



THE UNIVERSITY *of York*  
Computing Service

# Keynotes

Volume 30 Number 6 June 2004

*In this Issue:*

The year in Computing Service

Netskills materials license

ColdFusion upgrade

Software support

Printing

**From the Editor**

I always like to finish the academic year on a happy note, so I'm pleased to say that there's plenty of good news in this issue of Keynotes. On page 4, Dave Surtees outlines the extension of support available to undergraduates and taught graduates, while Susanne Hodges gives details of the newly acquired licence to use Netskills training materials.



Respondents to the Computing Service user satisfaction surveys (page 7) will be among those who are pleased to see a reduction in the cost of printing - turn to page 3 for more details.



Finally, there's a chance to remind yourself what else we've been up to this year on page 6.

*Joanne Casey*

**Contents**

**News in Brief**

Enquiry handling review	1
Revised web pages for students	1
Software information pages	1
Summer software changes	1
Academic Oracle	1
Cognos Impromptu Administrator and Powerplay	1
WINS and DNS server changes	2
Message Labs trial	2

**News**

Staff news	2
Internet Explorer upgrade	2
Printing	3
PC classrooms and study centres	3
Electrical safety testing	5
ColdFusion upgrade	5
The year in Computing Service	6
User satisfaction surveys	7
WriteNote trial	7

**Training**

Software support for undergraduates	4
Netskills training materials	4

**Windows 95 countdown....**

The supported Windows 95 service will be withdrawn in around three months, at 5pm on Friday 1 October. See Keynotes March 2004 for more information.

**Keynotes on the web**

**Back copies of Keynotes can be found at:**  
[www.york.ac.uk/services/cserv/offdocs/keynotes/](http://www.york.ac.uk/services/cserv/offdocs/keynotes/)

## Enquiry handling review

*Dave Surtees*

For the past 5 years, the Computing Service has been using its own system for handling requests for assistance from users, the Enquiry Tracking System (ETS). This has proven to be a great success, and ETS is justly praised for providing a simple and effective interface to a complex issue.

The Service now needs to decide whether to continue to develop ETS itself, or look outside for a third party solution. Whilst ETS is a mature and comprehensive service, there are some features which have come to prominence in recent years, specifically in the provision of management information and in the effective generation of a knowledge base, that we would wish to see in a new system.

We have begun an internal review of ETS, but recognise that for many of our users it is their first point of contact with the Service. Therefore we would welcome input from anybody who has used ETS in the past, or who has suggestions for the features they would like to see in its replacement, to contact David Surtees ([dps4@york.ac.uk](mailto:dps4@york.ac.uk)), who is heading the review.

## Revised web pages for students

*Kriss Fearon*

A revised set of web pages for students was developed earlier this year and went live in late February. This followed the recent update of the pages for staff. The aim was to produce effective navigation to student-related resources online and to identify possible gaps in information provision. The contents were based on suggestions and requests made by a student focus group and have been modified by feedback from both staff and students.

The Web Office is due to review the student web pages at the end of the Summer term: if you would like to make a comment or request a resource, please contact Kriss Fearon, the Web Coordinator, at [web-coordinator@york.ac.uk](mailto:web-coordinator@york.ac.uk) or by phone on 4682.

## Academic Oracle

*Jonathan Wheeler*

An Oracle database service will soon become available for academic and research use. Training in the use of Oracle, support and help will commence as soon as the server becomes live. The Oracle database will be much faster, more reliable and able to handle greater volumes of data than the existing Interbase service which will eventually be phased out.

## Cognos Impromptu Administrator and Powerplay

*Geoff Houlton*

The Computing Service is planning to withdraw two pieces of software later this year, Cognos Impromptu Administrator and Powerplay. These tools have been used by a small number of staff to interrogate the Data Warehouse, for example. As part of the YIMS Programme, an alternative piece of software, Business Objects WebIntelligence, is being introduced. If you, or anyone in your department, is still using Impromptu Administrator or Powerplay please contact Geoff Houlton, [gph2@york.ac.uk](mailto:gph2@york.ac.uk).

## Software information pages

*Jonathan Wheeler*

Information about software applications and utilities is currently being centralised into one convenient location on the web.

The new pages include links to relevant frequently asked questions, user guides, and training pages, as well as holding details about licensing and the software available for unsupported connections. They can be found at:

[www.york.ac.uk/services/cserv/cfm/swtab.yrk/newsnapshot/main.cfm](http://www.york.ac.uk/services/cserv/cfm/swtab.yrk/newsnapshot/main.cfm)

## Summer software changes

*Dan Shelton*

During the Summer months we perform our main software upgrades for the supported Windows 2000 network. The upgrade usually starts around July/August, when the exact details of the upgrade will be made available via YorkExtra.

In the meantime, please visit [www.york.ac.uk/services/cserv/sw/upgrade2004.htm](http://www.york.ac.uk/services/cserv/sw/upgrade2004.htm) which gives details of the current status of the software packages we expect to be available for the upgrade and procedures on how to upgrade.

## Staff news

*Mike Jinks*

We're pleased to welcome Amanda Bacon as our Text Processing Advisor. Amanda previously worked at the University of Sheffield in Staff Development where she concentrated on IT. She not only assessed training requirements and developed training courses, but also acted as the local computer systems administrator for the Staff Development Office.

Amanda thus comes with a wide understanding of the IT issues in research Universities, as well as practical



*Amanda Bacon*

experience of the details of getting systems to do what is required. Amanda's presence will enable us to extend the support we provide to taught course students (see page 4), as well as contributing to the support of staff and postgraduates. We hope she will enjoy her new environment.

### Internet Explorer upgrade and disruptions in service

*David Surtees*

From 21 April until 30 April, we suffered a number of serious disruptions to normal service in PC classrooms, and to a lesser extent on staff PCs. Investigations are continuing, but it would appear that the most likely cause of these problems was a planned rollout of Internet Explorer 6 coinciding with the release of a number of Microsoft security updates.

The most common symptom encountered by users was the appearance of a blue background after logging onto the PC, after which the PC no longer functioned. We found that a temporary fix was to log onto the PC using an account with administrator privileges, but a more permanent solution was effected in the most heavily used teaching classrooms by rolling them back to Internet Explorer 5.5.

We are now confident that our services are stable, including machines upgraded to Internet Explorer 6, and those rolled back to Internet Explorer 5.5. We would like to apologise for this break in service, and are keen to hear from any user who has experienced these symptoms since 5 May.

In order to shield us from potentially damaging updates being applied to live systems in the future, we are investing in a facility to extend our testing procedures.

### WINS and DNS Server changes

*Andrew Smith*

On 1 October 2004, the Windows 95 service will officially be switched off. A number of servers providing WINS services will be unavailable from this date. This change will effect all unsupported Windows PCs that have been configured to use these services. The following addresses will no longer be valid:

WINS: 144.32.134.4 and 144.32.8.4

The new addresses are:

WINS: 144.32.190.38 and 144.32.190.53

These addresses will have to be changed in the TCP/IP properties of the network control panel.

### Message Labs trial: an update on spam blocking

The second phase of the Message Labs trial started in early June and sees the service changing to **Block'n'Quarantine** mode. Messages identified as being spam will no longer be delivered to your inbox; instead, they will be quarantined using the MessageLabs **Spam Manager** service. For more details of the trial, please see:

[www.york.ac.uk/services/cserv/docs/mail/](http://www.york.ac.uk/services/cserv/docs/mail/)

## Printing

**Brian Souter**

The current classroom printers located in rooms A/EW/107, D/114, G/022, G/169, SL/LRC/001, K/120, L/050, V/058, W/036 and W/202 are to be replaced this summer with the next generation HP 9000DN printers; 2 additional printers are to be located in rooms R/002 and A/EW/004, bringing the total to 12 printers. The work is scheduled for July with only one printer being out of service at any one time; the changeover for each printer should take about three hours.

The cost of providing A4 black and white printing has been carefully costed over the lifetime of the printers and we are pleased to announce that the cost can be reduced to 6p per page. The new printers will also offer A3 and duplex but a cost has yet to be fixed.

We are conscious of the recent user survey which calls for a reduction in the cost of printing and the provision of more classroom printers. The opportunity to reduce costs and increase the number of classroom printers is in some part due to our policy to move entirely towards the use of self-service printers: the old A4 black and white printer in the computer room will not be replaced this summer and the central A4 printing service withdrawn at the end of September. In addition, the little-used label printing service will also be phased out; users who still rely on this service will be contacted in due course.

The colour printing service is to be transferred over the summer from the ageing A4 Lexmark printer to a high quality HP colour LaserJet 5500HDN printer offering A4, A3 and duplex. The cost for A4 will remain at 30p per page and the cost for A3 and duplex will be announced shortly. The new colour printing service will be run centrally for a trial period during the Autumn Term, after which it will be either withdrawn or moved to Goodricke G/022; demand for colour printing has been very low in previous years which may in part be due to the quality of the output, and in part due to the cost per page. The new printer will offer much higher quality printing but we are unable to reduce the price per page until usage exceeds 200 pages per week; below 100 pages per week the service will have to be withdrawn.

As part of our drive to offer printing and scanning services twenty four hours per day, we have identified space in Goodricke G/022 which we plan to develop as a central media area. As well as the standard HP 9000DN printer offering monochrome A4, A3 and duplex, the HP 5500HDN will offer colour A4, A3 and duplex. Scanning facilities will also be provided in due course using a high volume scanner or a multi-function printer offering printing, photocopying and scanning.

With the demise of central printing, the pigeon holes in the User Area of the Computing Service building will be withdrawn at the end of the Autumn Term.

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## PC classrooms and study centres

**Brian Souter**

The total number of classroom PCs managed by the Computing Service is to increase to 480 this summer when we take over management of the 66-seater PC classroom in Alcuin A/EW/004. The room will be closed for five days from Monday 2 August to allow for PC rebuilds, cleaning and general maintenance.

The total number of PC rooms will rise to 18, comprising 7 bookable PC classrooms, 9 study centres and 2 staff training rooms. As usual over the summer, most rooms will close for a minimum of three days to allow for PC rebuilds, cleaning and general maintenance; a comprehensive schedule has been compiled which will be detailed on YorkExtra closer to the time. Every care has been taken to minimise the disruption with the rebuilds being carried out gradually over seven weeks, although the cleaning programme has had to be concentrated into the first two weeks of August.

In addition to the usual maintenance work, we plan to replace PCs in three locations: G/022, L/050 and R/113; PC replacement is scheduled for September and, again, details will be given in York Extra.

The above work is in addition to the full refurbishment of room D/016 and the provision of 23 high performance PCs to replace the workstation facility in D/104. Details of the D/104 closure throughout August were given in the May edition of Keynotes.

# Software support for taught course students

*David Surtees*

We are pleased to announce that, from the start of the Autumn Term 2004, we will be extending our support of undergraduates and taught graduates to include assistance in the use of 'basic software', in addition to the operational support we currently provide. The details of what is covered by 'basic software' will be defined over the summer, but will certainly cover some components of the Microsoft Office suite of applications including Word. Hitherto, support of the use of this software by taught course students has been a departmental responsibility, though the Service has often dealt with those questions where a quick answer has been possible, referring the student back to the department only for the more complex issues. In future the Service will handle all queries relating to Microsoft Office from undergraduates and taught graduates in the same way as it provides the service for research graduates and staff, thus removing a load from Departments. This change results from one of the recommendations of the Computing Service review of 2001.

We already receive a significant number of queries from staff and research graduates in the more sophisticated use of Microsoft Word, but have had no specialist technical support in the area of text processing since the departure of John Robinson. In order to provide the new service to taught course students and to provide better support to staff and research graduate users, we have recruited a specialist, Amanda Bacon, who will be developing self help materials and assisting the Information Desk in their resolution of the majority of support requests. She will also be available for consultation on the wider and more strategic issues in the area of text processing, as well as on the intricacies of Microsoft Word. We hope that the new service will have a positive impact on both students and staff.

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## Netskills Training Materials

*Susanne Hodges*

Netskills is the primary UK provider of internet related training to the HE and FE communities. Computing Service has purchased a Gold Scheme licence on behalf of the University for the complete range of Netskills' training modules. The Gold Scheme also provides any new materials that are released during the year, as they become available.

Netskills' materials can be used for providing training to both staff and students and for personal development. They can be tailored to develop appropriate training courses, lectures, tutorials and self paced study programmes. They may not, however, be used for commercial purposes.

Each training module contains presentations or instructional materials plus practical hands-on exercises to consolidate learning. The modules fall into six broad categories:

### **Introducing the Internet**

These introductory modules explain the framework of the Internet and the world wide web, clarify the jargon and examine the use of Internet Explorer.

### **Searching and Information Skills**

Use these modules to help find relevant, high quality information on the web. They cover search services, efficient search methods and strategies, quality evaluation techniques and explain metadata.

### **Communication and Collaboration**

These modules cover the use of web based communication tools (e.g. email, chat, audio/visual tools) to facilitate learning, teaching and collaborative working.

### **Learning and Teaching**

A broad category that includes modules exploring the use of the internet as a mechanism for course delivery, support and assessment and the use of WebCT and Blackboard.

### **Developing a Web Site**

These modules cover many aspects of web site development, including design, use of images and multimedia, creating forms and the use of tools including text editors, Dreamweaver and FrontPage.

### **Web Technologies**

These modules include technologies such as Java Applets, Server-Side Includes (SSI), Cascading Style Sheets (CSS), Active Server Pages (ASP), Common Gateway Interface (CGI), databases on the web, Flash, eXtensible Mark-up Language (XML), eXtensible Style Language (XSL) and JavaScript.

To access the materials or for further information go to: [www.york.ac.uk/services/cserv/advice/netskills.html](http://www.york.ac.uk/services/cserv/advice/netskills.html). Here you will need to register your name to receive a user ID and password. Once you have these you are free to download, use and adapt materials as and when required.

## Electrical safety testing

**Robert Demaine**

Under Health and Safety legislation the Computing Service has a statutory obligation to test its equipment for electrical safety.

This summer we are required by law to schedule testing of all equipment within the central computer room in the Computing Service building. This is a massive undertaking covering some 30 cabinets with 60 power rails, over 140 servers and nearly 100 network devices. Equipment must be powered off during testing and it is inevitable that this process will cause significant disruption to central IT services.

To minimise the impact on users, work will be carried out over three weekends in July, during which the normal availability of IT services should be considered at serious risk.

The timetable is as follows:

### **Saturday 3 July 08.00 to 17.00**

Network engineering works to increase resilience during testing periods. Periodic loss of connectivity during the day.

### **Saturday 17 July 08.00 to Monday 19 July 10.00**

Periodic loss of network connectivity including off-site access

Affected:

- Windows 2000 service (office and classroom)
- Central mail servers
- Web servers
- General Unix servers (Tower/Ebor)
- Printing

### **Saturday 24 July 08.00 to Monday 26 July 10.00**

Affected:

- All YIMS systems
- Library catalogue
- HYMS mail servers
- Archaeology servers

## ColdFusion upgrade

**Chris Kilgour**

As mentioned in the last edition of Keynotes (May 2004), the Computing Service will be upgrading the ColdFusion Service over the summer vacation. This is an upgrade from version 5 to MX 6.1. The current version was introduced in 2002 as part of the YorkWeb server upgrade, and updates are no longer being provided by Macromedia.

ColdFusion MX is a re-write of ColdFusion as a Java web-application, and now runs in a J2EE environment. This provides a faster and more reliable service, as well as ensuring that patches and updates can be applied.

### **How will this affect my applications?**

Despite the re-write of the server, there are very few changes for application developers to be aware of.

### **Can I test my applications in advance?**

Yes. The Computing Service will be making the single user ColdFusion MX environment available to supported Windows 2000 users. This can also be downloaded from the Macromedia website ([www.macromedia.co.uk](http://www.macromedia.co.uk)). The single user environment includes a code checker that can analyse the application's code for any changes that are required.

The Computing Service will also be providing a test webserver that maps the YorkWeb filestore and uses a ColdFusion MX service for ColdFusion pages.

### **When will this all happen?**

We are planning to have the single user ColdFusion MX environment available by July, and the test webserver available at the same time. The new service will be in place a month afterwards, to allow for application testing.

A legacy service will be made available for a short period after the new service is live in case of problem applications.

### **Where can I find more information?**

- [www.macromedia.com/devnet/mx/coldfusion/migrating.html](http://www.macromedia.com/devnet/mx/coldfusion/migrating.html) contains various documents about migrating applications from ColdFusion 5 to MX 6.1
- [www.macromedia.com/devnet/mx/coldfusion/articles/\\_misc\\_blurbs/migrating.pdf](http://www.macromedia.com/devnet/mx/coldfusion/articles/_misc_blurbs/migrating.pdf) has useful information about the differences between ColdFusion 5 and MX 6.1
- [www.york.ac.uk/services/cserv/offdocs/cfmx/](http://www.york.ac.uk/services/cserv/offdocs/cfmx/) is the website for the upgrade project, and will contain information about the upgrade

For further information, please contact Chris Kilgour ([crhk1@york.ac.uk](mailto:crhk1@york.ac.uk)).

### **Summary**

#### **By July**

- Single user ColdFusion MX 6.1 development environment to supported Windows 2000 computers
- Test webserver running against YorkWeb filestore and using ColdFusion MX 6.1

#### **August**

- Roll out of upgraded ColdFusion service
- Legacy system made available for a short period

## The year in Computing Service

*Joanne Casey*

The end of another academic year is nigh, bringing with it the opportunity for each of us to wonder where all that time went, and consider what we've been up to for the past twelve months. Turns out that we in Computing Service have, once again, been rather busy.

### Projects

Members of the Service have been involved in a wide variety of projects, all impacting on the University in some capacity. These have all been detailed in earlier Keynotes articles - below is just a selection of the year's activities:

The Service has been closely involved in the Virtual Learning Environment project, which is now moving towards the implementation stage.

The first major phase of the Agresso Business World Software went live on 12 January replacing the MAC Finance and Research Manager applications. This was a mammoth task involving members from all groups within the Computing Service, in particular members of BSG.

PAMS, the Student Accommodation Management System, went live in July last year. Used by the Accommodation Office and College Secretaries, it provides an easy to use interface.

SITS went live in mid-September 2003, replacing the Student Records area of MAC. Student records data is now far more accessible, and new reports have been developed to run along side SITS.

The YIMS Support Centre was introduced to enable best use of the systems, and access to ETS was rolled out to relevant administrative departments.

The People Database is a central data repository holding basic identity information on staff, students, and associates of the University. It takes information from various corporate databases, eg SITS, Resource Link, Associates Database, and provides a single uniform data layer for service providers. After twelve months of development, the main components of the system will go live in July. With tight access control procedures, we intend to make it available to administrative offices and departments.

The Facilities Database will be at the centre of a new Computing Service resource management system controlling facilities such as host login, email and web access. It will take information from the People Database and support various types of user allowing different sets of resources accordingly. It will also speed up a number of processes currently requiring manual intervention. The new system is due to go live towards the end of 2004.

The Oracle Development Project aims to provide Oracle development and production platforms for in-house applications, oversee the migration of in-house applications from Interbase to Oracle, introduce effective development standards and DBA arrangements for in-house applications and review Oracle skill levels, training/documentation/software tool needs.

Members of the Infrastructure Group contributed to the design and implementation of the HYMS IT infrastructure, which is now running smoothly.

### Training

The Computing Service has aimed to respond to a number of requests we've had on training, and have introduced three new courses this year; Graphics using PaintShop Pro, SPSS, and SITS and the DataWarehouse. We've also continued to meet the needs of staff by offering courses at different times of the day, and in vacations - this has been very successful, and is set to continue next term.

This Spring, the Service arranged a license to use Netskills training materials (see page 1). The Iliad Steering Group has considered the changing needs of new students; this year, Iliad for University was offered as separate units, rather than as one continuous course, enabling students to pick and choose the skills they wanted to improve.

### Security

All computer systems are relentlessly targeted by viruses and worms - this year we saw a number of attacks, with three in particular (SoBig, Blaster and Sasser) making headlines. While a number of other Universities and large commercial and government organisations suffered badly, the York network remained stable under these attacks.

### University activities

The Computing Service is actively represented on Information Committee, YIMS Steering Group, ALCOR panel, HYMS MIS Group, OLSIG

### External activities

Members of the Service are also involved in activities of the wider academic community.

Susanne Hodges is a member of the Yorkshire IT Training Group, and has contributed to the Big Blue Project, the SCONUL working group on accredited student IT training, and the recently published book 'Enhancing training in the 21st Century'.

Peter Halls is a member of the Archaeological Data Service Advisory Committee, the Economics and Social Sciences Data Service Advisory Committee, the JISC Geospatial Resources Working Group and the GISRUUK National Steering Committee.

Rob Fletcher is an Honorary Senior Research Fellow in the Institute of Archaeology and Antiquity at the University of Birmingham. This year, when he stepped down as Chairman of EGUK, the Rob Fletcher Prize for the Best Student Practice paper was instigated in his honour.

Kay Mills-Hicks is a UCISA-CISG committee member contributing to the organisation of the seminar and conference programme, and is organising a seminar in September on "running a CIS service".

Joanne Casey is a member of the UCISA-TLIG committee, and was chair of the organising committee for their recent biennial conference.

## User satisfaction surveys

*Joanne Casey*

The User Satisfaction Surveys which took place in March elicited a good rate of returns, and some very useful information, with a happily small number of surprises! In particular, the surveys showed that users are particularly happy with the email service, security and virus protection, and the friendliness and efficiency of Computing Service Staff - all issues that also rated highly as being important to users. A number of user concerns were raised, and the Service has already identified ways to act on these; for example, lowering the cost of printing, and producing new training courses in response to user needs.

The survey also helped to identify priorities for future development - particularly popular suggestions were the implementation of a system to identify classrooms with free PCs, increased provision of media facilities, and provision of online payment, all of which are now under investigation. Other areas will need to be considered at University level - for instance, the introduction of areas with PCs or network points for group work.

A full report on the surveys has been produced, and is to be presented to Information Committee, after which it will be made available in the Official Documentation area of the Computing Service web site:

**[www.york.ac.uk/services/cserv/offdocs/](http://www.york.ac.uk/services/cserv/offdocs/)**

Survey respondents were entered into a cash prize draw, and the lucky winners have now been presented with their prizes.



*Louise Ward of Electronics receives her prize from Mike Jinks*

## WriteNote trial

*Jonathan Wheeler*

The University has subscribed to a trial of WriteNote. This is a web-based bibliographic manager that is designed to help students conduct their research.

The application helps users find online library resources, to collect and organize references and then use these as footnotes or to create a bibliography in essays and papers. WriteNote is similar to EndNote and Reference Manager, but is aimed at the Undergraduate user. It also has the advantage of being easier to use.

A toolbar that enables Internet Explorer and Mozilla to reveal links to library resources, capture citation data and mark up web pages and save for later use will also be trialled.

WriteNote only needs a web browser to work and so is compatible with Macintosh, Linux and Windows machines.

The trial began on 2 June. Log into WriteNote at: **[trials.mywritenote.com/](http://trials.mywritenote.com/)**. If you have any comments, please email **[jdw5@york.ac.uk](mailto:jdw5@york.ac.uk)**.

## Contacting the Computing Service

Computing Service  
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Telephone: (01904)433800  
Direct dial: (01904) 43 followed by ext no.  
Fax: (01904)433740  
Email: *username@york.ac.uk*

[www.york.ac.uk/services/cserv/](http://www.york.ac.uk/services/cserv/)

### Information Desk

The Information Desk is your first point of contact with the Computing Service

Telephone: ext 3838

Email: *infodesk*

Open from 9am to 5.15pm Monday to Thursday, and 9am to 4.15pm Friday (*may be closed for training Wednesdays 2pm-3pm*), for problem solving, advice and information, fault reporting, network connections, file restoration, sales, course bookings and user registration. Printed output can be collected from the lobby entrance during opening hours.

### Computing Service Staff

Director:	Mike Jinks	3801	<i>knj1</i>
Departmental Secretary:	Lorraine Moor	3801	<i>lsm1</i>
Head of Infrastructure:	Robert Demaine	3808	<i>rld1</i>
Head of Information Systems:	Kay Mills-Hicks	2101	<i>knh8</i>
Head of Support Services:	David Surtees	3803	<i>dps4</i>
Operations Manager:	Brian Souter	3814	<i>bs1</i>
Information Officer:	Joanne Casey	3805	<i>jmc8</i>

Kashif Amin	3817	<i>ka14</i>	Jenny Jackson	4455	<i>jj5</i>
Gavin Atkinson	3738	<i>ga9</i>	Chris Kilgour	4454	<i>crhk1</i>
Amanda Bacon	3802	<i>agb12</i>	Fergus McGlynn	3822	<i>fam6</i>
Linda Bailey	3800	<i>lcb6</i>	John Marsden	3832	<i>jpm1</i>
Sue Bolton	2102	<i>sjb28</i>	John Mason	3813	<i>jrm13</i>
David Broom	3229	<i>dlb10</i>	Darren Miller	3815	<i>dm26</i>
Mike Brudenell	3811	<i>pmb1</i>	Darren Munday	3821	<i>dam6</i>
John Byrne	3812	<i>jcb1</i>	Colin Noble	1747	<i>cdn1</i>
David Chambers	3742	<i>dac6</i>	Nicola Normandale	4695	<i>ncn1</i>
Michael Clark	3745	<i>mpc3</i>	Phil O'Connell	3825	<i>paoc1</i>
Arthur Clune	3129	<i>ajc22</i>	Suran Perera	4689	<i>sjp25</i>
Steve Downes	3741	<i>sd21</i>	Aimee Phillips	3897	<i>amp11</i>
Ken Finch	4452	<i>kf1</i>	Chris Reece	3807	<i>car7</i>
Rob Fletcher	3816	<i>rpfl</i>	Sam Scott	3817	<i>svs2</i>
Kevin Gardner	3739	<i>pkg4</i>	Daniel Shelton	4349	<i>ds23</i>
Chris Gowland	3823	<i>cg1</i>	Philip Smailes	3833	<i>pjrs1</i>
Dan Granville	3839	<i>dsg2</i>	Andrew Smith	3809	<i>abs4</i>
Sarah Hall	3827	<i>seh11</i>	Ben Thompson	3230	<i>bt4</i>
Peter Halls	3806	<i>pjh1</i>	Pete Turnbull	3804	<i>ptn1</i>
John Hawes	4347	<i>jeh11</i>	Sam Vines	3749	<i>sccv1</i>
Susanne Hodges	3839	<i>sh32</i>	Jonathan Wheeler	3818	<i>jdw5</i>
Matt Holmes	3820	<i>mjh25</i>	Timothy Willson	2123	<i>ftmw1</i>
Geoff Houlton	2100	<i>gph2</i>			

## Keynotes