allow the electrical circuit to be completed, thereby allowing lights and other equipment to operate when the user's card is inserted. The product also features a 30 second time delay, so that once the card is removed, lights remain on for a comfortable period – allowing occupants to vacate the room.

Not only can this technology operate in hotels, but it can also deliver real energy saving benefits to any public or private sector organisation. Schools, colleges, universities, hospitals, leisure centres and offices can all benefit from reduced costs, reduced energy consumption and an improved carbon footprint.

When used commercially, the MIFARE option means that users can use a single card for a wide range of applications, including full access control, energy saving, cashless vending, and library services.

Contact Duncan Gooch at TDSi – 01202 724 950, or [duncan.gooch@tdsi.co.uk](mailto:duncan.gooch@tdsi.co.uk)

## **SME NEWS – IT, SOFTWARE, SERVICES & INTERNET**

### **Digital agency Sequence unveils new public sector procurement website**

A free new public sector procurement website has been delivered by award-winning digital agency **Sequence** using Sitecore Web CMS.

The portal is the latest measure aimed at removing unnecessary obstacles that make government

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procurement difficult for small businesses. Designed by Sequence for **Serco plc**, who already provide the **Business Link** site – [www.businesslink.gov.uk](http://www.businesslink.gov.uk) – in which the new site is housed, ‘**Contracts Finder**’ displays information on all new procurement opportunities, tender documents and contracts for central government that are valued at over £10,000.

Targeted at businesses, government buyers and the public, the project forms a central part of the government’s new commitment to transparency and makes government procurement “more welcoming” for SMEs.

The service is built around Sitecore Web CMS, a Microsoft .Net-based web development platform. Sitecore’s easy-to-use structure keeps editorial quite separate from the technical side allowing non-technical staff to be responsible for keeping content up-to-date. Sitecore also has a comprehensive range of pre-built connectors and data abstraction layers that allow customers to easily extend the platform’s capabilities over time.

**Richard Baker**, MD of Sequence, said: “The launch of Contracts Finder represents an important step in opening up government procurement. By providing an easy to use online tool smaller companies will stand a better chance at competing for public sector projects.”

Acting as a replacement for the current government tender portal [www.supply2.gov.uk](http://www.supply2.gov.uk), Contracts Finder is one of several practical measures being taken by the government in a drive to become more open.

[www.contractsfinder.businesslink.gov.uk](http://www.contractsfinder.businesslink.gov.uk)

### **Introversion Software prepares to launch next Defcon game**

**Thomas Arundel** co-founded Introversion Software in late 2001, with two friends from **Imperial College London**. With just \$1000 a CD burner and inkjet printer between them, the trio set about releasing ‘**Uplink**’, the highly acclaimed ‘**Hacker Sim**’. Responsible for bringing Uplink from the Underground to the public eye, Tom’s main focus is in commercialising Introversion’s highly innovative portfolio of games.

In this pursuit, Introversion has used direct and indirect retail, developed a digital distribution system, and also used several 3rd party online distribution solutions.

Dubbed ‘the last of the bedroom programmers’ and truly embracing independent game development for the last 4½ years, Introversion Software followed Uplink with **Darwinia**, and is now preparing for the imminent release of **Defcon**, about the ‘Global Thermonuclear War’.

He said that ‘the blood, sweat and tears over Darwinia’s three-year development cycle were well worth it’. It has enjoyed 80-90 percent reviews across the board. Darwinia has been nominated for four out of six **Independent Game Awards**, at this year’s **IGF**.

The team, still fully funded from their initial £1,000 are currently preparing to launch Defcon in late spring, which simulates global thermonuclear war.

[www.introversion.co.uk/defcon](http://www.introversion.co.uk/defcon)

### **Helveta wins acclaim for super-growth of over 2000 percent**

Helveta is a world leader in supply chain monitoring software, has been further recognised for two separate distinctions reflecting the company’s current success.

The Oxfordshire company has enjoyed revenue growth of over 2000 percent during the last five years and looks set to beat their 2010 target. With contracts to provide supply chain software in several **African**, **South American** and **South-East Asian** economies, the company has global reach.

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**Alex Gayer**, commercial director at Helveta, said it was expanding their tracking systems services for the tropical timber industry to other commodities such as cocoa and various foodstuffs. Recent changes in legislation in the US are enhancing its prospects.

Helveta is the developer and owner of the **CI World software platform** – a unique technology providing fully auditable traceability and chain of custody control for extended supply chains in the timber and food production sectors.

CI World is a unique technology providing fully auditable traceability and chain of custody control for extended supply chains in the timber and food production sectors. CI World and its components – **TracElite** and **CI Earth** – have won a number of awards as innovative technologies for the timber sector.

**Ed Lascelles**, partner at **Albion Ventures**, said “As the only commercially deployed, electronic traceability system in the timber sector Helveta is uniquely placed to become the industry standard.” **David Mott**, of **Oxford Capital Partners**, said “Think of it as the Fairtrade Mark for the timber industry”. Helveta was incorporated in 2004 and is privately held.

[www.helveta.com](http://www.helveta.com)

### **Bath’s reputation as a hub for fast-growing technology firms underscored**

Expansion plans at two cutting-edge businesses in the city include silicon chip firm **Picochip**, which has moved from offices in Walcot Street to a new hi-tech HQ in Lower Borough Walls.

Picochip, which is at the vanguard of wireless technology, is one of Bath’s fastest growing companies. In February 2011 the firm said it was growing in both the UK and China, with increasing shipments and revenues fuelling a host of developments.

Its new 15,000 sq ft headquarters in Lower Borough Walls is home to 110 staff and includes an engineering and product development base. It has also bought a test laboratory in Cambridge and announced plans to double the size of its development centre in Beijing.

**Nigel Toon**, chief executive of Picochip, said “In 2010 we have seen dramatic growth in our business, and we expect to sell one million femtocell chips this year. We are growing organically in Bath and Beijing, and by acquisition in Cambridge, where we gain not just sophisticated facilities, but also a highly skilled group of engineers.”

Picochip employs 170 people worldwide, and has plans to expand “significantly” next year, although the firm is currently unable to put a firm figure on the number of new jobs likely to be created in Bath. Offices in **Seoul**, **California** and **Taiwan** are in the pipeline.

[www.picochip.com](http://www.picochip.com)

### **Electronic location firm Hypertag Ltd is snapped up by Proxama**

Proxama, the leading mobile contactless payment technology provider, has announced that it has acquired Hypertag. The Hypertag brand will be retained as will the senior management team and key staff who have transferred across.

**Neil Garner**, CEO of Proxama said: “Mobile is truly coming of age this year so I am delighted that we have secured a deal that will create the world’s leading proximity marketing specialist.

“Both companies have a track record of success in using mobile technology to revolutionise marketing campaigns and provide a greater return on investment for brands. With the growth of mobile uptake, NFC usage and the switching of advertising revenues away from traditional media we are perfectly placed to

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exploit the demand for 'hyper-local' marketing communications.

Hypertag will be the marketing division of Proxama and I will remain with the business and report to Neil Garner. Proxama has an existing NFC (near field communications) marketing platform and has acquired Hypertag to provide a complete Proximity Marketing solution. This covers all handsets, and allows customers to benefit from the most experienced team in the market offering the highest service levels.

**Jonathan Morgan**, MD of Hypertag, said "We originally founded Hypertag in 2001 to exploit NFC technology because of its payment capabilities. However, due to the time it has taken for NFC to reach critical mass we adopted other technologies like Bluetooth and Wi-Fi. Now that NFC is about to take-off in a big way, the deal with Proxama to bring all the technology under one roof is a timely and sensible one."

[www.hypertag.com](http://www.hypertag.com)

### **Computer animation firm spinout wins backing from 20th Century Fox**

**University of Surrey** spinout company **IKinema**, based on the Surrey Research Park, was only launched from the University of Surrey in 2010 by **Dr Alexandre Pechev**.

It has now received backing from Hollywood media giant 20th Century Fox, and secured other high-profile clients including VICON, Framestore and Escape Studios.

With the support of **SETsquared partnership**, IKinema has proved an innovative way of animating the whole body of any creature in real time making them more realistic in their movements taking in gravity and balance.

"It's fantastic to see how far IKinema has progressed so quickly," said **Sarah De'Lacy**, of the SETsquared Partnership. "It's been great to support the development of the company as a spin-out from the University, and now it's getting the recognition it deserves." The company offers two products to market: IKinema middleware engine for PC, consoles and iPhone; and an IKinema plug-in for Autodesk Maya, designed for use in games, film, animation and TV.

**John Griffith**, 20th Century Fox director for cinematic development, said: "I am beyond excited to integrate IKinema into my performance capture pipeline. IKinema's full body solver is unmatched in its ability to duplicate human behaviour. It allows me to quickly adjust performance capture on the fly with just a few controls. I no longer need to spend hours tweaking curves to get a result. IKinema is now an essential part of my process now and in the future."

[www.ikinema.com](http://www.ikinema.com)

### **Wales salutes growth of Tracesmart, leading consumer data specialist**

It was nominated for the fastest growing company within the Creative and Knowledge Industry category, and competed for the title of **Wales's Fastest Growing Company** at the 2010 Welsh Fast Growth 50 awards.

Established in 1999, **Tracesmart Ltd** is a leading provider of consumer intelligence services. It specialises in the provision of both online tracing and identity verification. **Mike Trezise**, Tracesmart's MD and founder said "To see Tracesmart placed within the top 20 fastest growing organisations in Wales is a real highlight in the company's history. Thanks to our investment in innovative technology and our pool of talented people, we have gone from strength to strength. Our maxim has always been 'to be the best', and we continually strive to improve our products and services so that we can offer real benefits, and strengthen our position in the marketplace."

Founded in 1999, Tracesmart provides online solutions and offers access to industry leading consumer

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data. Its B2B products are utilised by a large and diverse range of industries from SME to FTSE 100 companies across a wide range of business sectors.

It provides organisations with the means for tracing people, finding lost account holders, conducting employee background checks and confirming people's identity.

The Fast Growth 50 Awards celebrated its 12th anniversary with Wales's most successful privately owned companies. Its founder, **Professor Dylan Jones-Evans**, said "Tracesmart is exactly the type of business that the Welsh economy needs as we emerge from recession."

[www.tracesmartcorporate.co.uk](http://www.tracesmartcorporate.co.uk) – [www.fastgrowth50.com](http://www.fastgrowth50.com)

### **IT Professional Services Ltd expects to double its turnover to £20m**

It will engage in an aggressive acquisition strategy in order to become one of the biggest IT firms in the North East. ITPS has seen the demand for its services grow dramatically in recent months, with many of its clients seeing investment in IT as a vital way of preparing themselves for the upturn.

The firm, which was established in 2000, provides a wide range of services, including IT consultancy and support services, with clients including regional development agency **One North East** and green support services company **eaga**.

After growing its sales organically over recent years, the firm is now looking to purchase a number of its rivals over the next three years to help grow its annual sales from £10m to £20m, and said that it had a number of targets in mind.

It also said that it was seeing an increased take up in its cloud computing services, which allows companies to download software applications and business processes over the internet from a remote server, eg online email services **MSN Hotmail** and **Google Mail**.

The company has also invested around £250,000 in its three data storage centres in Newcastle, Gateshead and Sunderland over the last 12 months, and expects to invest a similar amount in the sites over the next two years as it picks up more contracts. It is now looking to take its workforce from 90 staff to over 100 by the end of the year, with more expected as the firm nears its turnover target.

The firm also said its prices were more competitive than some of its larger blue-chip rivals, which was attracting businesses looking to reduce their infrastructure costs in light of tougher trading conditions.

Sales director **George Galloway** said: "We have grown our sales year on year and now plan to continue our growth through acquisition. A number of opportunities have presented themselves and we are looking to capitalise on this."

[www.it-ps.com](http://www.it-ps.com)

### **London-based HG Apps Store develops apps in partnership**

They are currently people who have great ideas or content but aren't developers, who want to share the risks and rewards. If they have a good idea, HG Apps Store will develop it for free, test it and then launch it, they can even help market it and will share the download revenues.

HG Apps Store also develops apps for businesses at competitive rates. Many businesses recognise now that they would benefit from having an app to add value to their customer and at the leading edge of customer communications.

**Paul Ardeleanu**, Head of Development, said the HG Apps Store has been created by a team of industry

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veterans, all experts in the software and application development field with a strong track record in building successful businesses globally.

HG Apps Store is a **Highgate Tech Fund Ltd** invested company – [www.highgatetechfund.com](http://www.highgatetechfund.com). In February 2011 HG Apps Store in collaboration with leading employment law consultant, **Robert Joy** launched an app that all employees should have to hand, whatever their employment status. For that unfortunate moment when you get fired, made redundant or resign in haste from your job, 'I've Been Fired' provides all the important advice and guidance. Employees will quickly be able to understand their rights, calculate what they are owed in redundancy payments and assess what they should do next.

With huge numbers of public sector redundancies announced in the last few weeks and sadly more jobs expected to go in the public and private sector over the next few years, the unfortunate fact is that more and more people will be faced with redundancy.

The app will give the newly redundant over 10,000 words of practical advice about the situation, and their rights and entitlements.

The app tells you how to assess if you have been treated fairly compared to the acceptable standards of employment law and good practice. It also gives guidance about how to challenge your employer's decision.

[www.hgappsstore.com](http://www.hgappsstore.com)

#### **iomart Group plc buys share capital of server host Titan Internet Ltd**

iomart, a leading UK managed server hosting company, has spent £3.6m cash on completion with a further amount of up to £0.6m payable in April 2011.

Founded in 2000, **Titan Internet** became one of the UK's most respected and technically advanced hosting companies, particularly in the areas of virtualisation and network management. In recent years Titan Internet has achieved a well deserved reputation for excellent customer delivery and service.

Titan is focused on delivering highly reliable complex managed and virtualised hosting solutions and has built an impressive client base, currently managing over 1,000 servers on behalf of clients ranging from SMEs to large corporates.

As at 31 August 2009, the net assets of Titan were £765,000 with revenues of £3.4m, and pre-tax profits of £342,000. Titan currently has net cash of approximately £500,000.

**Angus MacSween**, CEO of iomart, stated: "We announced back in June that the Group intended to become the UK's leader in the relatively new cloud computing market through a combination of organic growth and acquisition. Our enviable position of having a strong balance sheet and an additional £10 million credit facility from **Lloyds Banking Group**, enables us to make strategic and complementary acquisitions such as Titan Internet when they present themselves."

[www.iomart.com](http://www.iomart.com) – [www.titaninternet.co.uk](http://www.titaninternet.co.uk)

#### **AIM-quoted promo marketing firm Altitude 'set for take-off'**

The company distributes promotional paraphernalia such as golf balls, pens, mugs and umbrellas. Though this market can be cyclical, as proven by historical results, the real excitement for investors in Altitude is its software arm.

The US promotional market is the world's largest and is worth \$15.6 billion with 22,000 players, the bulk of which have sales of less than \$2.5 million. Altitude owns a bespoke cloud-based software platform known

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as **PromoServe Pro** that provides customers with both product and financing tools in one complete package.

The SaaS (software as a service) product is creating a major buzz and for as little as \$150 a month provides the opportunity of great recurring income for Altitude. Since 2000, more than £5 million has been spent on developing the software, all of which has since been fully written off.

The software was launched at the **PPAI Expo** in Las Vegas in January 2011 but its commercial launch in the US is planned for June. A recent agreement has been signed with **iPROMOTEu**, a Boston-based network that brings access to over 550 independent distributors – all new targets for the software. In the UK, for £99 a month distributors receive 100 branded catalogues, a website, supplier information and a basic version of the software.

Altitude also runs the largest trade exhibition in the UK, which was held in Coventry in January. The show had over 2,000 exhibitors, with bookings up by 15 percent. For 2012 the event is already over 80 percent pre-sold so Altitude is taking on additional floor space. In addition, the division runs regional shows to help complement the annual event. To complete the picture Altitude owns *Promotional Product Distributor*, the leading magazine for the industry.

[www.altitudeplc.com](http://www.altitudeplc.com)

### **10 billionth download from Apple's iTunes App Store goes to... Orpington**

A start-up UK app developer and a woman from Orpington were the winners of Apple's 10 billionth download from its iTunes App Store.

**Gail Davis** of Orpington in Kent downloaded the app, Paper Glider, from Cirencester-based iPhone app developer **Neon Play** over the weekend.

**Oli Christie**, CEO of Neon Play, said "We've been eagerly discussing the 10 billion app countdown in our game studio, so when I got a call from Apple Cupertino saying they had some 'good news'. I thought they might tell us they were featuring one of our apps on the App Store. So when they said that Neon Play's Paper Glider was the 10 billionth app, I was completely and utterly dumbstruck. It's a great piece of news for the whole Neon Play team. Paper Glider is currently the number one app in the UK, so this is a double piece of great news for our studio."

Apple has been counting down to its 10 billionth app using a counter on the iTunes App Store. **Gail Davis** will receive \$10,000 in iTunes vouchers.

Paper Glider is Neon Play's sixth app and follows hot on the heels of number one selling app Flick Football, as well as Talking Baby, Golf Putt Pro and Hotshot Pool.

<http://itunes.apple.com/gb/app/little-book-of-neon-play/id41> –  
[www.neonplay.com/little-book-neon-play](http://www.neonplay.com/little-book-neon-play)

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### Integrated Magnetic Systems Ltd win Smart:Scotland award

Integrated Magnetic Systems offers magnetic proteins to the life science community (research and bio-processing) while further developing its magnetic proteins technologies for licensing and partnering opportunities in medicine – diagnostics and therapeutics.

In August 2010 it won an exclusive deal with **Scottish Enterprise**, oddly enough. Based in Dundee, the company will bring to market commercial assets which have been realised from the **Biosensing Research Programme** that enable the direct and highly controlled manipulation of biological material by magnetic fields.

These can be used to target specific biological entities and access areas of the body previously not possible, providing the basis for improved diagnosis of disease. This biotechnology company will use the grant to develop their proprietary magnetic protein technology, says **Dr Jamie Love**, Chief Operations Officer of IMS.

“Our technology will replace and extend the market currently occupied by magnetic beads in biotechnology applications. Furthermore, the small size of our proteins and the ability to use metals other than iron, provide opportunities that we will exploit in a variety of medical applications – from diagnostics to therapeutics.

“This award adds to the corporate funding we have already received to develop our first product, which we call ‘SF’. SF is a magnetic protein that attaches to biotin, making the biotin and anything the biotin is attached to magnetic. Biotin is commonly conjugated to molecules of interest in molecular biology in order to label them.

“For example, biotin-labeled nucleic acids are frequently used in genetics research (genomics, expression analysis, etc.) but they need to be purified before use. Our technology can purify such molecules faster and better than magnetic beads, and our proteins lend themselves well to automated systems, thus saving time and money.”

IMS will complete the Smart:Scotland project before the end of this year and expects to launch SF soon thereafter. IMS has several potential heavy-use customers eager to trial the new product.

<http://integratedmagnetics.co.uk>

### Wireless fetal monitor cleared for use in the American market

A ground breaking wireless fetal monitor developed by **Monica Healthcare**, a **University of Nottingham** spinout company, has been cleared for use in America by the US **Food and Drug Administration** (FDA).

The company has been granted regulatory clearance of their Monica AN24 wireless fetal monitor for use during labour and delivery. This FDA clearance enables Monica technology to be used in the USA during the care of healthy women and single childbirth.

Monica hopes that its technology will lead to improved patient care, raise efficiency, and ultimately reduce the cost of pregnancy care in the hospital.

**Carl Barratt**, CEO of Monica Healthcare, said: “The introduction of Monica AN24 to the US market is a significant milestone for Monica Healthcare, an endorsement of the team here, and represents an exciting opportunity for this advanced technology to positively impact the care of pregnant women during the critical stages of labour.”

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The Monica AN24 uses innovative wireless, non-invasive technology to collect real-time electrical signals from the abdomen of a pregnant mother. The device uses complex algorithms to correctly identify signals related to the fetal heart rate (FHR) and contraction signals on the abdomen of pregnant women using ECG-style electrodes.

The monitor is simple to use, beltless, requires no wires to connect to the display or printer, and will provide high levels of patient satisfaction. There is also no need for the constant re-positioning of transducers, which is required with the current technology, especially during an epidural when the patient is on her side. In the hospital, the Monica AN24 will be available exclusively in the USA through **Glenveigh Medical**.

[www.monicahealthcare.com](http://www.monicahealthcare.com)

### **Manchester's Renovo sees shares rise as its best hope has positive trial**

Biotechnology firm **Renovo Group's** shares enjoyed a healthy surge after the Manchester-based anti-scarring specialist said its lead treatment Juvista showed a positive trial result in a new formulation for children.

Chief executive **Prof Mark Ferguson** also said he hopes to conclude a licensing deal for Juvista in Asia or South America towards the end of next year. **Shire plc** holds the licence for the United States, Canada and Mexico but Renovo retains the rights to all other territories and is exploring partnership opportunities.

Renovo's shares gained 5.41 percent, or 2p, to 38.75p after it announced the results of a trial in Manchester involving 84 volunteers. The rise gave the company, which employs just over 100 people at its headquarters on Grafton Street, a market value of nearly £74m.

Analyst **Paul Cuddon**, of **KBC Peel Hunt**, raised his price target from 80p to 115p after the trial result. Renovo has 84 staff, designed to establish the safety and efficacy of a new formulation of Juvista.

Volunteers were given a single dose of the treatment immediately after surgery to close four experimental one centimetre incisions under the arm. The appearance of the scars showed 'significant improvement' after a year.

In the adult Juvista programme, a dose is administered twice – once at the time of surgery and another 24 hours later. As part of an agreement with the **European Medicines Agency**, Renovo said it would try to develop a single dose for children for use while they are still anaesthetised. The trial outcome shows it is now appropriate for further study.

Prof Ferguson hailed an 'extremely successful' trial and said he hoped Juvista would be launched on the market in late 2014 or early 2015.

[www.renovo.com](http://www.renovo.com)

### **Native Antigen Company Ltd gains investment from Mercia Fund**

In February 2011 Mercia Fund and business angels invested in the company – which aims to supply of components to the in-vitro diagnostic industry

**The Native Antigen Company** has been formed following a spin out from **PsiOxus**, formerly **Hybrid BioSystems**. NAC, headquartered in Birmingham with research offices in Oxford, has its expertise in the isolation and purification of both viral and bacterial native antigens. These antigens serve as key components of infectious disease testing kits (a growing market estimated to be worth up to £100m); their function being to accurately detect pathogenic infection by capturing antibodies in patient samples.

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The Native Antigen Company (NAC) specialises in the purification of native viral and bacterial antigens for the in vitro diagnostics (IVD) manufacturer. NAC has the scope to produce almost any Native Antigen, from low volumes to bulk. In addition, NAC offers an Adenovirus purification and production capability and a screening service for anti-cancer drug compounds

**Andrew Maxwell** was previously MD at **Lab21** and prior to this held responsibility at **Genetix plc** for its reagent and microarray divisions. **Professor Geoffrey Hale**, CEO of **BioAnalab**, which was acquired by **Millipore** in 2009, will serve as Chairman of the board of directors. The shareholders of NAC include Management, Mercia Fund, Cancer Research Technology and the University of Birmingham.

Andrew Maxwell said "Most antigens used in current diagnostic kits are not native and can thus lack the specificity and sensitivity which we offer with our native antigens. Accurate identification of an organism is vital to ensure an effective patient treatment regime. Industry has become reliant on recombinant antigens in part, due to perceived costs savings and ease of manufacture.

"There is a clear gap for an innovative company which can focus its expertise in the isolation and purification of native antigens and is prepared to work closely with the kit manufacturers to provide tailored, cost effective solutions. This is reflected in the strong market appetite to evaluate our approach."

<http://thenativeantigencompany.com>

### **Morgan Technical Ceramics works with Hull University spinout Avoco Medical**

Morgan Technical Ceramics is marketing a new speech valve that uses zirconia ceramic components that are said to extend valve life, resulting in less frequent valve changes for patients.

Up to 15 percent of patients diagnosed with throat cancer every year require a procedure called a laryngectomy – removal of the larynx – which results in speech loss.

Some speech and vocal function can be restored through the use of valves that reconnect the trachea and the oesophagus. Current valve designs consist of a stent and incorporate a flap that opens as air is forced through.

The valve is usually made from silicone rubber, but as the material is exposed to a hostile and non-sterile environment, a biofilm develops on the surface. Consequently, the performance of the valve deteriorates so that it has to be replaced every three months on average.

Ceramic is a more attractive material as it has a hard, impervious surface that makes it more resistant to the hostile environment, and laboratory tests are said to have shown that ceramic valves should last more than two years. According to MTC, the speech valve design will be supplied with a specially designed multifunction insertion tool.

[www.avocomedical.com](http://www.avocomedical.com) – [www.morgantechnicalceramics.com](http://www.morgantechnicalceramics.com)

### **Oxford BioTherapeutics celebrates as sanofi-aventis takes a licence**

The French-headquartered pharma firm has acquired an exclusive world-wide license to one of OBT's internal preclinical antibody programs.

**sanofi-aventis** intends to use the licensed antibody, which is directed against a novel, proprietary target identified by OBT, to develop, manufacture and commercialize antibody drug conjugate (ADC) products for the treatment of cancer. ADC products comprise toxins attached to antibodies which form effective therapeutic products that attack tumour cells in a highly targeted manner.

OBT is eligible for development and regulatory milestone payments on the program, royalties on the

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worldwide products sales and will receive additional performance milestones.

**Christian Rohlf**, CEO of OBT. “Given their expertise and experience in cancer drug development, I am very pleased that a program from our broad preclinical pipeline will be developed by sanofi-aventis.”

The initiative integrates OBT’s expertise in cancer target and antibody discovery with the in-house antibody development capabilities of sanofi-aventis. A key component of OBT’s expertise in cancer target discovery is the company’s **Oxford Genome Anatomy Project** proteomic database, which represents one of the world’s largest proprietary human cancer cell-surface protein repositories combined with highly relevant genomic and clinical information derived from human blood and cancer tissue studies.

[www.oxbt.co.uk](http://www.oxbt.co.uk) – 01235 861 770 [cr@oxbt.co.uk](mailto:cr@oxbt.co.uk)

### **London Technology Network organizes mentors for London’s life sciences SMEs**

LTN is working with **University College London** on two programmes that are live this year, namely HELO and SMILE – and participation in these programmes is free of charge or largely subsidised and will offer project support and business advice.

HELO, **Higher Education London Outreach**, will bridge the gap between the knowledge held within UCL and **London Business School**, and the London SMEs that could benefit most from it. By using existing networks and expertise from these world-class research institutions, HELO offers short term consultancy support, including both strategic and technical support, to enable SMEs to prosper and transform both themselves and their communities.

Secondly, **SMILE** – Selected Mentors and Interims for London Enterprises – helps London-based SMEs grow and develop with the help of business managers who have “been there and done that” acting as mentors and management interims. With a highly-personal approach, companies are matched to mentors to ensure mutual benefit and value, at no cost to the company.

Contact: **Jolyon White** – Life Sciences Technology Consultant – [jwhite@ltnetwork.org](mailto:jwhite@ltnetwork.org).

## **FUNDING & INVESTMENTS**

### **UCL cancer vaccine spinout sold to Amgen ‘for \$1 billion’ in landmark deal**

Amgen has agreed to acquire BioVex Ltd, a developer that spun out of **University College London** a decade ago. BioVex has raised \$150m from more than a dozen venture capital groups. It has developed a genetically-modified virus called OncoVex that destroys cancer cells when injected into patients suffering from skin, head and neck cancer.

Amgen is paying \$425m in cash, with as much as \$575m of future payments being conditional on the company hitting certain regulatory and sales milestones.

The deal represents one of the biggest exits of a venture capital-backed biotechnology company for many years and is a boost for the ailing European venture capital industry which has struggled with a dearth of big success stories.

Founded by **Robert Coffin**, a former University College London researcher who is now its chief technology officer, BioVex has moved its headquarters to the US, near Boston, but still does research in the UK at a facility in Oxfordshire. The company has started advanced clinical trials of **OncoVex** in 80 hospitals around the world and if these are completed successfully, it aims to file for a biologics licence from the **Food and Drug Administration** in the US later this year.

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“OncoVex has demonstrated encouraging anti-tumour activity in clinical studies for the treatment of melanoma and head and neck cancer and BioVex is currently enrolling patients into pivotal Phase 3 trials in both indications,” said **Roger Perlmutter**, Amgen’s executive vice president.

The main VC backers of BioVex, who supported \$70m financing two years ago, include **Scottish Equity Partners** in the UK, **Forbion** in the Netherlands, **Morningside** of Hong Kong, **Crédit Agricole** of France and **New Science Ventures** of the US.

The deal comes as Amgen seeks to refresh its pipeline with new experimental drugs, following a series of setbacks and pressures from generic rivals on the Nasdaq-listed group’s existing products. It also signals resurgent work around cancer vaccines.

[www.biovex.com](http://www.biovex.com) – BioVex Ltd, 70 Milton Park, Abingdon, Oxfordshire OX14 4RX – 01235 441 900.

### **Google buys Cambridge-based speech synthesis startup Phonetic Arts**

In a bid to improve speech output from computers and mobile devices the American search giant has bought **Phonetic Arts**, a company established only in 2006.

The latter develops software that can generate millions of lines of natural speech from a small sample of recorded dialogue.

**Google** has already launched Voice Search, Voice Input and Voice Actions apps for its Android devices, but the new acquisition will help the firm move a step closer to a ‘Star Trek’ future in which people have natural conversations with computers.

“There are already places you can hear this in action today. For example, Google Translate speaks translated text in multiple languages, and you can listen to navigation instructions as you drive. *But there’s still a lot to do,*” said **Mike Cohen**, manager of speech technology at Google, in a blog post.

“There’s a particular focus right now in the UK on technology and innovation, and we’re delighted to be deepening our investment in the country with this acquisition. We already have a strong engineering centre in London.”

Phonetic Arts plans to continue breaking new ground in the field of speech recognition.

The firm launched its first product only last October. Phonetic Arts already has global giants **Sony**, **Ninja Theory** and **EA Sports** on its client list.

Its PA 2010 product suite allows for the creation of synthetic voices capable of delivering any sentence in a natural, expressive way, allowing computer games to adopt any type of voice. The goal has been to free developers from the constraints of recorded samples and allow them to create rich, expressive and responsive dialogue within their games.

**Steve Tyson**, VP of sales, said global games developers fell head over heels for the product as soon as it was unveiled. The company is attacking a segment worth billions of dollars and Tyson said the product was active in every major territory of the world. The company has built swiftly to 14 people at its Cambridge HQ and Tyson said it would use the base as the springboard to further growth.

He said “Our virtual speech technology solution is revolutionising the industry, making the games a much better, more exciting – less boring – experience for the player. We are confident that we are the only people in the world that has this capability. It would take too many man hours for anyone to catch up.”

Tyson said Phonetic Arts was engaging with games giants that have formed a new and burgeoning cluster in Cambridge – many of them home grown but others foreign-owned players. The company intends to

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make its technology available to developers both of high-budget console titles and small-scale iPhone applications, he added. The company is headed up by co-founder and CEO **Paul Taylor**, a recognised world authority on speech technology.

[www.phonetic-arts.com](http://www.phonetic-arts.com)

### **UK 'off the boil' as France and Germany top scoreboard for venture capital**

Magazine *Tornado Insider's* preliminary data for 2010 revealed an increase in VC activity in Europe to an impressive 1,068 tech investments, we thought it would be interesting to find out where the €4.7 billion was spent.

The surge in activity in **France** and **Germany**, indeed, the two stars of 2010 were **Paris** and **Berlin**, meant for the first time that London did not report the highest number of deals in the annual city ranking.

The city dropped from 64 deals in 2008 and 2009 to 52 deals in 2010, placing it third.

First was Paris. No less than 75 VC deals were recorded for the French capital, well above the 44 deals in 2009 when it came in second. Berlin followed closely last year with a reported total of 68 deals. The German capital was placed third in 2009 (40 deals) and 2008 (38 deals). **Munich** retained its fourth place with a total of 28 deals, while **Cambridge** moved back up one rank to fifth place (18 deals).

**Barcelona** also showed a tremendous rebound in 2010. The city tumbled from 10th place in 2008 to the 31st in 2009. Last year the Spanish city shared 6th place with **Hamburg** (16 deals). Amsterdam stayed strong taking 8th place (15 deals), just outpacing **Dublin** (14 deals), **Cologne** and **Stockholm** (both 13 deals).

[www.tornado-insider.com](http://www.tornado-insider.com)

### **Tokamak Solutions secures funding to develop powerful neutron source**

In February 2011 the company's successful funding round coincided with a €110,000 contract award from **ITER**, the next generation international fusion energy research reactor.

Fusion research company **Tokamak Solutions** secured £170,000 of equity investment from **Sir Martin and Lady Audrey Wood**, the **Rainbow Seed Fund**, **Oxford Instruments plc** and investor members of the **Oxford Early Investments Network**.

The Tokamak Solutions board is led by **Dr David Kingham**, CEO, who was formerly managing director of **Oxford Innovation**, a leading operator of business and innovation centres, investment networks and advisory programmes for entrepreneurs. Other members include **Dr Mikhail Gryaznevich** (chief scientific officer) and **Alan Sykes** (technical director).

The funding will enable Tokamak Solutions to complete the design of its novel fusion neutron source – a super compact *tokamak*. Applications for the new technology range from the clean-up of nuclear waste, which could make safe nuclear power a reality, to the production of medical isotopes used in the diagnosis and treatment of diseases such as cancer and, in the longer term.

Instead of requiring a large, ultra-hot plasma to produce fusion neutrons, the super compact fusion neutron source designed by Tokamak Solutions generates neutrons by the simpler method of injecting a high energy beam into a 'warm' plasma of modest size. Contact: Tokamak Solutions UK Ltd:  
[david.kingham@gmail.com](mailto:david.kingham@gmail.com)

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## Seraphim Capital makes second investment into Pyreos

Seraphim Capital – the early stage technology investor – has made its second investment into Pyreos alongside other existing shareholders including **Siemens Technology Accelerator, Braveheart Investment Group PLC** and **Scottish Enterprise' Scottish Venture Fund**. Seraphim previously led a £1.35m round in April 2010.

Pyreos has developed patented thin film technology with applications across the infrared sensor industry. This technology enables Pyreos to make infrared sensors at a fraction of the size and cost than is possible today whilst also offering improved performance, functionality and reliability.

CEO **Jeff Wright** said Pyreos had the potential to disrupt the infrared sensor market in much the same way that the development of integrated circuits drove the electronics / microchip revolution 40 years ago.

Infrared sensors form the basis of several \$billion markets including motion detection – used for energy conservation, building automation and security alarms – infrared cameras that can “see in the dark”, gas detectors used to detect the presence of harmful gases such as carbon monoxide, and spectroscopy which uses infrared sensors to determine the chemical / molecular composition of samples for – amongst others – the pharmaceuticals, food and beverage and petrochemical industries.

With the current funding round Pyreos has now raised a total of £4.8m in equity funding over the last 3 years. The investment will be used to strengthen the company's global network of channel partners and to respond to the growing demand for its technology from its 50+ existing customers.

**Tony Lear**, a 40 year veteran of the electronics and semiconductor industries, having previously worked for **Texas Instruments, Seagate** and **Philips**, has been appointed Non Executive Chairman.

Contact: Jeff Wright – [jeff.wright@pyreos.com](mailto:jeff.wright@pyreos.com)

## Entrepreneur Hilary Devey to join the next series of BBC's Dragons' Den

The 53-year-old Devey launched her own business Pall-Ex in 1996, a pallet distribution company which she has turned into a multi-million pound European empire.

She joins **Peter Jones, Theo Paphitis, Duncan Bannatyne** and **Deborah Meaden**, who will all return for the new series, replacing **James Caan**.

After being rejected by banks to back her business, Devey sold her house and car to fund its start-up. “At a time when the banks are failing to invest in British small businesses, I am proud to be able to do my part to support the next generation of UK entrepreneurs,” Devey said. Mrs Devey also appeared on the Channel 4 show *Secret Millionaire* in 2008 in which she helped struggling projects in Rochdale.

[www.pallex.co.uk](http://www.pallex.co.uk)

## Microvisk secures £6m to launch world's first diagnostic SmartStrip

Microvisk Technologies, the developer of a handheld system to monitor the blood clotting status of patients taking the drug Warfarin, has won the largest amount raised by a UK life science firm in the past 12 months.

It raised £6m through a rights issue to existing investors in an oversubscribed round. This is the third successful funding round for Microvisk, which has now secured £10.5m.

The round included investment from **Porton Capital, Oxford Technology Management, New Hill** (Boston, USA), **Midven, the Rainbow Seed Fund, Finance Wales** and private investors.

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A spinout company from the **Science and Technology Facilities Council**, Microvisk has developed the world's first medical diagnostic strip based on a micro-electro-mechanical system (MEMS) that was originally created as a movement system for nano-robots.

Microvisk's 'SmartStrip' is a disposable strip that uses embedded sensors to work out the clotting speed of blood from a finger prick sample and the results are displayed on a handheld reader.

The company is using the new capital to continue clinical trials in the UK and expand its research and manufacturing facilities as well as recruiting additional scientists and manufacturing staff. Microvisk is also preparing to commence trials in the USA and Germany within the next six months, with product launches in both countries anticipated to follow in 2012.

**John Curtis**, CEO of Microvisk, said: "This funding round represents a real milestone for Microvisk as we also start to prepare for expansion into the German and US markets over the following year."

Microvisk's manufacturing and INR application specific research facility is located at St Asaph Business Park in North Wales. The company also has a non-application specific technology research laboratory in Chipping Warden, Northamptonshire.

[www.microvisk.com](http://www.microvisk.com)

### **OrganOx Ltd completes Series B investment round of £2.75m**

OrganOx is developing a medical device that will increase the availability of suitable livers by enabling successful transplantation of organs from non-heart-beating donors and reducing the number of discarded livers.

The device operates by maintaining the organ in a fully functioning state during transport and storage, by providing blood flow, oxygen, nutrients and temperature within physiological parameters. This not only enables the liver to be stored safely for a longer period (up to 24 hours) but also provides the surgeon with real-time and cumulative data with which to assess viability and make a decision whether to transplant. This is a major advance over the current method of assessment which is largely subjective.

OrganOx was spun out through **Isis Innovation Ltd** in April 2008 by **Professor Peter Friend**, (Professor of Transplantation, University of Oxford and Director of the Oxford Transplant Centre) and **Professor Constantin Coussios**, (Professor in Biomedical Engineering at the Institute of Biomedical Engineering, University of Oxford) and secured its Series A funding in December 2008.

**Dr Les Russell**, CEO of OrganOx, said "These funds will allow us to complete our clinical studies and prepare for market launch in 2012 and also to push forward with further exciting developments aimed at increasing the number of organs available for transplant."

[www.isis-innovation.com](http://www.isis-innovation.com) – [www.organox.com](http://www.organox.com)

## **GENERAL NEWS**

### **4<sup>th</sup> Rushlight Awards reward environmental innovation taking place in the UK**

Held in early February, the overall winner was **Diverse Energy** which has developed the Powercube, a low-cost power solution for mobile phone communication towers in remote third world locations, replacing diesel generators. An innovative ammonia cracker produces the hydrogen for the fuel cell with market leading efficiency and in a compact design, which only produces what is needed to deliver the required power at any given time.

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This innovative and compact unit produces an overall 80 percent reduction in greenhouse gas emissions, savings of 74 percent on energy bills, the elimination of noise and local particulate pollution, a 25 percent reduction in cost of ownership and a 2 year pay-back on investment.

The judges commented: "Diverse Energy received support of the judges due to its high social and environmental impacts, its simple yet innovative design, its clever use of ammonia (a cheap commonly available chemical) as a fuel source and the fact that the company has a market-ready, commercial solution for a distinct environmental issue."

*The group category winners included:*

- **VerdErg Renewable Energy** which use Bernoulli's venturi principles to convert large low head flows to higher head smaller flows to drive a conventional axial flow turbine which is the only underwater moving part in their marine energy technology;
- **AFC Energy plc** for their advanced alkaline fuel cell which, through their innovative fuel cell and stack design, together with a novel laser-based process for mass manufacture, makes it suitable for the technology to be linked with underground coal gasification so that it can be deployed on an industrial scale for the first time;
- **Oxford Catalysts Group** who use microchannel Fischer-Tropsch and steam methane reforming reactors with a highly active catalyst to produce a high quality synthetic crude or gas-to-liquid product that can be handled through the existing industry infrastructure;
- **Biomatrix Water Technology LLP** for their Dynamic Media Active Island Reactor which is an engineered floating island and underwater ecosystem that supports complex biological treatment processes within an attractive feature in the aquatic landscape;
- **IMC** who have developed the Compod standalone mobile building, designed to be a flexible solution to the treatment and processing of caterer's food waste at Imperial College into quality compost in a cost effective way and
- **InterfaceFLOR** for their Cellulose Optimization Resource Efficient technology which has been developed to up-cycle cellulosic and ligno-cellulosic waste, without any chemical additives, to create Zelfo, a micro and nano-fibrillated fibre.

[www.rushlightawards.co.uk](http://www.rushlightawards.co.uk)

### **Top 5 Hot Topics at Mobile World Congress 2011**

As **Mobile World Congress** gets underway in Barcelona, regarded as one of the biggest mobile events in the calendar, **Juniper Research** reveals the hot topics at the 2011 show.

#### *1. Wave of Tablet Launches in Wake of iPad*

iPad competitors gear up to launch their own devices: the Congress is showcasing a raft of new arrivals, including Samsung's Galaxy Tab 2, the LG Optimus Tab and the HTC Scribe. Meanwhile, the surge of interest in consumer tablet devices – allied to the accelerated adoption of smartphones – has brought further urgency to the debate on how to tackle mobile network congestion.

#### *2. LG's Optimus 3D in the Vanguard of Stereoscopic Revolution*

LG's announcement that it would be unveiling the world's first 3D smartphone at MWC generated significant pre-event buzz: the handset, which enables both stereoscopic image and video capture, is expected to be the trailblazer for an array of imitators, with vendors anxious to translate the wider

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consumer enthusiasm for 3D experiences in the cinema and on TV to the smaller screen.

### **3. NFC to see real, live usage in 2011**

In Juniper's view, NFC is going to see real, live usage in 2011. Over the last few months we have seen major announcements from several key players such as Orange and Google along with growth in the rollout of the contactless readers at merchants' POS plus announcements of retrofit interim solutions.

### **4. Mobile Industry Moves To Grasp mHealth Opportunity**

mHealth has a dedicated stream at MWC this year, indicating the scale of the opportunity presented by this sector and the increasing industry interest. Certainly, the nascent markets for mobile services such as remote monitoring are expected to grow strongly in the short/ medium term; Juniper expect the number of deployed services will rise dramatically during 2011.

### **5. Vendors and Brands invest in Augmented Reality**

2011 is the year in which AR will hit the mobile mainstream. There has been innovation and investment across the value chain – Qualcomm has launched an Android AR SDK; Samsung is preloading AR browsers on selected handsets. Expect to see greater breadth and depth of AR apps this year, with significant numbers of brands such as Carlsberg utilising AR platforms in their ad campaigns.

[www.juniperresearch.com](http://www.juniperresearch.com)

### **The Web Mission 2011 to Silicon Valley begins on 5<sup>th</sup> of March 2011**

A select group of 19 of the UK's most successful, fast-growing technology companies have been awarded the opportunity to take part in a trade mission to Silicon Valley in the US. For one week they will showcase their unique technologies and work towards opening up their businesses to an international market.

**The Web Mission 2011** will give the entrepreneurs behind 19 growing web technology companies the opportunity to engage with top people from US technology businesses such as Twitter. Over \$60m has been raised in private finance by companies that attended two previous web missions.

The mission is sponsored by; the **Technology Strategy Board, UK Trade and Investment** and **Orrick's Emerging Companies Group** and supported and delivered by partners; **Polecat**, the Co-Sponsorship Agency and **The Long Run Venture**. The goal of the mission is to help entrepreneurs in the UK's web technology sector to take their businesses into the global marketplace.

The 19 companies selected for the 2011 mission produce, and are developing, a wide range of web technologies. These range from mobile applications, cloud computing, to new ways of interacting with social media.

The 'Web Economy' refers to the individuals, enterprises, investors, clusters, sectors and value webs contributing to innovation in mobile, social, semantic and real-time web technologies; Cloud2; social gaming; and 3-D/RealVR environments.

The 19 companies selected for the 2011 mission are: **BookingBug, Brainient, BraveNewTalent, CloudApps, Conversocial, Crisp Thinking Group Ltd, housebites.com, MADE.COM, Mobcast Services Ltd, Qwerly, oneDrum, ParcelGenie.com, PrismaStar, Pusher, Rightster, Screenreach Interactive, Skyscanner Ltd, PeerIndex, and Struq.**

[www.webmission.co.uk](http://www.webmission.co.uk)

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## Kent County Council leader Paul Carter to lead post-Pfizer taskforce

In trying to ease the impact of Pfizer's closure decision on jobs and the east Kent economy Business Secretary **Vince Cable** has asked Mr Carter to work with **Pfizer** and the **Local Enterprise Partnership**.

Mr Carter said it would "do everything we can to mitigate the impact of this decision and continue with our ambitious plans for East Kent. "Many of Pfizer's workforce live in the area and are among the most highly skilled workers in Kent. This will also have a massive impact on the local people and the local economy that support Pfizer as a business."

For over a year campaigners have been lobbying MP's and KCC to persuade rail firm **Southeastern** to stop the existing high-speed trains which pass through **Sandwich** and **Deal** everyday to be included into the highspeed network and encourage job growth and inward investment. He also wants to turn **Manston Airport** into a major hub.

[www.kent.gov.uk](http://www.kent.gov.uk)

## FOREIGN NEWS

### CIA 's VC arm funds 'bleeding-edge technologies'

America's spy agency the **Central Intelligence Agency** has been running a little-known venture capital arm that is funding small firms developing 'bleeding-edge technologies'.

Tiny cameras, hearing devices for the teeth, Wi-Fi for refrigerators – are some of the products made by companies that have caught the eye of **In-Q-Tel**, the venture capital arm of the CIA.

One of the most recent companies to get an infusion of cash from the US spy bureau's investment fund is **Cleversafe**, a Chicago-based startup that offers software to keep data stored in cloud networks secure by slicing it up and storing it in different locations.

**William Strecker**, In-Q-Tel's chief technology officer, said the intelligence community was always looking for new ways to secure information given the increasing ubiquity of cloud computing.

The country's only federally funded venture capital firm was created in 1999, during the tech boom, because the private sector was setting the pace in technological innovation, leaving the intelligence community feeling not very intelligent.

Back in 2001 CIA official **Rick Yannuzzi** wrote in a briefing document for the *Defense Intelligence Journal*: "The CIA had to offer Silicon Valley something of value, a business model that the Valley understood; a model that provides those who joined hands with In-Q-Tel the opportunity to commercialize their innovations."

What technologies is the CIA interested in now? One clear area of focus is energy. In 2007 In-Q-Tel put cash into **AdaptivEnergy**, a company that develops products that harvest energy from impulse shocks, vibrations, and even footfalls.

It also likes companies that are working on making smaller batteries, like **Qynergy**, a New Mexico-based company working on radioisotope batteries, and **Infinite Power Solutions**, a Colorado developer of thin-film batteries that can power RFID (Radio Frequency Identification) tracking chips.

In 2008 it invested in Massachusetts-based RFID specialist **ThingMagic**, a company that makes RFID chips that can "track anything." The Florida State Attorney's Office for West Palm Beach uses them to

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track felony case files, and Ford offered them up as an additional feature for pickup trucks. A contractor can put the tags on all of his tools, so that a quick scan of the truck bed with an RFID scanner will reveal everything in there. ThingMagic was acquired last month by GPS device maker **Trimble Navigation** for an undisclosed amount. In-Q-Tel has also invested in **GainSpan**, a company finding ways to make everything Wi-Fi-enabled, from refrigerators to health monitoring devices, for richer information on something than just its location.

In-Q-Tel has some fun investments, like **Destineer Studios**, an outfit that develops military-themed videogames as well as training simulations for active-duty soldiers.

The espionage potential of many of the technologies in the In-Q-Tel portfolio are immediately apparent, but there are some surprises, like **Sonitus Medical**, which makes hearing aids that fit over the teeth and send sounds directly to the inner ear.

[www.iqt.org](http://www.iqt.org)

## UNIVERSITY NEWS

### UCL Ear Institute 'closer than ever to finding a cure for tinnitus'

UCL's tinnitus researcher **Dr Roland Schaette**, who is the **British Tinnitus Association's** Senior Research Associate at the UCL Ear Institute in London, said "At the moment, we are closer than ever to finding a cure for tinnitus. In the past decade, tinnitus research has made tremendous progress, and we have learned a lot about the mechanisms that are involved in the development of tinnitus.

"The picture of the mechanisms that lead to the development of tinnitus has become much clearer. I thus expect that the puzzle of how tinnitus arises will be solved within the next decade, and that this will lead to true targeted tinnitus treatments."

In the UK alone there are more than 1m tinnitus sufferers, but it is difficult to obtain funding for tinnitus research, and the number of research groups that focus on understanding this condition has therefore remained relatively small. Funding from a dedicated charity like the BTA thus makes a huge difference.

In January 2011 the Ear Institute's **Professor Martin Birchall** assisted in a laryngeal, trachea and Thyroid Gland transplant to an American patient who previously had no voice. The patient has now spoken for the first time in 11 years, and together with a team of surgeons at UCLA Davis Prof Birchall carried out only the second documented voicebox transplant.

Earlier, in April 2009 UCL Ear Institute researchers said viruses could prove successful at fighting the infections because it may be hard for bacteria to develop a resistance to them.

Hospital-acquired superbugs like MRSA are difficult to treat because they are resistant to many antibiotics. **Prof Tony Wright**, of the Ear Institute, who led the study, said: "Like you set a thief to catch a thief, we are setting a germ to kill a germ." In the study, highlights in New Scientist magazine, Prof Wright and his team identified and joined six viruses that "eat" a common ear infection, the *Pseudomonas aeruginosa* [P. aeruginosa] bacteria.

[www.ucl.ac.uk/ear](http://www.ucl.ac.uk/ear)

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## **Aston University's KTP with Pace Systems recommended at regional awards**

A Knowledge Transfer Partnership between Pace Systems International Ltd and Aston University has just been highly recommended at a regional business awards ceremony.

The local specialist vehicle design and electronics company based at Rugby, now sponsors one of the country's top young design specialists at its Rugby headquarters.

The company has a strong belief that investing in cutting-edge research and development and the KTP programme, particularly in the depths of a recession, is the key to successful business in the future.

Pace Systems MD **Les Leek** said: "We believe the way forward in this recession is to invest in knowledge and our unique partnership with the University, where some of the world's most brilliant young design engineers are studying, will help our business to beat recession. We sponsored **Syed Kazmi**, our Aston University Design and Research engineer here at Pace Systems, and we know it will bring immense benefits to the company and its future."

Syed, a 25 year old, was involved in innovative and exciting design work; as well as steering the company through the ISO 9001 process. He is now leading projects in UAVs (Unmanned Aerial Vehicles) and their civil and military applications, which include potentially life saving aspects. Syed said: "Pace Systems is an exciting, innovative company to work with and I believe that my work in research and development with them will keep them at the forefront of technology."

[www.pace-systems.co.uk](http://www.pace-systems.co.uk)

## **London Met graduate sells web business for \$10-15 million!**

A graduate from **London Metropolitan University** in north London – who started his business serving the Twitter eco-system two years ago whilst studying for his MBA – has now sold it for an estimated \$10-15 million.

**Plix** was the brainchild of student **Sean Callahan**, who envisioned a way users of Twitter, Facebook, MySpace, LinkedIn and Foursquare could share images in real-time from their mobile devices. He turned his original concept into a successful business, which raised \$2.6 million in VC capital a year ago and has now been sold to social commerce platform **Lockerz**.

Soon after the deal was sealed in January, Sean wrote to **Pat Wood**, the Director of Corporate and Community Synergy at the **London Met Business School (LMBS)** to thank them. 'I couldn't have done it without you!' he wrote. Sean started TweetPhoto with the support from LMBS and the Student Enterprise programme, which has helped launch another 27 student businesses.

Plix, originally called **TweetPhoto**, is one of the top 250 websites in the world, attracting 27.5 million users a month, including a host of celebrities. **Paris Hilton** is a regular Plix user, recently uploading a family snap of her and Nicky as little girls. 'This pic is so 80s – ha, I love it!' she wrote. While Plix offers a standalone web and iPhone app, more than 300 developers have integrated Plix's photo sharing technology.

Callahan, who lives in **San Diego**, California, came to London at the start of 2009 to study his MBA at London Met. "I decided on London Met because I liked the small class sizes and the teachers seemed very knowledgeable."

Dr **Sue O'Hare**, Associate Director of Enterprise at London Met said: "We are very proud of all that Sean has achieved. We work hard with students and graduates to help get their business ideas running, and have good links to business through our business incubator Accelerator."

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“London Met has strong academic expertise in the digital media area, with specialist knowledge across business, technology, creative design and social science.”

London Met’s digital media business incubator **Accelerator** is located at the heart of the ‘**Silicon Roundabout**’ in Shoreditch, which is poised to develop into East London Tech City. London Met is an anchor institution for the **East London Tech City** and will be showcasing its strength in digital media at the **Digital Shoreditch** festival in May.

[www.plix.com](http://www.plix.com) – [www.londonmet.ac.uk/lmbs](http://www.londonmet.ac.uk/lmbs)

### **UEA spinout Intelligent Fingerprinting secures £300,000 of investment**

**Intelligent Fingerprinting** has developed a unique technology for the simultaneous detection of personal identity and contact with illicit substances from fingerprints.

The funds come from the **Porton Group** together with the **Iceni Seedcorn** fund. A spinout company from the **University of East Anglia**, Intelligent Fingerprinting was founded in 2008 and received initial seed funding from Iceni.

The company has developed methods to determine whether an individual is using drugs from the sweat deposited in a fingerprint. The fingerprint itself provides positive identification of the individual and sweat analysis shows the presence or otherwise of drugs in the body. The combination of both these factors provides a watertight evidence trail for crime detection.

The technology detects the metabolites and not the drug itself. It is, therefore, impossible for an individual to avoid detection – if hands are washed, a time delay in acquiring the fingerprint will still show the metabolite on the fingerprint when he or she begins to sweat again.

Intelligent Fingerprinting is developing reagent kits which use high sensitivity immunoassay technology intended for application in forensic science, roadside policing and homeland security.

The reagent kits can already determine nicotine, cannabis, methadone and cocaine, and development work continues for the identification of other illegal substances, individual biomarkers and even explosives.

The biggest issue with current testing methods for illicit substances is mislabelling of blood and urine samples as they are sent away to forensics laboratories for testing and the time taken to get a result. By taking the fingerprints of a suspected user and testing these instead of a blood or urine sample as evidence of drug abuse means that there is no chance for fraudulent swapping of samples or mislabelling.

**Dr Jerry Walker**, CEO, Intelligent Fingerprinting said “For the first time, fingerprint imaging and drug detection can be done at the same time with Intelligent Fingerprinting’s revolutionary technology. The company’s technology is highly robust and sensitive adding versatility and higher quality evidence analysis to crime scene investigations”.

Contact: Dr. Jerry Walker, 07723 055 903 – [info@intelligentfingerprinting.com](mailto:info@intelligentfingerprinting.com)

### **‘Beyond Morph’ – a new flexi-phone at the Nokia Research Center Cambridge**

The **Nokia Research Center** (NRC) is a research facility at the University’s **West Cambridge site** collaborating with several departments – initially the **Nanoscience Centre** and Electrical Division of the Engineering Department – on projects that, to begin with, are centred on nanotechnology.

The academics from the department leading the collaboration are **Professors Gehan Amaratunga, Bill**

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**Milne and Mark Welland.** Soon after the center was established, the Morph Concept was unveiled, to help build a picture of where the research at the labs was heading.

**The Morph concept** is a new stretchable and flexible mobile phone allowing the user to transform their mobile device into radically different shapes. It demonstrates the ultimate functionality that nanotechnology might be capable of delivering: flexible materials, transparent electronics and self-cleaning surfaces.

Today, circuit boards are solid. The team at the University of Cambridge and NRC however are working on a technology that will enable them to be flexible, creating something akin to “electronic skin”. By using evaporated gold as a conductor, they have created an electronic touchpad which can be stretched like a rubber band, but still respond to touch and pressure. The team has been testing it to stretch by up to 20 percent of its original length without any drop in performance. The process of creating the material is pretty unique and the results are utterly mind-boggling, when you start to think about the possibilities it offers.

“The potential application: This research has at its heart new form factors for devices of the future. The possibilities might sound hard to believe, but working technology which can be twisted and distorted like a rubber band could enable a unique range of wearable devices or even enable technology to feasibly become part of our clothing.

[www.eng.cam.ac.uk/news/stories/2011/Nanoscience](http://www.eng.cam.ac.uk/news/stories/2011/Nanoscience)

### **Vomiting virus under strain from University of Southampton investigators**

With the number of norovirus infection cases rising across the country, scientists from the University of Southampton’s **School of Medicine** have successfully crystallised a key norovirus enzyme, which could help in the development of a norovirus treatment.

Noroviruses are recognised world-wide as the most important cause of epidemic nonbacterial gastroenteritis (stomach bugs) and pose a significant public health burden, with an estimated 1m cases per year in the UK. In the past, noroviruses have also been called ‘winter vomiting viruses’.

By crystallising the key protease enzyme, the research team from the University has been able to design an inhibitor that interacts with the enzyme from the ‘Southampton’ norovirus. The inhibitor works by preventing the enzyme in the norovirus from working, stopping the spread of infection.

The virus is called the **Southampton Virus** because this particular virus was first found in an outbreak that came from a family in Southampton. Traditionally, individual noroviruses are named after the place from which the virus was first found, so for example the very first norovirus is known as Norwalk virus because it discovered in Norwalk in Ohio, America.

University of Southampton virologist **Professor Ian Clarke** said “Noroviruses place a huge burden on the NHS. This is an important step forward in the rational design of new drugs to treat norovirus infections. Now we know the drug works in the test tube, the next step is to see whether we can modify and deliver it to the site where the virus grows.”

The research team hopes to translate their laboratory findings into an antiviral treatment for norovirus infection.”

[www.medschool.soton.ac.uk/research/molecular](http://www.medschool.soton.ac.uk/research/molecular)

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## **NHS Trusts could benefit by £500m thanks to solution developed at Reading**

Innovative software jointly developed by the **University of Reading** has the potential to save the NHS millions of pounds by improving the way it buys everyday supplies.

This week, a **National Audit Office** report on 61 hospitals in England calculated that through more efficient buying procedures and by using the power of bulk orders, NHS trusts could save at least £500m per year out of their current £4.6 billion consumables expenditure.

The **SpendInsight** technology has been developed by three coupled KTP projects with **Systems Engineering Ltd** at Reading, **Goldsmiths** at the University of London and **@UK plc**, a leading electronic marketplace provider.

SpendInsight applies artificial intelligence (AI) technology to enable NHS trusts to efficiently re-order basic supplies based on analysis of what they already use. The technology analyses existing procurement data and reveals areas of overspend, maverick spending and opportunities for making significant cost spending savings.

**Dr Richard Mitchell**, of the School of Systems Engineering at the University of Reading, said: "Our School has an outstanding record in Knowledge Transfer Projects over 20 years, but this particular three-year project is perhaps the most significant in terms of impact – leading to a potential saving to the NHS of £500 million."

[www.reading.ac.uk/sse](http://www.reading.ac.uk/sse)

## **LSBU student wins award for inventing a multi-purpose and folding trailer**

**Matthieu Philippault** is celebrating after winning a **Shell LiveWIRE Grand Ideas Young Entrepreneur Award 2010** for his invention.

The awards ceremony recognises young entrepreneurs aged 16-30 who are starting or running their own business. Matthieu invented the trailer which is designed for attachment to a vehicle to transport motorbikes, jet skis, quad bikes and other sports equipment.

The collapsible **Tyligo** trailer can be reduced to only 70cm wide when folded down and can be pulled through a door for easy storage in a shed or garage. It is smaller and lighter than existing trailers on the market which promotes better fuel economy on the road. Matthieu graduated with a first class honours degree in **Engineering Product Design**.

The first concept of a folding trailer won him a scholarship to commercialise his invention within LSBU's unique **Enterprise Associate Scheme**. The Scheme is a two-year programme where graduates can commercialise their business idea.

Matthieu plans to use his prize money to help finance the cost of exhibiting the Tyligo trailer at the **Motorcycle News (MCN) Motorcycle Show** in February 2011.

Matthieu has secured £40,000 from investors **Emerald Fund**, in order to run in-depth market research, enable prototyping and testing, as well as securing the IP for both product and brand, with a launch in January 2011.

[www.tyligo.com](http://www.tyligo.com)

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## University of Exeter joins SETsquared partnership to boost research growth

The **University of Exeter** has joined the SETsquared partnership, one of the UK's most successful and long running university collaborations. It has a large **Innovation Centre** on the main Exeter campus, which currently incubates 35 companies that employ over 150 people. Over the past 10 years, Exeter has spun out 18 businesses and is currently managing 27 patent families. It has commercial exploitation partnerships with **QinetiQ, Syngenta, Shell UK, and PCMD**.

The partnership has a considerable track record of achievement in the commercialisation of academic research, stimulating the UK economy and creating jobs through its support for high tech, high growth early stage companies.

Exeter joins the partnership's founder members – the **Universities of Bath, Bristol, Southampton and Surrey** – which have ten years' experience of driving value from academic research. Over the last five years, it has supported around 650 companies, raised more than £150m in capital and created over 1,000 jobs.

The partnership supports new businesses – both university spin-outs and from the wider community – through its business incubation and acceleration centres, provides support on intellectual property and IT licensing and access to industry specialists. It also works with established industry partners through research collaboration and consultancy.

Between them, the 7,000 plus academics at the five universities are responsible for nearly nine percent of the UK's research budget.

**Sean Fielding**, Director of Research and Knowledge Transfer at the University of Exeter, said: It will help us to share best practice, to be more efficient, and to deliver better services and networks to our incubating companies and industry partners." Fielding has joined SETsquared's Management Group. **Professor Nick Talbot**, the University of Exeter's Deputy Vice Chancellor for Research and Knowledge Transfer, will be joining SETsquared's Executive Board.

[www.setsquared.co.uk](http://www.setsquared.co.uk) – [www.exeter.ac.uk](http://www.exeter.ac.uk)

### LATE DATES FOR FEBRUARY 2011

#### 23-24 February 2011 – HazardEx Conference and Exhibition

Harrogate, North Yorkshire.

HazardEx is a comprehensive trade event with many specialist companies which supply products or services to the safety and hazardous area industries.

[www.hazardexonthenet.net](http://www.hazardexonthenet.net)

#### 24 February 2011 – Motor Industry and the 'green agenda'

St John's Innovation Centre Cowley Road, Cambridge, CB4 0WS. 6pm.

Of the 33 million vehicles on our roads in the United Kingdom alone, 27 million are cars. As travel by car is often the only practicable option, how is the motor industry addressing this problem?

Speakers on the subject are:

- **Dr Dorian Hindmarsh's** (Hethel Engineering Centre) has been specialising in the automotive sector as it grows and morphs into a low-carbon agenda, supporting ideas and R&D, all the way through to complete vehicle technology.
- **Jim Router** (Router Automotive) has just finished developing the Ecotricity Nemesis Electric Road

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car.

- **Dr Steven Cousins** (Axon Automotive), MD of Axon Automotive Ltd. He has worked in varied research capacity at Open University, later moving to Cranfield University.

[www.cetc.info](http://www.cetc.info)

## AND FINALLY...

### Photo-based mobile payment system trialed in Subway

If a picture is worth a thousand words under ordinary circumstances, then surely its value in a banking context would be difficult to overstate. So, indeed, is essentially the thinking behind **FaceCash**, a new, photo-enhanced mobile payment platform currently undergoing testing at sandwich chain **Subway**.

The brainchild of California-based **Think Computer**, FaceCash is a mobile payment system that allows consumers to use their cell phones to make purchases at the point of sale. Users of FaceCash begin by signing up online with a photo and pre-funding their account with money from a traditional checking or savings account.

Their FaceCash payment account then gets tied to a unique bar code that can be displayed on a smartphone or self-printed card for making purchases at participating merchant stores. When that bar code is scanned, the merchant is presented with the consumer's picture for verification.

Assuming it's a match, the transaction proceeds and the consumer's funds are transferred instantly to the merchant; both sides get an online record of everything bought or sold. Consumers can exchange money with each other this way as well.

FaceCash is part of the **ThinkLink** network, and merchants need only an internet-connected computer and a barcode scanner, optionally available from Think for as little as \$39.99; to use the service they pay just 1.5 percent per transaction. With the service's savings potential over traditional credit card fees, there's clearly a strong incentive.

[www.facecash.com](http://www.facecash.com)

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