



NovaUCD Newsletter



The Innovation and Technology Transfer Centre

July 2009

Dear Colleagues and Friends

Welcome to the second issue of the NovaUCD Newsletter for 2009 in which we review activities and events which took place during the second quarter.

NovaUCD has announced its results for 2008 and for the 5-year period from 2004-2008 in its 2008 Annual Report. These results clearly demonstrate that the growth in public investment in R&D at UCD is yielding a significant return to the Irish economy and society.

Congratulations to HeyStaks, which is the overall winner of SUSSEd!, UCD's €10K Entrepreneurship Competition. HeyStaks, a social web search company, will now go forward to represent UCD in the Europe-wide UNICA Entrepreneurship Competition for Students and Young Researchers which takes place later this year. HeyStaks' co-founders, Dr Maurice Coyle and Dr Peter Briggs are early-stage researchers in UCD's School of Computer Science and Informatics, and postdocs in CLARITY, The Centre for Sensor Web Technologies. HeyStaks' other co-founder is Professor Barry Smyth.

Given the current economic situation, it is not surprising that the visit of Professor Malcolm Gillis attracted a lot of attention. Professor Gillis, former President of Rice University, Texas, delivered a special lecture at NovaUCD which focused on the recent worldwide financial meltdown entitled *Black Swans in a Perfect Storm*.

In this newsletter we report on Innovation Dublin, a week long festival of workshops, events and showcases which will highlight and encourage innovation and creativity in Dublin. Innovation Dublin will take place from October 14 to October 20.

We also report on other recent developments for Enzolve Technologies, Socowave and Visor. These developments should not surprise us given the results of the GEM 2008 Report which are outlined on Page 8. We are, according to the Report an entrepreneurial nation to the fore in Europe in terms of entrepreneurial activity.

I would welcome any comments or feedback on this issue. Please contact Micéal Whelan on t: 01-716 3712 or e: miceal.whelan@ucd.ie.

Dr Pat Frain, Director

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NovaUCD 2008 Annual Report

NovaUCD has announced strong commercialisation results for 2008 and for the five year period from 2004-2008 in its latest Annual Report.

UCD researchers are generating an invention a week as 53 invention disclosures were reported to NovaUCD during 2008. A total of 184 inventions have now been disclosed to NovaUCD during the 5-year period to end 2008.

Thirty-eight patent applications, including 25 priority, 6 PCT (patent co-operation treaty) and 7 national/regional applications were filed by UCD during 2008. These patents were filed for intellectual property arising from research taking place throughout the University's Colleges, Schools and Institutes.

A total of 122 patent applications, including 70 priority patents, were filed by UCD in the 5-years ending last year. In the last four years 38 licence agreements were concluded by UCD with a range of indigenous and international companies.

Forty-five high-tech and knowledge-intensive companies, including 15 UCD spin-out companies, have occupied incubation space at NovaUCD and availed of NovaUCD's related innovation services during 2004-2008. Over 140 new ventures, 11 in 2008 alone, and 210 individuals have now completed the NovaUCD Campus Company Development Programme which has run annually since 1996.

Twenty-five innovative companies, occupying 36 incubation units, or nearly 90% of the available incubation space, are currently located at NovaUCD. These companies collectively employ over 170 individuals at NovaUCD.

NovaUCD's 2008 Annual Report is available via: <http://www.ucd.ie/nova/news/novaucdannualreports/2008/novaucd%20report%20final%20low%20res.pdf>

For further information or to receive a hard copy of this Report contact Micéal Whelan, Communications, tel: 01-716 3712, email: miceal.whelan@ucd.ie.

SUSSED! UCD's €10K Entrepreneurship Competition

In June, HeyStaks, a social web search company, was declared the overall winner of SUSSED!, UCD's €10K Entrepreneurship Competition.

The objective of the SUSSED! competition, organised by NovaUCD, was to transform business ideas emerging from students and early-stage researchers at UCD into business plans and commercial enterprises.

HeyStaks (www.heystaks.com) is developing a suite of online tools to make it easier for internet users to organise and share their internet search experiences without having to leave their favourite search engine.

HeyStaks' co-founders are Dr Maurice Coyle and Dr Peter Briggs, both early-stage researchers in UCD's School of Computer Science and Informatics, and postdocs in CLARITY, The Centre for Sensor Web Technologies. HeyStaks' other co-founder is Professor Barry Smyth.

On winning the competition, HeyStaks' team members were presented with a cheque for €5,000. They will also receive 6-months free incubation space in NovaUCD and obtain professional support in further developing their new venture.



Dr Maurice Coyle and Dr Peter Briggs



HeyStaks will now go forward to represent UCD in the Europe-wide UNICA Entrepreneurship Competition for Students and Young Researchers which takes place later this year.

Most users when searching on the internet are looking for information that another user, with similar interests, has found previously. However to date there has been no easy way for individuals to collaborate on shared internet searches.

HeyStaks' online tools will now enable internet users to organise and share the pages they find while searching the internet, without having to leave Google or their favourite search engines.

HeyStaks allows internet users to create a 'folder' called a 'search stak' for any search interest, which they can share directly with other users or which can be made public so that anyone can subscribe to it. As stak members search, they contribute pages and associated query terms to the stak's data store.

When another stak member searches for a similar query in the future, the pages that are most relevant to their query, as decided by the collective actions of the stak community, can be promoted and recommended within Google's standard result list.

Furthermore, if a particularly relevant page is found that does not appear in Google's result lists, users can tag the page with descriptive terms and it will appear in Google's result list in the future.

Two other short listed teams, XIT and OlympOzone, received runner-up prizes of €3,000 and €2,000 respectively in addition to 6-months free incubation space in NovaUCD.

XIT is developing a web-based travel planning application that allows users to more easily plan and share their travel experiences.

XIT's application sources information from multiple websites and social networks and can make recommendations inspired by previous trips made by friends and colleagues.

The software creates a portable itinerary that can be used in hardcopy or on a mobile handset. XIT's software also allows users to share their experiences after their trip or holiday.



Eamonn Fallon, Daft.ie with Martine Wallace and Kevin O'Shaughnessy, XIT and Dr Pat Frain

Kevin O'Shaughnessy, XIT's team leader is a postgraduate student in UCD's National Institute of Technology Management as are the other three team members.

OlympOzone's business idea is to provide a viable alternative for the use of chlorine in swimming pools in Ireland.

OlympOzone aims to be the primary supplier and installer of Ozone water treatment systems in Ireland. The use of Ozone technologies to disinfect and treat swimming pools does not have any of the negative health side-effects associated with chlorine by-products. It is also more cost efficient and more environmentally friendly than using chlorine.



Sinéad Quinn, Liam Cody and Gavin Duffy, OlympOzone

Sinéad Quinn, OlympOzone's team leader is a former competitive swimmer. She is also a lifeguard and swimming instructor and an undergraduate Cell and Molecular Biology student in UCD's School of Biology and Environmental Science. OlympOzone's other



team members are fellow UCD undergraduate students Gavin Duffy and Liam Cody who are studying Biochemistry and Botany respectively.

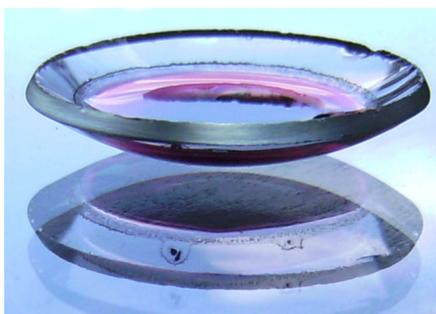
The members of the SUSSED! Judging Panel, who picked the winners following "Dragons' Den" pitches by the six short listed finalists were; Eamonn Fallon, Managing Director and co-founder, Daft.ie; Dan Maher, founder, Nua Venture; Nicola Mitchell, Managing Director and founder, Life Scientific; Dr Brian Kelly, CEO and co-founder, Celtic Catalysts and Dr Pat Frain, Director, NovaUCD.

The other three short listed teams were Coast 2 Coast Coaching, FlyFit and SustainableMeter.

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Protection and Commercialisation of Intellectual Property

NovaUCD is responsible for the implementation of UCD's policies relating to the commercialisation of intellectual property and for the management of the intellectual property arising from UCD's research programmes.



©UCD 2008 Images of Research: Iodine UFO, Susan Kelleher, UCD School of Chemistry and Chemical Biology

A key priority of NovaUCD is to work with UCD researchers in identifying, protecting and commercialising the intellectual property arising from their research programmes and to take innovative ideas from proof-of-principle to full commercial success.

UCD 2009 Invention Disclosures and Patent Filings

54 invention disclosures have already been disclosed by UCD researchers to NovaUCD during the first six months of 2009.

UCD patents filed to date this year include:

A method of concentration of a specific low abundance biomolecule, Professor Kenneth Dawson, UCD School of Chemistry and Chemical Biology. A European priority and US provisional patent application.

Athletic performance, Dr Emmeline Hill, UCD School of Agriculture, Food Science and Veterinary Medicine. An Irish priority and a US provisional patent application.

Bull fertility, Dr Emmeline Hill, UCD School of Agriculture, Food Science and Veterinary Medicine. An Irish priority patent application.

Digital predistorter for RF power amplifiers, Dr Anding Zhu, UCD School of Electrical, Electronic and Mechanical Engineering. An Irish priority patent application.

Fibrosuppressant biotherapeutics, Professor Catherine Godson, UCD School of Biomolecular and Biomedical Science. A US provisional patent application.

Method and apparatus for stimulating pelvic floor muscles, Dr Brian Caulfield, UCD School of School of Physiotherapy and Performance Science. An Irish priority patent application.

Method and systems for analyzing most recently used lists, Dr Pavel Gladyshev, UCD School of Computer Science and Informatics. An Irish priority patent application.

Method and System for providing inter-gateway mobility support in mesh networks, Dr Liam Murphy, UCD School of Computer Science and Informatics. An Irish priority patent application.

System and method for multi-source streaming of media content, Dr Liam Murphy, UCD School of Computer Science and Informatics. An Irish priority patent application.

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Black Swans in a Perfect Storm

Professor Malcolm Gillis, former President of Rice University, Texas delivered a special lecture at NovaUCD, during his recent visit to UCD. The title of his lecture, which focused on the worldwide financial meltdown during the period 2007-2009, was *Black Swans in a Perfect Storm*.



Professor Malcolm Gillis, Dr Hugh Brady, UCD President and Dr Pat Frain, Director, NovaUCD

According to Professor Gillis, currently a Professor of Economics at Rice University a flock of black swans appeared on the financial scene in 2007 – 2009.

Financial perturbations and dislocations have been recurrent features of post World War II financial history. Since 1975 alone, the IMF has counted 113 episodes of financial crisis in 17 countries, including five crises that were especially serious. And, from time to time, financial institutions have faltered seriously, as in the S&L crisis of the 80s. Regional housing markets have undergone cyclical ups and downs, and we have experienced periods of capital flight. In the 70s and 80s there were bailouts of Chrysler and S&Ls.

But never before have we experienced so many simultaneous financial insults, claimed Professor Gillis. Black swans arrived in force, bringing a headlong process of rapid globalisation to at least a temporary halt, while leading to a near complete breakdown of trust in financial circles.

In his special lecture, Professor Gillis examined six root causes of what he called *The Perfect Financial Storm* and the interplay between them: Excessive leverage; perverse pathological incentives for banks and other financial institutions; misguided and lax financial regulation; poor applications of good

economic theory; financial engineering carried to extremes; and investor gullibility.



Professor Malcolm Gillis

Throughout 2008 all six factors came together to yield a near-perfect worldwide financial storm," he said. "The pain is far from over, especially as downgrades of collateralised securities trigger chain reactions leading to more write-offs of banks' prospective losses, according to Professor Gillis.

A podcast of the seminar is available via: <http://www.ucd.ie/nova/podcasts/>

Innovation Dublin Week

Innovation Dublin (www.innovationdublin.ie) a week long festival of workshops, events and showcases highlighting and encouraging innovation and creativity in Dublin will take place from October 14-20 next.



Innovation Dublin will be organised around the following themes, social, cultural, urban form, movement, education, innovation, environment and economics.

Innovation Dublin is an initiative of the Creative Dublin Alliance and is being co-ordinated by Dublin's local authorities, business groups, colleges, including UCD, organisations and individuals.



The Creative Dublin Alliance is a network of diverse leaders that meet to discuss and implement solutions in response to the challenges that Dublin faces as an internationally competitive city region.

The aim of this Alliance is to progress new levels of innovation and in collaboration with all key parties, to promote Dublin as a creative and world-class city.

NovaUCD, as the Innovation and Technology Transfer Centre at UCD, is co-ordinating UCD's events for this week.

Further details of all UCD events will be available shortly on NovaUCD's website.

Contact: For further information contact Micéal Whelan, Communications, tel: 01-716 3712, email: miceal.whelan@ucd.ie.

Companies at NovaUCD

Twenty-five innovative new ventures, occupying 36 incubation units, or ~ 90% of the available incubation space, are currently located in NovaUCD.

Duolog Technologies recently graduated from NovaUCD. A total of 13 companies have now graduated and moved on to new premises.

The continuous turnover of companies is an important element of NovaUCD's strategy to continuously refresh our community of entrepreneurs and to have the capacity at all times to take on new projects.

NovaUCD continues to welcome proposals from the promoters of high-quality, knowledge-intensive ventures who are interested in locating in NovaUCD.

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Companies in the News

Enzolve Technologies

Enzolve Technologies, a UCD spin-out company based in NovaUCD, has formally launched its first CE-marked diagnostic test which screens for PKU (phenylketonuria) in newborn babies.

The products were launched at the 6th ISNS European Regional Meeting in Neonatal Screening which took place last April, in Prague, the Czech Republic.



Enzolve's PKU test

Enzolve's PKU test, based on engineered enzyme technology, has several advantages over the tests currently available on the market. It is easier, faster and more convenient to use and the results are more reliable.

The Enzolve PKU kits are also more cost effective and are available in two formats containing sufficient materials to allow up to 400 or 1,000 newborns to be tested.

PKU is an inherited metabolic disorder that results in severe mental retardation if treatment is not started within the first few weeks of life. If the disorder is detected early, and with a well-maintained appropriate diet, affected children can have normal development and life span. While most developed countries have programmes to screen newborns for this disorder, only 30-35% of babies world-wide undergo such screening programmes.

Enzolve Technologies, has designed and developed its novel diagnostic test over the past 2 years. The company was co-founded by Professor Paul C. Engel and Dr Suren Aghajanian as a spin-out from UCD's School of Biomolecular and Biomedical Science.

The PKU test is the first in a suite of products, called *NeoScreenPak*, which Enzolve is developing to screen for a variety of metabolic disorders in babies.

Enzolve's PKU test underwent extensive evaluation by the National Standard Authority of Ireland on behalf of the Irish Medicines Board to assure that best practice was undertaken in the design and development of the product which resulted in it being granted the CE Mark.



In addition to the granting of the CE Mark, Enzolve Technologies was also recently awarded ISO 13485:2003 accreditation, demonstrating its commitment to quality and customer service.

Socowave

Socowave, the NovaUCD-based technology start-up, has made a wireless technical breakthrough which is attracting the attention of global wireless infrastructure vendors. This breakthrough has the potential to transform how cellular network operators deliver video-rich services to mobile customers, in the future.



Joe Moore, Socowave

Socowave's pioneering active panel antenna (APA) technology will enable faster internet access for cellular users. In addition, this new technology will significantly reduce the wireless industry's carbon footprint by enabling future networks to be designed with fewer base station sites. This will reduce base station electricity consumption by up to 50%.

Socowave estimates that the new APA technology has an annual market potential of over €2 billion.

In June Joe Moore, who founded Socowave in 2008, announced details of the radical technology in advance of a presentation to global infrastructure vendors and mobile network operators who are preparing to migrate to 4G networks (LTE & mobile WiMax).

These networks are the next level of evolution in the field of wireless communications and will replace existing communication networks offering facilities such as voice, data and streamed multimedia to users on an "anytime, anywhere" basis and at much higher data transfer rates compared to current generations. Socowave's technology dramatically improves the quality of the wireless link between mobile user and cellular network and increases

effective data rates by up to ten times. This improvement will reduce video upload and download times to/from the internet.

Socowave, which is supported by Enterprise Ireland has a technical design centre, at the National Software Centre, Cork.

The technology underlying Socowave's breakthrough is based upon a pioneering base station system architecture controlled digitally over fibre optic cable which incorporates some enabling technology licensed from NUI Maynooth and UCD.

Visor

Visor the Irish software company, a NovaUCD graduate company has announced that Deloitte Digital has chosen accountsIQ as their platform to deliver online accountancy services to their clients in Australia.

Deloitte Digital is pioneering the delivery of professional services online in Australia, which include business intelligence tools, online education and collaboration products, compliance and HR solutions. It expects the accountsIQ software, which includes predefined journal templates and easy to use client company set-up and data import wizards, will change the paradigm for providing professional services.



Tony Connolly, Visor

accountsIQ is Visor's flagship software-as-a-service product and it is a new breed of accounting software that is designed to move a business' entire accounting online. accountsIQ is a hosted online accounting package that has been designed by accountants and IT specialists.

Visor, a graduate of NovaUCD, was established in 2004 by Tony Connolly, a former partner with Farrell Grant Sparks (FGS).



accountsIQ was launched commercially in early 2007 after over 30 man years of extensive research and development. Visor's client base currently includes businesses in Ireland, the UK, USA, Australia and India and ranges from sales consultants to global payment providers, franchisers, offshore finance companies and traditional accountancy practices and their SME clients.

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GEM 2008 Report

The 2008 Global Entrepreneurship Monitor (GEM) Report for Ireland was launched in May by An Tánaiste and Minister for Enterprise, Trade and Employment Mary Coughlan TD.

The report, sponsored by Enterprise Ireland, Forfás and AIB, confirms that Ireland is at heart an entrepreneurial nation and to the fore in Europe in both the rate of early stage entrepreneurial activity (7.6%) and in the rate of established entrepreneurs (9%) among the adult population. With an average of 2,800 individuals setting up new businesses every month, entrepreneurial activity in Ireland remains high, according to the latest GEM report.

The main Report findings include:

- Despite the changed economic environment in Ireland in 2008, GEM reports that at the time of the 2008 survey (June 2008) there was no fall off in the level of those who had recently set up a new business (new firm entrepreneurs) (4.3%), that Ireland remained to the fore in Europe in early stage entrepreneurs (7.6%) and that there continues to be a high level of established owner managers at 9% of the adult population.
- One in four (27%) of early stage entrepreneurs is a serial entrepreneur in that he/she has been involved in entrepreneurial activity previously.
- Reflecting the economic conditions there is a significant decline in the number of people perceiving good opportunities to start a new business - down to 27% from 46% in 2007. The aspiration to start a new business

in the next three years (10%), however, still remains strong.

- The rate of early stage entrepreneurial activity among men increased from 10.6% in 2007 to 11.2%. As is the case in nearly every country in the world, the rate of early stage entrepreneurial activity among women is less than it is among men. Ireland is no exception. The rate of early stage entrepreneurial activity among women in 2008 was 4.0%, similar to the level in 2006, but lower than the rate in 2007 (5.9%).

- The focus of activity among early stage entrepreneurs in 2008 is different to that reported in 2007. In 2008 fewer entrepreneurs focused on consumer related sectors (37%) than in the previous year (44%) and there was a more even distribution across the sectors including business services (30%) and transformative (25%) than had been the case previously.

- GEM can report for the first time on the generally held belief that those born outside the country are more involved in early stage entrepreneurship. This widely held perception is in fact true. Those born outside the country and now living in Ireland are more entrepreneurial (9.1%) than those who were born in Ireland (7.3%). It should also be noted that those who have lived outside of Ireland for more than one year, whether they were born in Ireland or not, have a higher rate of entrepreneurial activity (10.5%) than have those who have never lived outside the country.

Professor Barry Smyth, UCD's School of Computer Science and Informatics and co-founder of two UCD spin-out companies, ChangingWorlds, whose Advanced Research Centre is located at NovaUCD, and HeyStaks, is one of 12 entrepreneurs featured in this year's report.

The authors of the GEM 2008 report are Paula Fitzsimons, National GEM Co-ordinator, and Dr Colm O'Gorman, Professor of Entrepreneurship, DCU Business School.

Full report can be accessed via: www.forfas.ie/publications/2009/title,4076,en.php



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NovaUCD and Social Media

NovaUCD is now on Twitter. If you would like to follow NovaUCD our twitter handle is @NovaUCD.

NovaUCD has also established a LinkedIn Group. The purpose of the NovaUCD LinkedIn Group is to connect members of the NovaUCD community which includes entrepreneurs, innovators, researchers, staff, the NovaUCD network of professional contacts along with any individual who is based or has been based at NovaUCD or is otherwise linked with NovaUCD.

If you wish to become a member of this group please use the URL below or visit the LinkedIn website, www.linkedin.com, and search for 'NovaUCD' under 'Groups'.

<http://www.linkedin.com/e/gis/149865>

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