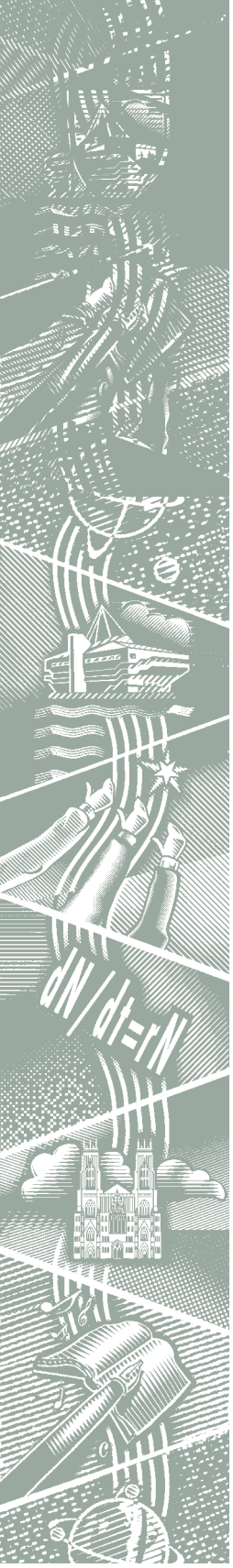
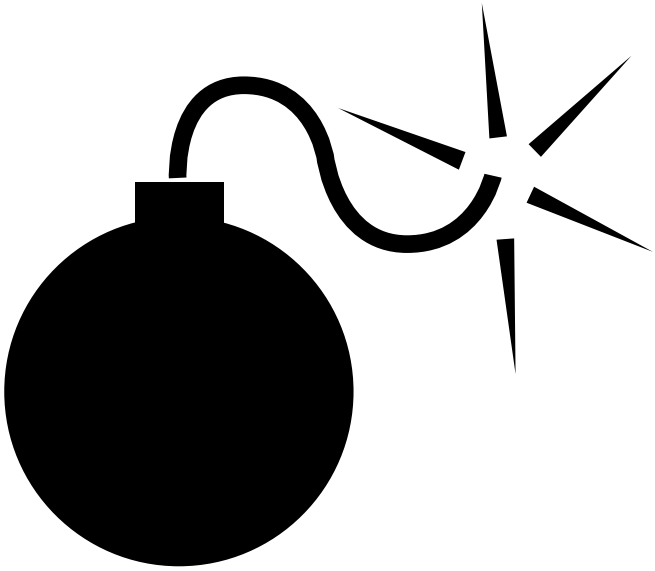


THE UNIVERSITY of York
Computing Service

keynotes

Volume 25 Number 1 Nov 1998

Millennium Countdown



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So you want to “do Graphics”?

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From the Editor

Welcome to the term's first issue of Keynotes. It's also my first issue, having recently taken up the post of Information Officer.

❖❖❖

We've introduced a new feature; the Millennium Countdown. Just in case you hadn't realised how close it's getting, this will be in every issue from now on.

❖❖❖

This issue also contains information on a number of developments within the Computing Service. Chris Joy writes all about the new UNIX service on page 2, while Doug Moncur and Brian Souter detail changes, upgrades and new installations in classrooms, on page 3. This is just a small selection; there's also news from ILIAD, MIS, software advice... all in all, a very full issue of Keynotes.

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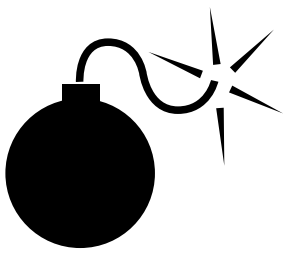
Finally, I would like to thank Lorraine Moor, who has edited this issue of Keynotes while I found my feet.

Joanne Casey

millennium countdown

61 weeks to go!



Are you prepared? See *http://www.york.ac.uk/services/cserv/offdocs/y2k.htm* for further information.

Charging for Non-Core Services

Mike Jinks

As mentioned in the 'summer special' issue of Keynotes, the 'Review of the Review of the Computing Service' recommended some changes to the extent and level of charges to be levied for the non-core services. The system for charging departments for central printing has been implemented and is largely automated, with departments having operational flexibility in deciding which individuals' work will be charged to specific account codes. We will extend this system to other recurrent charges, eg network connections and software costs, in due course when staff effort is available, but at present, and for the short to medium term, our systems will remain manual.

The introduction of charging for non-core services has resulted in much discussion, and even argument, between individuals and Service staff about the principles involved, ie why an individual should now pay for what they previously received 'free'. Whilst there will be grey areas, the principles of the approach adopted by the University are clear and have been published both in the original review document and the subsequent 'Review of the Review' report; an electronic version of the latter is available on the Computing Service Web pages. Service staff are happy to clarify specific issues, but every care needs to be taken to ensure that continuing relationships are not jeopardised by personalising the actions of individual members of the Service in carrying out agreed University policy.

Service Guide

Mike Jinks

Departments will shortly receive copies of the 'Service Guide' to the Computing Service for distribution to staff. This guide is the synthesis of two documents: the commentary to the recommendations of the 'Review of the Review of the Computing Service' and a general service guide agreed by Computing and Information Committees last year but not published as the 'Review of the Review' was then in train.

The Service Guide will define in general terms the core and non-core services provided by the Service and the background procedures etc which will govern their delivery. All aspects of the Service Guide cannot be implemented at once as a large number of systems need to be developed, but the Service Guide will enable individuals to be aware of University policy in this area, define longer-term objectives, and provide information about the level of core and standard non-core services until full service definitions are produced. In future years, the definitive version of the Service Guide will be on the Web, but we have produced the document in paper form to provide easy access to the information in the year of transition to the new way of operating.

University's Information Strategy

Mike Jinks

Many of you will be aware that the University is developing an Information Strategy as part of its overall strategy formulation process. This strategy encompasses all types of information, eg printed, electronic, and knowledge in people's heads; it is much more than Information Technology, though this will inevitably have a major role to play. The strategy is being formulated in the context of the University's review of corporate governance and evaluates the information needs, present and future, of the University's main processes, both the information employed or produced, eg lecture notes, books, periodicals, web pages, and research papers, and the information necessary to manage these processes.

This has proved to be a major undertaking as the ramifications of focusing on information have been complex and far-reaching. It has led to the development of the Research, and Teaching and Learning Strategies, and to clarification of the objectives of other areas of the University. The strategy document itself is being drafted and the first draft for consultation and comment should be available later this term. This document will define the objectives and direction for 'information' for several years and will hence impact almost everyone in the University. We look forward to comments and discussion, particularly on the computing-related aspects.

Staff News

Mike Jinks

Three members of staff have recently joined us.

Darren Munday joined us in June as a Technician, replacing Paul Bowen. Darren had been working at Lynx Automotive Systems at Clifton Moor where he was involved with LAN installation and commissioning. He had previously worked for Mitrefinch in York on PC LAN software installation and training.

Michael Woodhead joined us in August as a Technician, replacing Susan Ashton. Michael had been working at Airedale and Wharfedale College in IT support, preceded by a varied career in industry.

Joanne Casey joined us at the beginning of October as Information Officer. Joanne studied English before taking a postgraduate diploma in Information and Library Management. She joins us from Newcastle College where she has held the posts of Curriculum Information Officer and, subsequently, Audio-Visual Librarian. In the latter post, Joanne was involved in supporting staff in the use of IT resources, producing user guides, reports and promotional material.

We welcome all our new colleagues and trust that they will have an enjoyable and stimulating time with the University.

Our new Head of MIS, Dr Nick Teall, should join us in November, before the next issue of Keynotes is published. Nick is currently working for the World Conservation Monitoring Centre as Head of Information Systems, having previously worked for the NERC; we will introduce him more formally in the next issue.

The New UNIX Service

Chris Joy

Over the summer months, there have been significant changes to the UNIX facilities provided by the Computing Service. The UNIX service has been developed to provide more powerful computational servers and an updated classroom of premium systems. These changes ensure that the Computing Service can provide the latest versions of supported applications within a cutting edge UNIX environment. New access restrictions apply to the UNIX service and there is a special procedure for registering to use the systems.

Servers

The old servers were called Tower and Ebor and were two Silicon Graphics multi-processor systems running the Irix 5.3 operating system. These have been replaced with Sun Microsystems systems. Tower is now an Ultra10 server with 500MB main memory and Ebor is a 6 336MHz CPU Enterprise 3500 server with 1GB main memory. Both Sun servers run the Solaris 2.6 operating system.

The transition to a different manufacturer of UNIX servers has several important implications for users:

- All software must be recompiled to work on the new servers
- Your personal login scripts may require modification to work correctly
- Many applications have been updated to newer versions and may require modified data formats (or usage for libraries)

The old Silicon Graphics servers have been renamed to Oldtower and Oldebor. Oldtower will be removed permanently from service on 30 October 1998 and Oldebor will remain in service until the end of the autumn term. Access restrictions will be gradually imposed on Oldebor to ensure that users transfer across to the new server in advance of it being removed from service.

Workstations

The Derwent classroom, D / 104, has been refurbished and now provides 20 Silicon Graphics O^2 workstations. These are the R5000 200Mhz system with 64MB main memory and are essentially a much updated version of the Indigo workstations which have now been removed from service. The workstations run the Irix 6.5 operating system which is an all-platform release (this means that all Silicon Graphics computers with a R4000 CPU or later can run the same version of the operating system).

The move to modern Silicon Graphics workstations and a new operating system does not significantly alter the user interface. However, many system utilities have been improved. The important implications for users are:

- COFF binaries will not run on the systems and so the software must be recompiled to the newer ELF binary
- Your personal login scripts may require modification to work correctly
- Location of application defaults are controlled by the XUSERFILESEARCHPATH environment variable
- Many applications have been updated to newer versions and may require modified data formats (or usage for libraries)
- Software developed on the workstations will not run on the Sun servers because they are incompatible

The old Indigo workstations are available for sale directly from the University's Silicon Graphics reseller. Interested users should contact Chris Joy (*cjf*) in the first instance.

The mail reading service

A new service has been introduced to provide the facility for mail reading using the supported mail client. This service is called Mailer and is intended to reduce the load on both Tower and Ebor.

If all you want to do is to check for / read / send email messages or Usenet news articles, then please log in to Mailer instead of Tower or Ebor. However, if you are already using a UNIX system for other work then you can still use Pine or Xpine from all the systems.

When you connect to Mailer you will be presented with a simple menu:

1) Logout from mailer
2) Use Pine - Read or send e-mail, and easy access to Usenet news

At present Pine is available but the Computing Service intends to introduce a more powerful Usenet news reading program (probably Tin) at some point in the near future to satisfy 'power users'.

Application availability

The provision of UNIX applications has been rationalised to ensure that the applications can make the best use of the system on which they are being run. This means that some applications are available only on the servers where their computational requirement can be best serviced. Conversely, some applications are only provided on the workstations where they can make use of the advanced graphics and audio capabilities.

Full details of the applications that are provided on the unix systems can be found at *http://www.york.ac.uk/services/cserv/sw/unixsw.htm*. Many new versions of popular applications are now available and these provide much improved functionality in certain areas. Notably, there is now a Fortran 90 compiler available.

Access restrictions

With the exception of the mail reading service, no user will gain automatic access to Computing Service UNIX systems. Instead it is necessary to register to use the appropriate system through the Electronic Infodesk.

The New UNIX Service (continued)

There are different access rights for particular categories of user which are detailed below. In certain cases it is necessary for the academic supervisor to register a student for the particular facility.

Tower is the general UNIX service and is available to all users. All users can register to use this facility directly through the Electronic Infodesk. It is intended that Tower should service the undergraduate UNIX requirements.

Ebor is the staff and research UNIX service. Members of academic staff and research graduates can register for this facility directly through the Electronic Infodesk. Taught graduates and undergraduates can only use the system if they have been registered by the academic supervisor.

The UNIX workstation classroom is now classed as a premium facility and is reserved for research use and approved undergraduate work. Members of academic staff and research graduates can register for this facility directly through the Electronic Infodesk. Taught graduates and undergraduates can only use the system if they have been registered by the academic supervisor. Certain departments may also make special provision for student access for teaching purposes.

It is essential for staff who are involved in teaching in the Derwent UNIX classroom to note this change in access restrictions. Please make provision for registering your students prior to the course by contacting the Information Desk. The desk staff are able to register a list of users on your behalf.

Registering to use the systems

The registration for a UNIX system is achieved through the Electronic Infodesk (see page 4). Follow the link to registration to see details of your account and a section on registering for optional facilities. This section is customised according to your user status. If you are entitled to self register for a UNIX system then click the Register button and you will see the optional facility be added to your netgroups list. If you are not entitled to register directly then the instruction will inform you to get your supervisor to contact the Information Desk directly.

Classrooms in 1998-99

Doug Moncur/Brian Souter

PC Classrooms

Windows 3.1 has been withdrawn from all Computing Service managed classrooms as of 25 September 1998. Office machines remain unaffected.

At the same time L/117 and D/114 have been upgraded by replacing the 486 based machines with Pentium II based multimedia machines. The elderly Compaqs in the JB Morrell Library and L/051 have been replaced by some of the 486 based machines withdrawn from classrooms. The remainder of the ex-classroom 486 based machines will be used as spares to replace machines in Goodricke and Wentworth as they fail. However, as machines last longer if they're used, we will be installing them in G/169, but they will not be counted in the number of bookable machines for G/169.

In addition a new classroom has been installed in V/058, again equipped with Pentium II based multimedia machines. This means that almost half of our public access PCs are Pentium II based multimedia-capable machines.

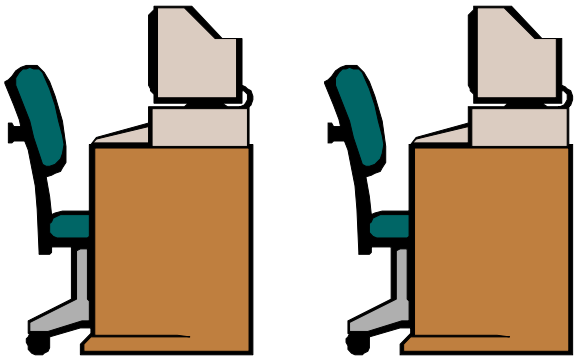
UNIX Workstations

The SGI Indigos in D/104 have been replaced by the same number of SGI O^2 workstations, principally intended for project work and use by graduate students. Full information on the progress of the new UNIX installations can be found at *http://www.york.ac.uk/services/cserv/unix/devel/welcome.htm.*

Printers

A new HP8000DN has been installed in V/058 as a classroom printer and a further two HP8000DN printers have been bought to replace the elderly HP IIISi classroom printers in Alcuin and King's Manor to improve the reliability and availability of the self service classroom printing service.

In addition a further two HP8000DN printers have been bought to replace existing printers which are coming to the end of their useful lives.



national databases

ATHENS – the new authentication scheme for national databases

Sue Cumberpatch, J B Morrell Library

Since 1 September there has been a new method of accessing some of the major national databases used in higher education. These include BIDS, EDINA and NISS subscription services. Just to remind you what these are, we at York subscribe to the following:

- Via BIDS we have the ISI Citation Indexes, the International Bibliography of the Social Sciences, ERIC and British Education Index (and we hope to add INSPEC soon).
- Via EDINA we have BIOSIS (Biological Abstracts) and the Periodicals Contents Index.
- Via NISS we have the Computergram magazine for computer users and NetFirst, an index to Internet resources, from OCLC. The main section of NISS will not be affected by ATHENS, and will continue to be accessible to all Web users.

The background

The change has come about as a result of an extensive programme by the Joint Information Systems Committee (JISC) on behalf of the higher education funding councils. There are two factors behind the change to ATHENS: security and resource allocation. ATHENS is an authentication mechanism which will help guarantee that only valid users from valid organisations may gain access to subscribed services. It is likely that more databases and other electronic resources, such as electronic journals, will eventually be accessible only to users with an ATHENS account. Also, ATHENS can be used for the analysis and control of database usage, so is useful in resource planning.

The added value features of ATHENS are:

- That it allows customisation for each user, for example regular notification of search update, or journals contents.
- That the accounts can be used anywhere – on or off campus, even via dial-in, and from a variety of machine types.

The practicalities

Each user will have a single username and password which will enable them to access all of the above databases. This is known as an **ATHENS account**. All ATHENS accounts at York will have a username beginning with the letters YKU followed by a five-figure number, and a random password.

Old BIDS and EDINA accounts cease to be usable at the end of October, so it is important that all users register for an ATHENS account as soon as possible!

The Library and Computing Service have been working closely to provide a simple way of giving all staff and students their ATHENS accounts, and much credit should go to Chris Joy in the Computing Service for setting up the internal mechanisms. The new system is based upon each user "self-registering" for their ATHENS account, and works as follows:

- Log in to the internet (eg the campus network) and start up a Web browser such as Netscape.
- From the Computing Service Electronic Infodesk which is at:

  http://www.york.ac.uk/services/cserv/edesk/welcome.htm

  select "ATHENS Registration"
- You will be prompted for your Computing Service network login, and after entering this will go to the ATHENS Registration page.
- This page lists the terms and conditions to be agreed to. Read these, then scroll down and click on the "I accept these conditions, please register me for ATHENS" button.
- You will be shown your ATHENS account username and password, which will become active within three working days.

If you forget your ATHENS username or password, you can find it from the Electronic Infodesk at any time. Please note the username and password cannot be changed, so do not let anyone else see them.

We have updated all of our relevant guides to include information about ATHENS registration. They are all available in paper form on display in the Library, or on YorkWeb. The main guide is at:

http://www.york.ac.uk/services/library/guides/bidscon.htm

If you have any queries about the system, please email *ydnhelp@york.ac.uk*, or telephone Sue Cumberpatch on ext 3891.

Visit the Electronic Infodesk!

Dave Atkin

An increasing number of services are becoming available online via the "Electronic Infodesk" on

http://www.york.ac.uk/services/cserv/edesk/

It currently allows you to do the following:

- Register for optional facilities such as the UNIX systems
- Check your computer account details
- Check your disk quota
- Change your password
- Check your charge account
- Change e-mail delivery options and set a forwarding address when you leave
- Register for Athens in order to access external databases
- Check your print jobs

In all these cases you will need to specify your username and password.

MIS News

Kay Robinson

MAC Upgrade – November

The MAC system will be upgraded during November to the latest release of the software – D18. The upgrade will include a Powerhouse version upgrade from V7.10F1 to V7.10G which is essential for Millennium compliance. The current version of Powerhouse is known to have problems with the retrieval of dates on 29 February 2000. (Powerhouse is the programming language in which MAC is written). The MAC TEST database upgrade will take place on 28 October and the MAC LIVE database upgrade will be shortly afterwards during November. The upgrade will cover all modules of the MAC system, including the Personnel and Payroll systems, so that all of the MAC software and our in-house programs use the same version of Powerhouse. The new version of MAC has very few new features. The enhancements are principally to the Student Manager product for the December 1998 HESA return and for changes in the UCAS electronic transfer of applicant data. Further details on the upgrade will be posted on Message of the Day and on the login menu nearer the time.

The Data Warehouse

The University runs a "day delay" Data Warehouse (DWH) which is held in an InterBase database loaded onto a Sun Ultra Enterprise 1 server (running in a UNIX environment). Data is extracted from the MAC System using Powerhouse programs and the resulting files are transferred to the DWH server. The database is re-created each weekday night and has built-in security which limits individual users' views. The purpose of the DWH is to provide secure access for end-user reporting and analysis using desktop tools such as Paradox and Impromptu. By keeping ad-hoc report production off the MAC system, better system performance is achieved.

The Student database holds a wide range of information relating to current students, past students, applicants, courses and student module choices. The Finance database includes data on research projects, purchasing, sales, stock and stores, budgets and assets.

Departments use the Data Warehouse to produce reports, generate mailing labels, provide mail merge files for letters and for many other purposes.

Obtaining access to the Data Warehouse

Firstly, contact the Information Desk and request the forms for DWH authorisation. You will receive two forms, both of which should be completed and returned to the Information Desk.

Form 1: this is for Computing Service records and is a request for a DWH password. To access the DWH you use the same login name as your network login (eg *abc1*) but you use a special password so that you are able to connect to the DWH computer. The Information Desk generate your DWH password and notify you in writing what the password is.

Form 2: this is for MIS / DBA records and specifies the data in the DWH to which you require access. It is necessary to obtain your Head of Department's signature on this form. On receipt of this form, MIS will obtain further approval for your access from the relevant DBA and will then add the necessary privileges to the DWH.

When access has been set up, you will receive an email from MIS telling you how to obtain further help and training for the DWH.

MIS Training

Due to student registration taking place in the Training Room H / B40 we are unable to deliver a full programme of training in the autumn term. Several courses are scheduled for December (please refer to the autumn course schedule) and a full programme will commence in January 1999.

Obtaining help on the MAC system and Data Warehouse

In the first instance please telephone the Information Desk (ext 3838) or send an email to *infodesk*. Include a brief description of the problem you have encountered or information that you would like and include screen names or program names if possible. If the Information Desk are not able to give you an immediate answer they will pass the log on to MIS.

It is very important that all support requests are logged this way so that we can monitor the volume and type of support that we are giving and so that we can deal with requests from all users fairly and effectively. A direct telephone call to an individual member of staff in MIS does not guarantee that you go to the top of the queue. An email sent to an individual person will not be dealt with if that person is away on leave or tied up in a meeting.

Please help us to help you by logging all support requests with the Information Desk.

Accessing MAC from a PC running Windows 95

Open the Start menu, select Programs followed by Network Access and then Telnet. Input a host name of Alpha1 (for Finance) or Alpha2 (for Students), press OK and you should then see the login prompt "Please enter your username".

Although we recommend Alpha1 for Finance and Alpha2 for Students you can in fact use either system since the programs and database are shared – it's just a matter of spreading the user load on the system.

To create a shortcut on your Windows 95 desktop for accessing the MAC system please refer to the instructions in *http://www.york.ac.uk/services/cserv/admin/alpcon95.htm.*

Campus Network Update

Robert Demaine

Lots of changes have been taking place behind the scenes, as the final phase of migrating the campus network to ATM has been undertaken during the summer. The FDDI ring, which has served the University well for a number of years, has been dismantled and replaced as the campus backbone by the much faster switched routing solution of Newbridge Networks ATM products. York has become a major European field trial and reference site for Newbridge, and today boasts one of the world's largest and busiest networks currently using their VIVID product range.

YHMAN Developments

Robert Demaine

The Yorkshire & Humberside Metropolitan Area Network (YHMAN), linking the nine universities in our region, has proved extremely successful since its introduction in April this year. In terms of both reliability and performance the founding members of YHMAN are reaping the benefits of investing in this type of regional infrastructure.

As envisaged in the original plans for the MAN these benefits are now being extended to other local institutions. An agreement has been made between YHMAN Ltd and a consortium of FE and Sixth Form Colleges under a scheme known as Learning in the New Millennium (LiNM). Under the service agreement managed network connections will be provided by YHMAN into local points of presence with guaranteed bandwidth in the YHMAN network core for each LiNM institution. Five such connections have recently been installed at York, connecting Askham Bryan College, York FE / Sixth Form College, Scarborough Sixth Form College, Yorkshire Coast College and East Yorkshire College.

King's Manor Networking

Dave Atkin/Doug Moncur

It's fair to say that a number of users in King's Manor have experienced performance problems using the Windows 95 service in King's Manor, particularly when starting applications and saving files.

The Computing Service has investigated these and many of the problems appear to be related to the bandwidth of the link between King's Manor and Heslington. This is particularly important for the Windows 95 service as all applications are loaded from a central server in Heslington, rather than from a local server in King's Manor as is the case with the Windows 3.1 service.

We have already made some changes to the configuration of the networking in King's Manor in order to improve the situation, but only marginal enhancements have proved possible. We have now ordered a new NT server for King's Manor on which we intend to duplicate the Windows 95 software. Unfortunately this is not as straightforward as it may sound, as some applications are dependent on the central server and cannot easily be installed on a second server, without the second installation interacting with the first.

What to do in the meantime

If you use WordPerfect 8 in King's Manor you can (a) help reduce the load on the network link and (b) improve response enormously by turning off all the Proofreading tools in the Tools menu (go into Tools->Proofread and turn off "Spell-as-you-go" and "Grammar-as-you-go", and also turn off "Prompt-as-you-go"). Our investigations revealed that these features generate horrendous amounts of network traffic.

We've turned off these features by default for all first time installs over the network, but existing users will have to turn off Proofreading by hand, as we can't easily turn it off without upsetting other previously stored WordPerfect settings.

The future

In the long term the obvious answer is to upgrade the link between King's Manor and Heslington and it is expected that a 34 Mbit / s link will be installed during the year.

Promoting Web Pages Using the Internet – a new course

A new course is offered this term by Kriss Fearon, the University's Web Co-ordinator.

This course is intended for anybody responsible for providing information on the web about their department, office or group who wishes to make their web pages easier for external users to find. It looks at effective ways to submit pages to search engines and also covers other internet resources such as newsgroups and information gateways. You will gain most benefit from the course if you are familiar with your own department's web pages. You should bring to the class a sample of web pages you would like to publicise. Knowledge of HTML is not required to complete the course.

Prerequisites: You must have used the web to find information and should be able to use the basic features of search engines.

The course will take place on Wednesday 25 November, 2.15-4.15 in W / 218. Please register at the Information Desk.

Charging for Network Traffic over Transatlantic Links

Mike Jinks

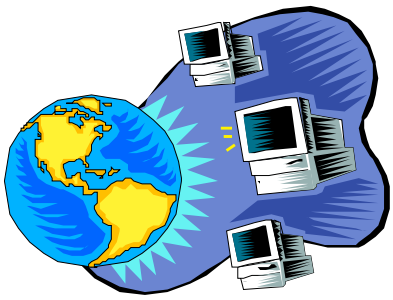
From the start of August 1998, the University has been charged for network traffic received across the transatlantic links. The rate is subsidised by HEFCE for the first year but, nonetheless, the University will be faced with a substantial bill. As almost no University has been able to set up detailed monitoring and accounting procedures in the short time available, York, like most other universities, will be paying the new bill centrally, ie from the Computing Service. If, as expected, the bill continues to rise, it is likely that most universities will introduce charge-back to departments for their use, and / or access controls.

These latter are difficult to formulate and to apply as the charges are levied on the actual traffic across the Atlantic and not on the location of the initiating and receiving site. In particular traffic which is received from a site with a network address in the UK or in Europe may actually travel across the Atlantic. There are several reasons for this including:

- the web sites of some multinational companies or those owned by companies in the USA may have web sites in the USA even though the network address implies a UK company
- some UK companies out-source their web provision and the outsourcing company may locate its servers anywhere in the world
- the network routing systems are very sophisticated so that if there happens to be low traffic on a transatlantic line at a particular time, it may be quicker for a message to be sent to Europe, say, via the USA rather than direct.

It is thus not possible to know for certain whether transatlantic traffic will be incurred by initiating a request to receive information from a specific location.

In the longer term, it is almost inevitable that universities will need to contribute directly to the costs of provision of SuperJANET, probably on a volume basis, though different models for network charging are in operation in different parts of the world. It is generally, though not universally, true that the major research universities generate a higher level of network traffic than the average, and hence York is likely to face a larger bill than would be predicted on size alone. The funding councils will continue to monitor the costs of networking via the JISC and universities will also develop more detailed analyses for their own use. Whatever the final outcome, there will probably be no more free packets!



For the Record

John Byrne/Andrew Smith

The Computing Service needs to keep records of computers connected to the campus network. The records contain fairly basic information, for example make and model, contact name, and owning department. Sometimes the records get out of date – PCs change buildings, have new owners, etc. To help keep accurate records we have installed a simple application which occasionally appears when you log in to a supported-connection Windows95 PC. All you have to do is check over the information and make any changes when necessary. The following fields are shown:

Computer Name
This is the network name given to the PC – eg admnpc32 You cannot change the entry, but please contact the Information Desk if it is wrong.

Manufacturer
Normally displayed on the front of the systems box – eg Viglen, Dan, HP

Model
Again normally on the front – eg P / 200

Serial Number
This is awkward as it is normally stamped on the side or back of the systems box. Although we would like this information, it is not essential. If you wish to provide it and need to move your systems box you should close down your computer and switch it off to protect your disks. If you prefer to skip this section just enter four zeros instead.

Contact Name
The name of the person who normally uses the machine – eg the occupant of the office.

Building Code and **Room Number**
The physical location of the PC. Building codes are defined on page 3 of the telephone directory.

Department
The department which owns the PC.

You may prefer to check the details next time you login, in which case just press the **Cancel** button to continue with the normal login sequence. Next time you login the application will reappear.

After all the entries have been completed the application will stay dormant until the next time we need to carry out the survey.

So You Want to "Do Graphics"?

Rob Fletcher

At York we have a wide range of graphics packages and tools on the various public systems. The Silicon Graphics O^2 UNIX systems in Derwent D/104 are for staff and research use only, but are the best systems on offer with high resolution screens of 1280x1024 pixels and 24-bit colour. The new multimedia PC systems offer a screen resolution of 800x600 pixels and 32-bit colour. You can also access some graphics utilties on Tower and Ebor via eXceed on a PC.

A graphics tablet is attached to one of the O^2 systems for specialist use. In addition a high quality flat bed colour scanner and a 35mm slide scanner are available in Langwith L/051.

A Lexmark A4 colour laser printer is available to everyone and pictures can be printed by specifying the colour printer device from within your PC program or by using the UNIX command "print -q colps image.ps", where the file "image.ps" is encoded as colour PostScript.

The following list will give you some idea of what is actually available. Note that not all the programs on the systems are listed. If there is some graphics functionality you require then please contact the Information Desk who will point you in the right direction.

Graph plotting programs

O^2, Tower and Ebor systems:
UNIRAS suite (high quality), GNUPlot(soon).

PC systems:
Stanford Graphics (lower quality), plotting functions within spreadsheets.

Image Painting/ Manipulation/Viewing programs

O^2 systems:
Photoshop, GIMP (GNU Image Manipulation Program), Imageworks, ImageMagick suite, XV, various SGI utilities (try "man -k image"), ghostview(soon).

Tower/Ebor systems:
ImageMagick suite, XV, xpaint, ghostview(soon).

PC systems:
LviewPro, ghostview. We also have plans to make the full CorelDraw suite available and possibly ImageMagick.

The ImageMagick suite consists of: animate, combine, convert, display, identift, import, mogrify, montage. To find out what they all do use the UNIX "man" command, eg "man convert".

Please note: if you have used GIMP before on the SGI systems you must delete the directory .gimp and all its contents. Otherwise, you will have the incorrect resources for this new exciting version.

Programming

O^2, Tower and Ebor systems:
UNIRAS Agl/Fgl/AgX graphics libraries, Nag Graphical Library, XFORMS, Tcl/Tk/SpecTcl

PC systems:
Borland C++ Builder 3, Delphi 3, Tcl/Tk/SpecTcl

Presentation Software

O^2 systems:
Showcase

PC systems:
Powerpoint 7.0, Corel Presentations 8.0

Video makers

O^2 systems:
moviemaker

NAG Library

John Robinson

The NAG Library is a collection of high quality routines for common mathematical, statistical and general computing tasks. If you are writing any programs which require numerical processing, using these routines can save you much effort and ensure more reliable results.

The Fortran library has around 1200 routines; a subset of these are also available in a library written in C. [The Fortran routines are also callable, with care, from C or Pascal]. There is also a device independent set of graphics routines (in Fortran) which can output text (for drafts), PostScript, and to an X-Window.

With the arrival of the new UNIX servers, we have had to review licensed implementations (the licence is for site-wide use, but the fee depends on the number of different platforms on which we use the libraries). We are currently licensed for use of the following libraries:

Fortran Library	Mark 18	DEC Alpha	UNIX
		Sun UltraSparc	Solaris
		SGI	Irix 5
	Mark 17	Sun	SunOs
C Library	Mark 4	PC	Windows DLL
		SGI	Irix 5
		Sun Sparc	Solaris
Graphics Library	Mark 4	Generic	UNIX

Note that the previously licensed PC DOS versions have been removed from our list of products, and users who obtained these from the Computing Service should cease using them, and delete all copies of the software.

In order to move support the newer SGI O^2 workstations in the upgraded D/104 classroom we plan to move the SGI versions to Irix 6; this would mean that Indigo workstations running Irix 5 would no longer be supported.

Administrators of departmental systems who would like to install or upgrade any of the NAG libraries, or users of non-networked PCs who need the Windows version, should contact John Robinson, (email *jsr1*, ext 3833).

WordPerfect News

John Robinson

Site Licence for Corel Products

The Computing Service has recently signed up for a new CHEST deal giving us a site licence for a range of Corel products. This allows us to use Corel's Academic versions of WordPerfect Suite, Paradox, CorelDRAW, CorelVENTURA (a desktop publishing package) and Corel WebMaster without additional payment. The deal lasts for three years, at which point the software must be deleted, unless the licence is renewed.

During this time upgrades and updates will be available at no extra cost. The site licence does not include media or documentation – these can be purchased from our approved resellers, eg Pugh (*http://www.pugh.co.uk/*) or Phoenix Software (*http://www.phoenixs.co.uk/*).

The agreement allows staff (but not students) to use a copy of the software on their home or laptop computers, at no additional cost.

The latest version of the WordPerfect 8 suite is available on the Windows 95 network, as is Paradox 7 [Paradox 8 is not sufficiently reliable to mount on the network]. We hope to make CorelDRAW available on the network shortly. If any users want to install the software on other machines, the Computing Service will be able to loan copies of the CD, and we also have a portable CD-ROM drive to help users install software on machines with CDs. If a department plans to do a number of installations, it would be sensible for them to purchase their own CDs.

On-line Help

A number of common points about using WordPerfect are covered in web pages accessible from the Windows 95 Start menu under **Programs | Text Processing | ! Help and Documentation | ! WordPerfect 8 Hints**. The points are grouped into headings for 'When things go wrong', 'Getting the format right', 'Creating special types of document', 'Customising your WordPerfect setup' and 'Miscellaneous points'.

This is a useful place to look for answers to your WordPerfect queries, and three of the most important are summarised below:

Running out of M: drive disk space

If your disk space quota is exceeded when you are saving a file, WordPerfect shows you a Disk Full error box. Unfortunately it is possible to dismiss this box, and carry on working on the document.

However, an incompletely saved document will usually have a corrupted internal structure, and often cannot be reloaded by WordPerfect. So if you see a Disk Full error, do not attempt to carry on working on any documents – instead you should try to recover your work from the backups WordPerfect makes, before closing WordPerfect. If you have previously saved the document, that version will have been renamed with a .BK! File type. You can use Windows explorer (accessible by right-clicking the Start button) to rename it with the file type .OLD, which will prevent it being discarded by WordPerfect.

There may also be a timed backup in your M: drive with the name wp{wp}.bk1 (or some such) – again, use Explorer to rename this to be doc1.old. If you had several document windows open there will be a backup for each one. At this point you can close WordPerfect. You should then use Explorer or My Computer to tidy up your file store, and use **Start | Programs | Utilities & Extas | Check Quota (fast)** to monitor your available space. If you cannot clear up space (by deleting old backup files, etc), then contact the Information Desk.

Slow response to typing

Users sometimes complain that WordPerfect is very slow when they are simply typing in text. There is a feature in WP8 called 'prompt-as-you-go' which suggests corrections to misspelled words, and also synomyns, as you type words. This process can slow down WP8 considerably, and is of limited value to most people. It can be turned off (as is now the default setting) by the **Tools | Proofread | Prompt-as-you-go** toggle.

Theses and Dissertations

There are many features in WordPerfect which can be used to help produce complex documents efficiently and consistently. Many of these have been embodied in a template which follows the University's Thesis Regulations. As well as the simple things like margins and line spacing, this allows you to write each chapter separately, and automatically produces page numbers, section numbers and a table of contents. This allows you to concentrate on creating the text, while WordPerfect does the donkey work of ensuring the format is consistent and in line with the regulations.

GIS, Digital Maps, and Satellite Imagery ...

Peter Halls

Whilst those of you who have been around for some years are probably 'in the know,' others may well have missed the various announcements in Keynotes over the years, so this piece is intended to inform, or remind, accordingly.

Many people find that there is benefit to the inclusion of one or more maps in a dissertation, thesis, or report. Some people can benefit from being able to use the map material to control, or contribute to, their analysis – to constrain cases to those within North Yorkshire, for example, or within a GIS (Geographic Information System). The University is a participant in a number of agreements which make available digital map data, and software to exploit these, and other, data. There are also some agreements specific to York. These facilities are available to every member of the University.

Specific provision include 1 : 250000 Digital Map data for Great Britain and 1 : 1000000 data for Europe from Bartholomew (the publishers of the Times Atlas and Bartholomew Road Maps series), 1 : 1000000 Digital Chart of the World, DCW, data and satellite imagery cover for the whole of the British Isles. Much of this data is always available online, although some will be made available online on request. Details of the data available may be found in the Computing Service GIS web pages at *http://www.york.ac.uk/services/cserv/sw/gis/gis-at-york.htm*.

New datasets, as they are made available, are announced here, in *Keynotes*, and on the Web pages.

GIS software is a component of the standard facilities at York –ArcView on classroom and office PCs, Arc/Info and ArcView on the UNIX systems. ArcView is a desktop windows and menus based system, whereas Arc/Info has a windows and menus interface but is more commonly used at command level, because of the power and flexibility this approach affords. It is perhaps worth noting that some of the reasons behind this choice of software are that data are fully interchangeable between the two products and that they are complementary in capability.

An offer (and a word of warning): if the data that you require to use does not appear to be available at York, or if you do not seem able to work out what to do next, then ask at the Information Desk, and we will do what we can to help. Where new digital map data for the United Kingdom is required, this does tend to have a price tag attached, so we may have to request a contribution towards the cost!

Almost all maps are copyright: scanning or photocopying them is thus an illegal act. The data (and software) available at York is licensed for University use only – if you have any doubts please ask first! Unless the maps are essentially pre-war, all (British) Ordnance Survey maps are copyright, and there are very strict rules regarding what is permissible use. We can give you advice, especially in terms of the University's Ordnance Survey licence, and to date we have a very good track record in obtaining permission for projects on the fringes of the letter of our licenses.

There is a growing community of staff and students employing GIS in their work. Look out for seminars in various departments – or ask – someone may already be using these facilities in a similar way to that you envisage.

Printing Labels

Dave Atkin

A system for printing sticky labels for envelopes etc is available from PCs and UNIX.

The labels are 38mm x 70mm and there are 21 labels per A4 sheet.

Producing labels on UNIX

To produce some labels, first create a file which contains lines of text with the text of each label separated by a line containing an asterisk ("*"):

```
label 1 line 1
label 1 line 2
label 1 line 3 and so on
*
label 2 line 1
label 2 line 2 etc
*
label 3 line 1
label 3 line 3 etc
```

Then use the UNIX command "labels". The command interface is as follows:

```
% labels input_file number_
                    of_copies
```

If you do not specify any parameters then you are prompted for them.

The text you supply is automatically scaled to fit onto the label. The output will be queued automatically to the central print queue "labels".

Labels cost 15p per sheet of 21 labels. This charge will be taken from your charge account, and output will be placed in the pigeon holes in the normal way.

Producing labels from WordPerfect 8 on Windows 95

It is quite easy to use the label printing service from WordPerfect 8 on the Windows 95 network. This allows you to use WordPerfect to format the text of your labels, or to create labels from a Merge document (eg, address labels from a Merge data file).

Full details are available on the Computing Service web pages at *http://www.york.ac.uk/services/cserv/help/wp/pages.sup/wp8/labels.htm*.

Producing labels from other sources

Users with access to central print queues by whatever means can submit a text file in the format described above (ie asterisk-separated) to the "labels" queue and it will automatically be formatted to fit onto the labels.

What to Look For When You Buy a New Desktop PC

Doug Moncur

Over the summer PC specifications have moved on quite a bit – in fact the changes have come so fast it's been virtually impossible to keep up with all of them. And the changes are still ongoing – it's quite possible that some of this article will be out of date by the time you read it. As the title suggests, this article is about desktop PCs in the main. Laptop specifications have also moved on, but as always you get a bit less disk, a bit less processor and a bit less memory for the same amount of money.

Processor

There are machines out there with processors from Cyrix and AMD that are good and perfectly capable machines and which might well do as home machines, but with NT5 on the horizon, it is probably best to play safe and only go for machines with Intel processors.

Intel have, however, muddied the water somewhat, by having available both the full blown Pentium II and the slightly cheaper Celeron series. The main thing to note is that Celeron machines have 128k processor cache while full Pentium II machines have 512k cache.

Essentially this means that a 300MHz Celeron will be slower getting information from memory than a 300MHz Pentium II although the instructions will execute at the same speed inside the processor. Quite what this means for the user is difficult to predict as undoubtedly some things will run much slower and other programs will run just as fast. On the whole it does mean that a Celeron based machine will run a bit more slowly than its Pentium II equivalent. For this reason full Pentium II processors are probably a good idea as the one thing that we know about NT5 is that it's going to demand yet more from your PC.

Probably the ideal processor would be a 350MHz Pentium II, but there's more. To gain full benefit you need to ensure that the machine has fast memory and the new 100MHz front side bus (FSB). The 100Mhz FSB refers to how the processor talks to the rest of the machine and obviously the faster the better.

Memory

Memory is cheap. Today 64Mb is a sensible amount to go for.

Hard disk capacity

Again the cost per Mb of disk store has come down a lot. The sensible minimum is 6.4Gb – in fact it's difficult to buy a machine with much less.

Other considerations

All machines should include a CD-ROM drive and a sound card. Depending on the machine chosen you may have the option of speakers in the monitor, or of external speakers, and whether to have a desktop case or a minitower case.

The Computing Service supports only Windows 95 at the moment. Machines intended as supported connections should be obtained with Windows 95. Machines intended as unsupported connections have no such restrictions but remember that you will not obtain any support. If you are in a department such as Biology which provides its own network support, please check with your local support staff as to any local guidelines or restrictions.

Machines purchased privately for home use are, of course, free from any such restrictions.

ILIAD News

Debra Fayter

You cannot open a newspaper or magazine today without mention of the 'information superhighway' or the 'digital revolution.' At York we have been preparing our students for these developments for some time. The Information Literacy in all Departments (ILIAD) programme has been giving students throughout the University the opportunity to become familiar with those information skills they will need whilst at University and in the workplace. Although the programme is optional, most departments actively encourage participation.

ILIAD Stage 1 allows incoming first year students to develop confidence with Windows, word processing, email, the Internet, databases and presentation software. It carries a University certificate and a nationally recognised word processing certificate. From Spring 1999 we will be running a Stage 2 programme which will allow students to develop further information skills. This is targeted particularly at 2nd, 3rd or 4th years who wish to enhance their career prospects. However, as this is the first year of operation, places will be limited. Publicity about Stage 2 will be made available during the Autumn term.

As our students become more information literate, many departments are using IT as a method of course delivery. I am always interested in hearing about computer-aided learning tools you may be using in your department. May I also take this opportunity to publicise a course I am running for staff in the Spring on 'Teaching and Learning with the Internet.' This course provides an introduction to ways in which the Internet can enhance teaching and learning. Contact me if you are interested in attending, as I may be able to arrange a time and date to suit you. Further information on ILIAD or on 'Teaching and Learning with the Internet' can be obtained from Debra Fayter, Computing Service (ext 3839, email *daf3*). Information about ILIAD is held on the Web at *http://www.York.ac.uk/services/cserv/training/main.htm*. Students taking part in ILIAD can accrue points towards the York Award, the University's student skills initiative. Contact Robert Partridge (ext 2492, email *award@york.ac.uk*) for more details on the Award.

Computing Service Address

Computing Service
University of York
Heslington
YORK YO10 5DD

Telephone: Switchboard (01904) 430000
Direct dialling (01904) 43 followed by ext no.
Fax: (01904) 433740
Email: *username*@york.ac.uk

Also, try the World-Wide Web: *http://www.york.ac.uk/services/cserv/*

Information Desk

Telephone: ext 3838
Email: *infodesk*

The Information Desk is open from 9am to 5.15pm Monday to Thursday and 9am to 4.15pm Friday (*closed for training Wednesdays 2pm-3pm*), for problem solving (staff and graduates), advice and information, fault reporting, network connections, file conversion, sales, course bookings, registration and documentation. Printed output can be collected from the lobby entrance which is open from 8am to midnight.

Contacting Computing Service Staff:

Director:	Mike Jinks	3801	*kmj1*
Deputy Director:	Peter Roberts	3802	*pdr1*
Departmental Secretary:	Lorraine Moor	3801	*lsm1*
Head of Technical Services:	Dave Atkin	3804	*dla1*
Head of User Services:	John Illingworth	3803	*jji1*
Head of Personal Systems:	Doug Moncur	3815	*dgm1*
Operations Manager:	Brian Souter	3814	*bs1*
Information Officer:	Joanne Casey	3805	*jmc8*

Steve Bennett	3832	*sgb8*
Sue Bolton	2102	*sjb28*
Mike Brudenell	3811	*pmb1*
John Byrne	3812	*jcb1*
Paul Conacher	4346	*pac1*
Mark Cook	3897	*rmc12*
Robert Demaine	3808	*rld1*
Debra Fayter	3839	*daf3*
Ken Finch	4452	*kf1*
Rob Fletcher	3816	*rpf1*
Kevin Gardner	3739	*pkg4*
Chris Gowland	3823	*cg1*
Peter Halls	3806	*pjh1*
Vivienne Hemingway	3818	*vwh1*
Sue Hodges	3800	*sh32*

Jenny Jackson	4455	*jj5*
Chris Joy	3807	*cj8*
Bob Marriott	4454	*bdm2*
John Marsden	3832	*jpm1*
John Mason	3813	*jrm13*
Darren Munday	3821	*dam6*
Helen Parker	3800	*hp7*
Colin Rea	3817	*cr9*
John Robinson	3833	*jsr1*
Kay Robinson	2101	*kr7*
Andrew Smith	3809	*abs4*
James Walker	4347	*jaw1*
Timothy Willson	2123	*ftmw1*
Michael Woodhead	3825	*mw28*

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