



# UCD Computing Services Annual Review 2005

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## Progress on IT Strategy

UCD's IT Strategy and 5 year plan sets out challenging objectives for IT services in the University. Developing the digital campus with 24/7 access for staff and students, providing dedicated IT resources for Research, and implementing best in class eLearning technologies are our goals.

Over the last two years UCD completed the renewal of its IT network infrastructure with 22,000 network points and wireless hotspots across the Belfield campus. A targeted level of one network point per user was achieved ahead of schedule in 2005. All major social spaces now have wireless access.

Expanding services and preparing for widespread laptop use is our focus in 2006. We will extend UCD Connect Services, open the new Research IT Data Centre in Daedalus and continue to deploy wireless and laptop access facilities in co-operation with Colleges.

**Mary Crowe**

Director

UCD Computing Services

## Highlights in 2005

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- UCD Connect 10,000 users each day
- Research IT - New Support Team established
- 15,000 eLearning users with 1,300 courses
- New IT Centre handles 3,000 calls
- Laptop Support 4,000 PCs registered in 2005
- IT Induction 4,200 students attend in Sept 2005
- 128MB Disk Key for all 1st year students
- 25% improvement in network performance
- 30% reduction in service incidents



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## Building the Digital Campus

UCD Computing Services' plan for 2006 focuses on developing new services to support UCD strategic goals, particularly the concept of a "Digital Campus". Pilot laptop carts used by classes in 2005 demonstrated the new mobile services and were very popular with students.



Students from the Robotics Design Project using the mobile laptop cart with lecturer, Brian Mulkeen, School of Electrical, Electronic & Mechanical Engineering.

*"Because the laptop cart is mobile I can use it in a small lecture theatre in the morning and then someone else can use it in a lab in the afternoon"*

Dr Dermot Malone,  
Senior Lecturer, School of Chemical & Bioprocess  
Engineering

Building on the experience from wireless technology, laptop implementation and direct user response to our support service we plan to extend IT facilities in 2006 through:

- A new research data centre providing hosting and storage capacity in The Daedalus Building
- A fully mobile and technology enabled campus
- Flexible laptop areas with wireless access
- UCD Connect for Administrative services
- A new IT Centre in Life Sciences

Full details of our work programme and projects can be found at: [www.ucd.ie/itservices/ITplan2006](http://www.ucd.ie/itservices/ITplan2006)

## UCD Connect

The UCD Connect portal was fully deployed to all staff and students during 2005 - a unique IT service giving anytime/anywhere access to UCD information and resources. UCD students and staff can avail of email, calendar, file access, library journal access, eLearning, registration, news and targeted information through a single web page. An ongoing programme of work includes new information channel development, with the scope for individual units and groups to provide dedicated services through the portal.



Brian Morrissey, UCD Computing Services with Dr. Feargal Murphy, School of Irish, Celtic Studies, Irish Folklore & Linguistics

### UCD Connect for instant Journal Access

*"If I'm writing a paper and need a reference from a journal, I no longer have to be in the office - I just have to be logged into UCD Connect"*

Dr. Feargal Murphy,  
Lecturer, School of Irish, Celtic Studies, Irish Folklore & Linguistics

Using evenings and weekends to catch up on certain tasks - like responding to email, planning coursework, marking assignments and writing papers - is an occupational hazard for most academic staff. It's a job that has been made easier by the introduction of UCD Connect, which enables immediate remote access to a range of University services, including email, group files and Library journals.

'The big advantage of UCD Connect is the fact that it's location independent,' explains Linguistics lecturer, Feargal Murphy. 'It allows you to work the same way as you do in your office, regardless of where you are.'

Murphy finds one of the newest services available on UCD Connect - remote access to Library journals - particularly useful. 'For years, if I was working on something from home and I wanted to look at an article I had to travel into College. Now, I can just find it online and download it straight away'.

## Research IT Support

In 2005 UCD was the first Irish University to introduce a dedicated IT service for research users, based on a detailed assessment of requirements with its research community. The Research IT Steering Group, chaired by Prof. Ciaran Regan will oversee the continuing development and enhancement of these IT services.



Dr Scott Rickard, School of Electrical, Electronic & Mechanical Engineering with Prof. Ciaran Regan, Chair, Research IT Steering Group

### Projects for 2005/06 include:-

- A new research data centre
- Hosting for research equipment
- Central storage capacity

### Community Cluster

The Halation Cluster is currently under development as the UCD Community Compute Cluster. For researchers within the University, a community compute cluster is a whole new way of maximising value for money spent on cluster hardware.

Researchers, both individual and group, can opt to contribute nodes to the community cluster as an alternative to building and maintaining their own clusters. UCD Computing Services also contributes nodes to the community cluster.



This allows users to benefit from their own individual compute capacity, while also contributing to the shared environment.

## IT Team provides Linux Cluster

The Research IT Support Team's first significant computational project was carried out in July 2005 in support of Dr Scott Rickard and his study into Costas arrays. Using the newly installed central Linux Cluster the team provided additional capacity for the extensive calculations involved in the research.



Members of the Research IT Support Team – from left, Patrick Tuite, Yuri Kuznetsov, Fred Clarke, Ben Van Der Puil and Ruth Lynch

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*“It was a massive undertaking, because there were 26 factorial ways of streaming together 26 different things”*

Dr. Scott Rickard,  
School of Electrical, Electronic & Mechanical Engineering

For Dr Scott Rickard, of the School of Electrical, Electronic & Mechanical Engineering, the study of Costas arrays has become something of a passion over the last ten years. Last summer, he began to run the code he had been fine tuning since 1995 to find out how many patterns exist for the number 26.

Rickard began running the program in May and called in Research IT Support to provide extra capacity from its Linux high performance computing clusters. Rickard forwarded his program with a set of parameters. Research IT Support team member Ben van der Puil took the data and sectioned it according to the capacity and capability of each cluster.

The job grew in size as the project progressed, from 500 job runs at the beginning to 10,000 runs in the end. As the requirements increased, Research IT Support allocated more resources until, by the end of the project, 19 machines were being used to complete the computations.

The race is now on to find Costas arrays for the number 27. These patterns can be used to create waveforms that are ideal for sonar and radar systems and for wireless communications. The challenge is to discover what arrangements are optimal for use in these applications.

## New ITCentres

In summer 2005 Computing Services opened an ITCentre in the Newman Building, the purpose of which was to bring IT support directly to all staff and students. This initial pilot gave very positive feedback from customers on the new support model. The provision of ITCentres followed from a detailed analysis of the changing user needs. Extensive wireless access, laptop use, increased eLearning and classroom technology are now typical across all areas of the University. Computing Services has responded with distributed user support and dedicated ITCentres. Two further centres are planned for 2006/07.



Prof. Pat Gibbons, Vice-President for Staff Affairs & Administrative Systems at the launch of the Daedalus ITCentre

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## IT users respond very positively

*“I find the service excellent and never go away without having a good insight into the subject I've been asking about”*

Edward Monaghan,  
Mature student, Information Systems & Sociology

Readjusting to college life wasn't the only challenge facing mature student Edward Monaghan when he recently returned to UCD after seven years in the workplace. He also had to get to grips with a very different IT environment to the one he left behind when he finished first year in 1998.

Monaghan, who is now a second year student in Information Systems and Sociology, had very little general IT experience and had rarely used the Internet. Passing by the ITCentre early in his first term, he decided to find out if the staff could provide any additional help to the classes given by his course tutors.

“When I initially went in with some of my questions I was thinking that maybe the centre wasn't specifically for that, but they had no problem showing me how to do different things,” he says. Since then, he's been using the centre regularly to get advice on everything from how to upload digital files to what would be the best computer to buy.”



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UCD Computing Services is committed to supporting the University's core mission of education, research and service. UCD Computing Services assist staff and students to reach their goals by delivering customer focused, quality IT products, support and services. UCD Computing Services have an ongoing commitment to provide information using a wide variety of mediums – all published information can additionally be found at:  
[www.ucd.ie/itservices](http://www.ucd.ie/itservices)