Keynotes

Gearing up for YIMS

From the Editor

Development of the YIMS systems continues apace so, to assist Departments in planning future software and hardware provision, Kay Mills-Hicks has detailed the requirements on page 3.

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On page 4, Andrew Smith writes about the implementation of Microsoft's Systems Management Server which will improve the control over application deployment and general management of user PCs on the Windows 2000 service.

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Finally, on behalf of the Computing Service, I'd like to wish you all a Happy New Year.

Joanne Casey

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Back copies of Keynotes can be found at: www.york.ac.uk/services/cserv/offdocs/keynotes/

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Learning Resource Centre in Wentworth W/202
Brian Souter

The new Learning Resource Centre in Wentworth W/202 opened on Wednesday 20 November and is available 24/7 for all graduate students. Residents of the college will be able to gain access using their Tesa card, other graduates will need to sign out a card from Wentworth Reception.

The room is currently equipped with 20 PCs running Windows 95, a classroom printer and 2 sockets connected to the Network Access Service (NAS). The room has the potential to provide 33 seats and will be upgraded as soon as funding is available. It is hoped that Windows 2000 PCs and additional NAS sockets will be available from July 2003.

Staff news
Mike Jinks

We welcome John Hutchinson as our new Software Technician. John has had extensive experience in computing, having worked in the technical management and support areas of both the computing and telecommunications sectors. Here he will be working on the distribution and maintenance of the standard desktop, taking over these responsibilities from Phil Smailes. We hope he will enjoy working in his new environment.

John Hutchinson

Ken Finch, known to many through his work on the PC maintenance contracts and in maintaining the PC classrooms, has suffered a heart attack and is now at home after a stay in hospital. Ken is recovering well but it will be some time before he is back at work. We send him every good wish for a speedy recovery.

Peter Roberts retires from the University at the end of the calendar year. Peter was responsible for setting up the Computing Service in its early days and acted as Computer Manager for many years. More recently, he was Deputy Director of the Service, a post from which he retired two years ago, continuing part time with responsibility for Business Continuity issues. Peter has made a major contribution to the Service over many years and we wish him every happiness in his retirement.

Reduced database support
John Illingworth

As we noted in the previous issue of *Keynotes*, Lisa Burkinshaw, our database advisor has left us. This means that until further notice there will be reduced user support and software support for Access, Interbase, Paradox, and general database issues, and for Reference Manager. However, the solutions to most common problems can be found at **www.york.ac.uk/services/cserv/help/db/** (databases) and **www.york.ac.uk/services/cserv/help/bibsoft/Refman/** (Reference Manager). This does not mean there will be no database advice, as many of our staff are experienced in one or other aspects of database creation and management, but it does mean that the turnaround might be slower, and we might be deficient in certain specialist areas.

The post has been advertised, and by the time you read this the closing date will have passed and we hope to be shortlisting from a good field of potential replacements.

Network Access Service
Matt Holmes

The Network Access Service (NAS) is a new trial service launched by the Computing Service at the end of November. It allows student laptop owners to use their computers with designated network sockets to access the university email, Usenet news and web cache servers.

The NAS is a free service, currently available to graduates in the Wentworth 202 computer room. Since its launch there have been 20 people sign up for the service and it has seen more "logins per socket" than the Win95 computers in that room. There are plans to expand the service to include areas in the Library, which will take place after Christmas.

More information can be found at: **www.nas.york.ac.uk/**.

Searching the UK Mirror Service
Joanne Casey

The UK Mirror Service (home of free software - **www.mirror.ac.uk**) has recently announced a new Search Facility, available in beta form for public piloting at the time of writing.

You can try out the facility at **search.mirror.ac.uk**, and perhaps fill in the Search Pilot Feedback form at **www.mirror.ac.uk/feedback/search.html** for the chance to win £50.

Seminar Room

The Computing Service Seminar Room has been converted into office space to cope with an increase in staff, and will no longer be available for booking.

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Associates Database
Brian Souter

As the next stage in developing the Associates Database, the Computing Service and Library are streamlining the procedure for recording details of associate people. It is vital that we receive timely and accurate data if we are to offer an efficient service to new people and minimise the workload for our desk staff, and we are very grateful for the efforts of the departmental staff authorised to enter people into the Associates Database. We have now given these departmental staff the grand title of Associates Database Officers, analogous to Departmental Computing Officers (ADOS), and listed them on the web with a corresponding ADOS mailing list. To access the current list of ADOS see **www.york.ac.uk/services/cserv/cfm/ado_contact.cfm**.

As a reminder, the Associates Database exists to hold details of individuals who are associated with their department in a capacity that requires them to have access to the Computing Service or Library, and who do not automatically receive this access by appearing in the Personnel System or in the Student Records System. Anyone falling into this category, or arranging for an associate to join their department, should check the list and contact their Associates Database Officer.

Classroom checks
Brian Souter

From Thursday 2 January 2003 the Computing Service commenced new procedures for managing the PC classrooms and printers, and ceased carrying out daily checks. A reorganisation of the Operations Group has released two members of staff to the Technical Services Group who will monitor equipment online, respond to fault reports and carry out periodic audits. The Windows 2000 service does not require the same level of daily inspections as Windows 95 and this will allow other members of the Operations Group to staff the Information Desk at the beginning of each day. The classroom printers will continue to be serviced as before until they too are upgraded for even more reliable equipment, hopefully in the Summer of 2003.

The important thing to note, is that users of the classrooms must report faults on PCs and printers as they can no longer rely on daily checks to pick up any problems. Telephone the Information Desk on 3838 or e-mail **infodesk@york.ac.uk**. Similarly, users should take careful note of the House Rules posted in each room. These rules are there to provide a quiet, clean environment in which to study, and we are having ongoing discussions with college authorities on how we might enforce them and monitor their effect.

Maintenance contracts on the web
Doug Moncur

If your PC or printer goes wrong, usually the first thing you want to check is if it's covered by a maintenance contract. You can find out if your equipment has a maintenance contract administered by the Computing Service by going to **www.york.ac.uk/services/cserv/purchase/purchase.yrk/maintenance** and clicking on the **Check what is on Contract** box. This will bring up a list of departments. Clicking on the name of your department will bring up a list of the devices in your department covered by a maintenance contract.

If the listing is a long one you can use **CTRL+F** to search the page to find the name of your machine.

If your machine is not on contract please check with your departmental administrator – it may be an error or it may be too expensive to maintain.

If your department name is not listed this is because your department makes its own arrangements - again check with your departmental administrator if in doubt.

Almost anything can be put on contract. You have the choice of two suppliers, ICM and Xenon. To check on their prices for the more common items click on the maintenance company name in the left side menu on the web page.

YIMS systems desktop software and hardware requirements
Kay Mills-Hicks

This guide to desktop software and hardware requirements for the YIMS systems is intended to assist you in your departmental planning. The software (and therefore hardware) that you need depends on the sort of information that you want to get hold of. Some examples of activities and the software solution envisaged are:

Finance

· View scheduled and on-demand financial statements on research projects · Run a standard report to list transactions or provide financial summaries for a department, cost centre etc · Enter or approve requisitions	Use Agresso Web Services
· Make detailed account and budget enquiries · Raise a purchase order · Run Science department stores (including bar-code readers)	Use Agresso Back Office

Student Records

· Look-up student details · E-mail a group of students	Use the web Student Enquiry Screen
· Input module selections · Input Supervisor details · Extract data to create lists and reports	Use the SITS system

Software and hardware requirements

For web access to SITS or Agresso	Internet Explorer 5.5 or higher Windows 95 or higher (NT, 2000, ME, XP) Any PC specification
For SITS system or Agresso Back Office access	Windows 2000 (Computing Service supported connection) MINIMUM Pentium III 400Mhz, 128Mb RAM, 8Gb disk
For SITS or Agresso printing via your PC	Standard Windows printer (capabilities dependent on your printer driver software)

Software availability

	Training system	Live system
Finance (Agresso)	March 2003	June 2003
Student Records (SITS)	July 2003	September 2003

The future of the data warehouse

As I reported in a previous edition of Keynotes, the future of the data warehouse is now being planned. To assist with this, the YIMS Finance and Student Record project teams are considering detailed information and reporting needs, through consultation with departments. There are several options available to supply information to departments using the standard tools that come with both Agresso and SITS (such as export to Excel) and these tools will access the Live database. A more specific, and potentially difficult, area to consider is if you have a locally developed system that takes extracts of data from the data warehouse. In these circumstances we really need to discuss the details with you individually to consider the options available and any data migration issues. Please contact me to discuss this area in more detail.

Computing Service Windows 2000 Supported Connections

I am aware that there are a number of departments who do not implement the Computing Service Windows 2000 supported service. For these departments I am in the process of discussing arrangements for the deployment of YIMS software with DCOs.

If you require any further information please get in touch (**kmh8@york.ac.uk**).

Systems Management Server
Andrew Smith

We currently deploy application packages to supported Windows 2000 users via a method Microsoft call **Group Policies**. This is a rather primitive deployment tool which allows little control over who receives the packages and when they are deployed. One of its major failings is that we are unable to check the status of a package to see whether it has been deployed correctly.

To overcome this and other shortcomings we have implemented Microsoft's **Systems Management Server** (SMS). This will give us more control over application deployment and general management of users PCs. Future issues of Keynotes will provide more details of these facilities and how we plan to use them. Here I will explain how we will be deploying Service Pack 3 to supported Windows 2000 desktops. Service Packs are periodically issued by Microsoft and consist of a number of systems, security and application upgrades to the operating system. It is recommended that users apply these service packs for the wellbeing of their PC.

From early January, users will notice a message when they login to their PC. This is the SMS client informing them, via the **Advertised Program Monitor**, that a new program has been advertised on their PC. We will be deploying all applications this way in the future so this is an important tool for the user. This program is also available from the control panel. The initial **Welcome** screen is shown below.
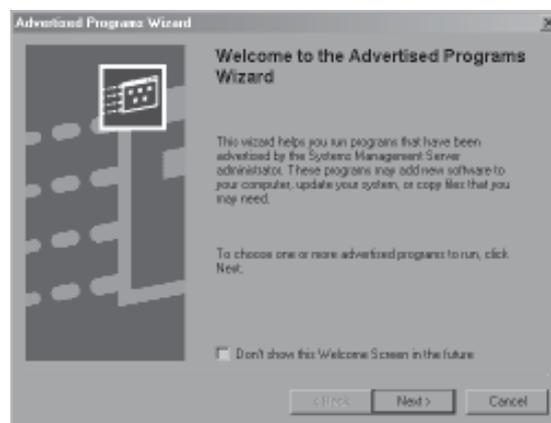
The user has the option to cancel this message, but we advise them to take the time and continue for now. If the user continuously ignores these messages then the service pack will eventually install without the user having the option to dismiss it. We think it is important that the service pack is installed on all PCs and we have taken the decision to make the installation mandatory. You will have about a month (until 31 January 2003) to install the service pack before it is installed automatically on your PC.

Clicking **Next** at the initial screen produces a screen with a list of advertised programs that are available (below).

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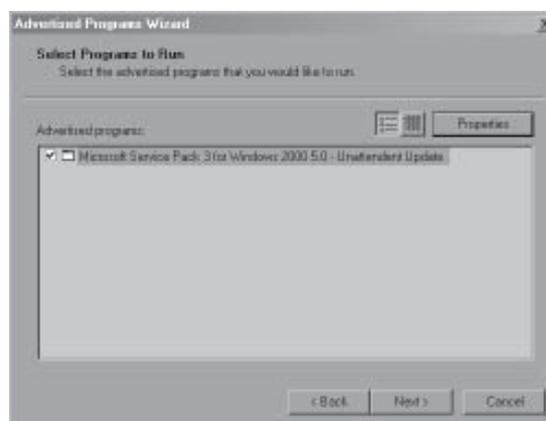
The next step is to select the **Service Pack** option and click **Next**. The screen now displayed (below) is a very useful one; you have the option to install now or at a later date. If you are busy and wish to continue with your work, your can schedule the installation at a time that is more convenient for you (when you are not at work!).
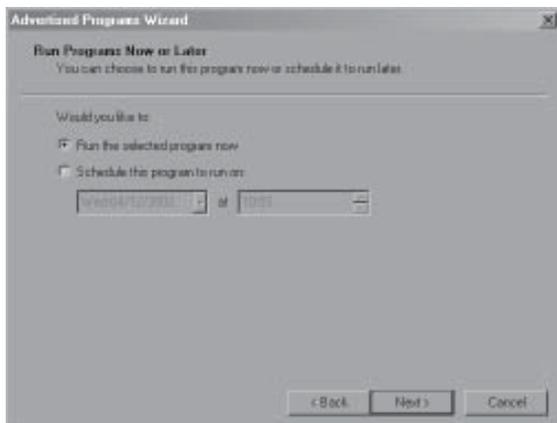
All you have to do is select a convenient date and time. For example you could schedule the package to install at 2:15am the next day and leave your PC switched on (and logged out) when you go home. The next morning the package will have installed and the PC will be waiting for you to login. In this example we are going to install the package now.

The next screen (below left) is just a confirmation of your actions, press **Finish** to continue. The package will now install and an indicator (below right) is displayed of the progress.
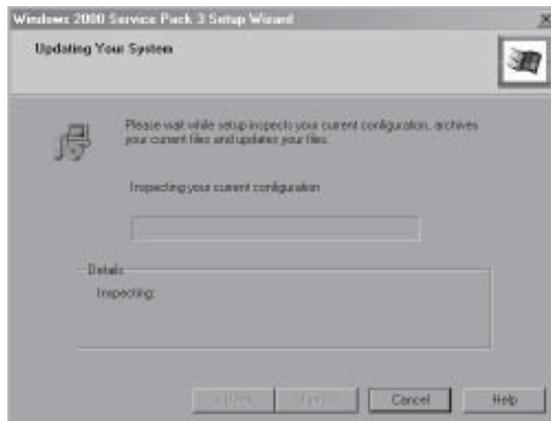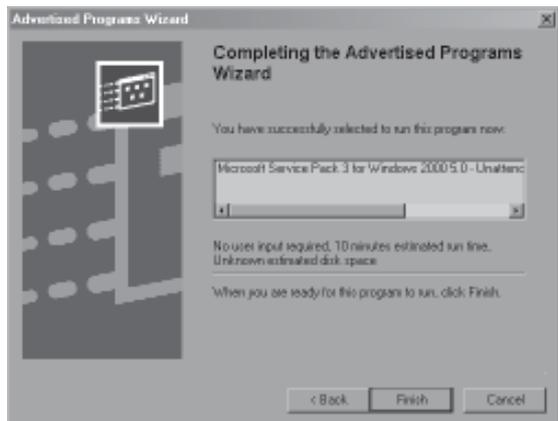
If a user continuously ignores the offer to install the Service Pack, then after 31 January SMS will automatically perform the installation. If the user is logged in, the warning dialog box shown below will be displayed.
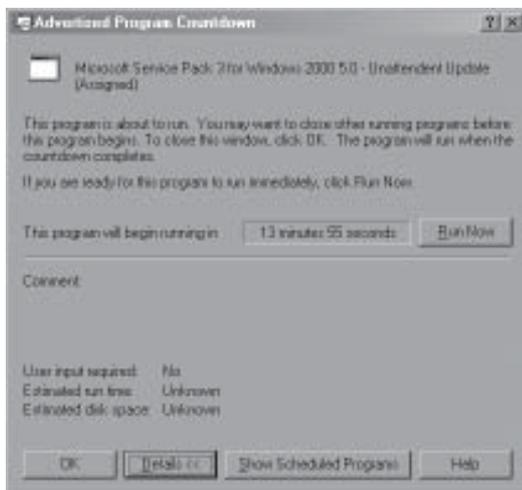
New mail servers
Mike Brudenell

As you may already be aware the Computing Service has purchased a pair of new machines to run the central mail service, replacing the overloaded single machine we currently use. We had hoped to get the new machines installed and operating before the start of the Autumn Term. Unfortunately pressure of other project work meant this became impractical. The limited time available over the Christmas break means installation over that period was not an option. Installation during term-time is technically possible but, we feel, unwise given the substantial downtime it would cause during this important time.

Consequently we are scheduling the new servers to be brought into operation over the Easter Vacation. To do this we will need to shut the mail service down entirely for, we anticipate, up to two working days. There will be more information about this in the next edition of Keynotes. We thank you all for your understanding and patience as we continue to run the mail service on the existing computer for the time being.

The Online Feedback System
Fergus McGlynn

In most departments at the university, student feedback is conducted via paper feedback forms. In many cases, this requires significant human input. Some departments have reported spending up to 500 hours per year on student feedback. This feedback process, however, can be automated, resulting in a significant reduction in administration time. The university piloted an online feedback system in 2000. This system was deemed successful, and in 2001 work commenced on a more general system for student feedback to be conducted via the web.

The Online Student Feedback Project is currently at the stage where the implementation of the system has been completed. Initial trials have successfully been conducted within the Department of Psychology and the Computing Service. The next stage is a full system trial, which is currently being conducted by the Departments of Biology, Mathematics and Politics. This trial will run until January 2003. From these trials, it can be determined whether the system needs refinement or whether it's ready to be released to departments.

The main benefits of the online feedback system include a reduction in administration time for student feedback, storage-space saving (as feedback forms and results will be held online) and flexibility in scheduling the feedback process. The system can also be used for more than just student feedback, for example it could also be used to conduct online quizzes.

There have been a number of hot issues which have needed attention over the course of the project. A survey of Board of Studies student representatives revealed that 39 out of 41 believed there would be no feasibility problems. The issue of whether or not students would feel their comments were anonymous online has been raised. The developers give their assurance that any information about a student cannot be linked to the responses they give, unless they explicitly name themselves. However, the most discussed issue has been about response rates. Many departments expect that they would receive a lower response rate online than they do on paper because students will most likely be giving feedback in their own time. There is, however, a quality verses quantity argument here. Some lecturers using the pilot system felt the quality of unforced responses outweighed the loss of quantity.

Online feedback tends to imply a significant time and money saving but a drop in response rate. Departments need to weigh up the pros and cons in deciding whether or not to use it.

Web authors: deadline for default name change
Kriss Fearon, Web Co-ordinator

Web authors were recently notified of a change to the list of standard default names. These are the files that will appear when a directory alone (rather than a specific page) is given as a url, and are often referred to as 'welcome pages'. Any account owner directly affected by this change (for instance account owners who have directories containing more than one of the default names, causing a possible clash) was notified individually and given a listing of their directories that need to change. The deadline for this work to be completed has been set as Tuesday 4 February.

Further information on this is available on the web at:
www.york.ac.uk/services/cserv/help/web/ProvidingInfo/DefaultPages.html
Any members of staff who need help with this are welcome to contact the Web Office (**web-office@york.ac.uk**) for information or assistance.

Keynotes

GIS and Remote Sensing: the role of the GIS Advisor
Peter Halls

Firstly, what *is* this GIS thing?

The initials stand for Geographical Information Systems or, according to some, Geographical Information Science. It has been around for nearly forty years, though only recently has it achieved common usage and made it into the Penguin Dictionary of Abbreviations, amongst others. The term was originated by a geographer in Canada, with parallel work undertaken by cartographers and geologists.

Geographical? That's something to do with geography then?

Not really. I've often argued that the word *geographical* ought to be replaced with *spatial* (relating to the arrangement, distance, direction, etc., of phenomena in any space). But it is clearly closely linked to geography's concern with the description of the arrangement and development of phenomena on Earth. An important thing about GIS, though, is that it goes far beyond conventional geography. As a branch of Information Systems, or Information Science, it is concerned with methodologies for the representation and description of phenomena that are spatially arranged – information; mechanisms for the storage and retrieval of that information in terms of the spatial arrangement; techniques for performing spatial analysis and modelling and for the display of the results. In addition, although GIS has been around in some form for a long time in computing terms, it is still an active research field, with new approaches and techniques being published all the time.

But why at York? We don't have a Geography department here!

Maybe that is a prime reason! Many of the disciplines at York are concerned with the *spatial arrangement* of phenomena as a part of their specific understanding. For example, Archaeology and History are concerned with the way past peoples have developed, interacted, related to each other and used their physical environment, etc. Economics, Politics and Social Policy are interested in present day people. Environment is concerned with the sustainability of human and natural environments. Biology and Environment are interested in the various branches of Ecology – the study of the interactions of living organisms in / on their environment. I could go on; I know I have left people and subject areas out! Having said that, of course it is not necessarily appropriate that a given worker need apply a specific methodology in their work: there are usually many potential ways of exploring a problem.

Isn't it just about maps?

No, not really. A map is often used to convey information about the spatial arrangement of some subject but it is really quite limited, as any representation of three (or four) dimensional space onto paper must be. Some of the information used in a GIS may have originated from a map and GIS are often used to produce maps. Indeed, many people have used GIS output without realising it! As a computational tool, GIS is not restricted to performing functions that could be undertaken manually with maps – although it can of course do these tasks much more quickly and efficiently.

What is this Remote Sensing thing?

Most often, by Remote Sensing, people mean satellite imagery but the subject is much broader than that, including any non-destructive automated mechanism for gathering information. Avid *Time Team* watchers will be familiar with the concept of Archaeologists *doing Geophysics* – that is a form of remote sensing, as can be photography. Ultimately, Remote Sensing includes processing information, usually image based, that records a subject at a particular moment in time and using that information as part of a wider study. In practise, Remote Sensing of one sort or another is one of the most common methods for gathering spatial information to be used in a GIS. Allied to Remote Sensing is the use of GPS – Global Positioning Systems or satellite navigation systems – to automatically record position during field survey.

What can one do with this GIS then?

As I hinted above, many people have actually used GIS without realising it. Tools like *Autoroute Express*, for example, are GIS applications, searching out and returning details of travel from A to B. Airlines use GIS for planning flight paths and as part of the process of calculating how much fuel must be loaded. GIS are used in many risk analysis studies, for example flood liability and in planning flood protection schemes. Retail organisations use GIS and PostCodes for marketing and for facility location planning. GIS are also used for examination of demographic information, epidemiology studies, Environmental Impact Analysis (EIA) studies, by planners, for road traffic and accident analysis, in crime pattern analysis, and so on. Some of this activity may be undertaken under a specific terminology, but all are applying spatial science in their analysis.

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What does the GIS Advisor do?

My role is to *facilitate the exploitation of spatial techniques in research and teaching across the University*. My background is in Geology and in developing computational techniques to enable the exploration of geological problems using a computer. I'm not a Computer Scientist, although I work very closely with several, but have long experience of applying computational techniques to solving spatial problems. I have an in-depth knowledge of the supported GIS and Remote Sensing packages (and several that are not on the 'supported' list), and extensive experience of the underlying techniques employed by the software packages. From this I am able to advise on appropriate techniques for a specific problem, including any limitations that such a methodology might have in respect of that problem. I am also able to advise on ways of overcoming shortcomings in the packages, including the development of software to extend the existing functionality to enable the research thread to continue, rather than be restricted by the lack of that required technique. I teach the Computing Service *Introduction to GIS* course and have helped several departments set up formal courses for their students. I have also been closely involved in a number of research projects that sought to exploit GIS within the specific discipline. My work is principally with Staff and Research postgraduates and I am always available to explore the potential for GIS or Remote Sensing in a project with the researcher(s) involved … preferably as early as possible – I have been approached towards the end of the writing up phase, when it is simply too late! Provided that the contact is via a student's supervisor, I'm also able to discuss GIS and Remote Sensing issues with taught graduates and with undergraduates in connection with research projects.

Careering on the Web
William Mackintosh, Web Manager, and Claire Rees, Director of Careers Service

Following a successful bid to HEFCE, the University is to purchase a web-based career management package. Originally developed at the University of Reading for use by undergraduates, the software has been sold to over 30 HEIs in the United Kingdom and Ireland.

Career Management Skills aims to help students find jobs in a highly competitive graduate employment market. The online software has three main sections:

·   *Finding your profile* allows students to assess their interests, strengths and abilities;
·   *Finding the fit* uses the information established from *Finding your profile* to suggest relevant career opportunities;
·   *Effective applications* provides coaching in preparing a CV, completing application forms and interview technique.

Fergus McGlynn, Computing Service will install the software in January 2003. Jim Chapman, IT and Statistics Coordinator in conjunction with his colleagues at the Careers Service will then undertake extensive customisation to ensure that the package accurately reflects York's courses and facilities before it is made available to students at the start of the next academic year.
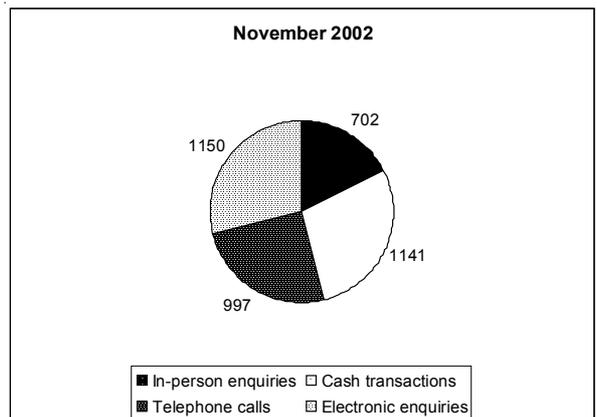
Further information about the Career Management Skills software which is written in Perl can be found on the website of the University of Reading:
www.rdg.ac.uk/Careers/cmsdemo/sample.htm.

Information Desk usage
Brian Souter

The Autumn term was busy at the Information Desk. At the time of writing, we have the statistics for October and November, which show a rise in enquiries from last year.

In October, staff dealt with 5491 transactions, a daily average of 239, while November saw a total of 3990 transactions, an average of 190 a day.

October 2002

1572 · 1613
1376 · 930

November 2002

1150 · 702
997 · 1141

■ In-person enquiries   □ Cash transactions
▨ Telephone calls   ▥ Electronic enquiries
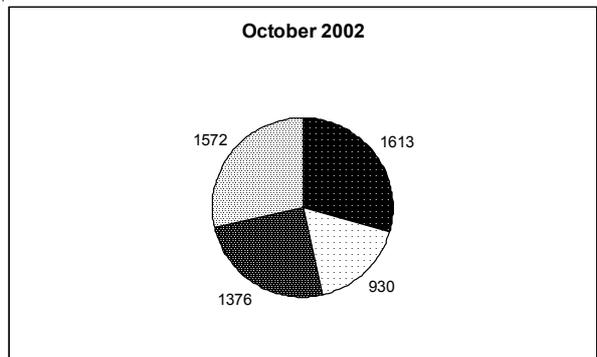
Hints and Tips on using the Library Catalogue
Sue Cumberpatch, Electronic Resources Librarian

Requests

1   Requesting books which are not on the shelves

You may request items listed as being On Loan, Being Catalogued, Being Labelled, or On Order. If there is a copy which is listed as being Not on Loan and not in any of these categories, then you cannot make a request.

·   From the **Holdings** screen click **request** to the left of the relevant item.
    NB: The copy which has been out longest will be recalled, but the first copy returned will be made available for you, so it doesn't matter which copy you select. You can see whether anyone else is waiting for the book by looking at the "No. of requests"column
·   If you are not logged in, you will be prompted to do so. You will then be asked to confirm the "period of interest" which means when it will no longer be of any use to you.

You will be notified (usually by email) when the item is available for you to borrow. Please collect it from Lending Services on the ground floor.

2   Requesting items from Key Texts

You may book Key Texts (four or two hour loans) for specific periods.
·   Find the Key Text you want on the Catalogue
·   In the **Holdings** screen click **request** next to the Key Text copy.
·   Login if required.
·   Click **request** next to the period for which you would like to book the item.

NB: If you do not pick up the booked Key Text within the first hour of the booked session, then your request is cancelled.

3   Cancelling requests

You may cancel a request before the book arrives for you.
·   Click **My Library Record**.
·   Login if required.
·   Click **Hold Requests** or **Key Texts Bookings**.
·   Click the underlined number to the left of the relevant item.
·   Click **Delete**.

Remember to logout whenever you have logged in!

What do those status messages mean?

There is a full list of the various status and location messages, with explanations, on LibWeb at:
www.york.ac.uk/services/library/guides/pdf/status.pdf. Some of the most common ones are:

Status	Meaning	Action
To be collected	Awaiting collection from Lending Services after being recalled. (If it is you who have recalled it, you will have been sent a message to collect it).	You may request this item, but the person who is to collect the item will have it for at least a week before you will get it. You may also have to join a queue of people waiting for the book.
Reshelving	The item has been recently returned to the Library after being out on loan.	May be back in place on the shelves. If not, check books awaiting reshelving near the lift shaft on the ground floor.
On order	The item has been ordered for the Library but has not yet arrived.	You may request this item, but please remember that it might take some time for the items on order to arrive.
Being catalogued	The item has arrived but has not yet been incorporated into the Library's stock.	If you wish to borrow you must request the item via the Catalogue, and it will be available within a few working days.
Not on loan	The item is currently in the library.	Check on shelf. If not found, make sure you are looking in the right place. Ask at the Enquiry Desk for help. May be in use so try again later. If still not found, fill out Recall card.

Contacting the Computing Service

Computing Service	Telephone: (01904) 433800
University of York	Direct dial: (01904) 43 followed by ext no.
Heslington	Fax: (01904) 433740
YORK YO10 5DD	Email: *username*@york.ac.uk

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 which is open from 8am to midnight.

Computing Service Staff

Director:	Mike Jinks	3801	*kmj1*
Departmental Secretary:	Lorraine Moor	3801	*lsm1*
Head of Infrastructure:	Robert Demaine	3808	*rld1*
Head of User Services:	John Illingworth	3803	*jji1*
Head of MIS:	Kay Mills-Hicks	2101	*kmh8*
Head of Technical Services:	Doug Moncur	3815	*dgm1*
Head of Systems:	Andrew Smith	3809	*abs4*
Operations Manager:	Brian Souter	3814	*bs1*
Head of Networking:	John Mason	3813	*jrm13*
Information Officer:	Joanne Casey	3805	*jmc8*

Paul Atherton	3229	*paa4*		John Hutchinson	3898	*jh57*
Gavin Atkinson	3738	*ga9*		Jenny Jackson	4455	*jj5*
Linda Bailey	3800	*lcb6*		Chris Kilgour	4454	*crhk1*
Sue Bolton	2102	*sjb28*		Fergus McGlynn	3822	*fam6*
Mike Brudenell	3811	*pmb1*		John Marsden	3832	*jpm1*
John Byrne	3812	*jcb1*		Darren Munday	3821	*dam6*
David Chambers	3742	*dac6*		Nicola Normandale	4695	*ncn1*
Michael Clark	3745	*mpc3*		Phil O'Connell	3825	*paoc1*
Arthur Clune	3129	*ajc22*		Suran Perera	4689	*sjp25*
Steve Downes	3741	*sd21*		Aimee Phillips	3897	*amp11*
Ken Finch	4452	*kf1*		Colin Rea	3817	*cr9*
Rob Fletcher	3816	*rpf1*		Chris Reece	3807	*car7*
Kevin Gardner	3739	*pkg4*		Sam Scott	3817	*svs2*
Chris Gowland	3823	*cg1*		Daniel Shelton	4349	*ds23*
Dan Granville	3839	*dsg2*		Philip Smailes	3833	*pjrs1*
Sarah Hall	3827	*seh11*		Deb Taylor	4346	*dt8*
Peter Halls	3806	*pjh1*		Simon Thompson	3894	*sjt8*
John Hawes	4347	*jeh11*		Pete Turnbull	3804	*pnt1*
Sue Hodges	3839	*sh32*		Sam Vines	3749	*sccv1*
Matt Holmes	3820	*mjh25*		Timothy Willson	2123	*ftmw1*
Geoff Houlton	2100	*gph2*				

Keynotes