



# University College Cork Computer Centre NEWSLETTER

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## THE 'GLOBAL VILLAGE' COMES TO UCC

**THE new campus network now being installed will make life a lot easier for those who need to keep in touch with the outside world. Eventually, if you have a computer or terminal, you will be able to make contact with your colleagues here or worldwide from your desk without the need for phone calls. You will be able to share information with co-workers elsewhere without having to trek across the campus with a disk or tape. And you will be able to access the repositories of information held on servers and databases around the world.**

Some of this is, of course, not new: international electronic mail, for example, has been in use at UCC for over five years now, and has hundreds of users. However, giving the rapidly increasing numbers of new users access to these services had become a major headache, as the existing cabling and ducting was not enough to meet the demand.

The new network means that connecting up new workstations should be much easier and faster. Existing users are already reaping the benefits of an eightfold increase in speed in the last few months.

If you find you need to use computer communications a lot, you can install extra circuitry in your machine to give even greater speed. That also means you would be able to send and receive electronic mail directly from your desktop, without needing even to log into the central computer.

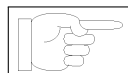
Using the facilities that network access gives you is extremely simple: for example, learning the basic electronic mail commands (**mail**, **send**, **read** and **exit**) takes about five minutes. (If you want to start using this service, there is a leaflet "Using Electronic Mail" available in the Advisory Office.) If you haven't yet got a UserID, you can apply for one at the Operator's desk in the MicroCentre in the Dairy Science Building basement. For an ID on departmental machines, ask locally.

Ultimately, all minis, mainframes and workstations will be connected, and this is scheduled to happen before the end of 1991. In the meantime, we are going as fast as we can with the

installation, but there will be occasions when service to an individual location has to be disrupted. We are sorry if this causes problems: we are doing our best to keep it to a minimum. Please bear with us.

### In this issue

Hardware changes .....	1
Discounting extended .....	1
Frogs and other software .....	2
Fax from your terminal .....	2
Recipe for failure .....	2
Guide to network services .....	3
Software update .....	3
Hardware pricelist .....	4
Viruses .....	4
Data Protection Act .....	4
Stop Press .....	4



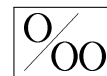
### Hardware changes

New mainframes and minis (a DEC VAX 6310 in the Computer Centre, an IBM 9370 and a  $\mu$ VAX in Computer Science, a  $\mu$ VAX 3400 in Electrical Engineering and an IBM AS-400 for the Commerce Faculty) have meant a considerable improvement in processing power and disk storage. However, the use of the new network has meant a small change in the routine for connecting your terminal, PC or Mac.

**Terminal access:** When you switch on your terminal, or run your PC or Mac communications program (eg, Kermit, ProComm, MacTerminal etc), set it for 9600 baud rather, than the previous 1200 baud (the other set-

tings remain unchanged). Press the ENTER or RETURN key a few times until you get the prompt saying 'Local>', then type the command CONNECT followed by the name of the machine you want, eg BUREAU for the main VAX, and then log in as before. You can get a list of valid names by typing SHOW SERVICES  
**A new scanner** has been installed in the Advisory Office. This will scan most typewritten text (fixed-width characters) into an ASCII file for editing in a wordprocessor, DTP package or whatever, provided the copy is clean and clear (no handwriting or graphics). It also works as a pure graphics scanner and can make .pcx or TIFF files at 300dpi from black-and-white artwork. Maximum page size for both applications is A4.

**Charging for laser printing** has been rationalised with the introduction of a charge-card for Hewlett-Packard output. A card reader attached to the machine controls the issue of pages, and you can buy cards from the Advisory Office or the Reception Desk: the price remains the same at 5p a copy, making it £1.00 for a 20-copy card or £5.00 for a 100-copy card. Use of the VAX laser printer remains unchanged: 5p a page, billed monthly to your department—it's up to you to settle with them.

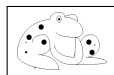


### Discounting extended

The discounts on desktop computing equipment and software which have been available for some time to the College now apply to any staff member student or recent graduate who wants to buy a machine for personal use. Machines on offer now start at around £600.

The Computer Centre handles all discounted purchases, and there is a price list of current offers on the back page of this issue. Please check with us before shooting off to buy something in town; we had someone up a couple of weeks ago who had just bought a printer elsewhere for £2,500 and

discovered we could have supplied it for £1,800.



## Frogs and other software

A considerable quantity of microcomputer software is available to all staff and students either free or at very low cost. Specialist or more advanced packages are normally bought and funded individually by the user. The low-cost software available from the Computer Centre falls into in four groups.

1. Public-domain (best example is the famous Kermit communications program)—this can be copied and given away without restrictions. Manuals and documentation are usually in a file on the disk with the program.
2. Site-licensed or group-licensed software comprises normal commercial programs which we have bought, but have permission to distribute within the College: you may not copy or give it away by yourself but anyone on campus can have a copy from the Computer Centre without charge. Manuals, however, continue to be printed on paper, and therefore cost.
3. Shareware, where you are allowed to copy the software and share it with others, but for continued use you must register for a small fee (usually \$25 or so). The registration usually gets you an updated copy of the program and a printed manual.
4. Normal commercial programs for which you pay a discounted rate as an academic user. This price is usually low enough not to make it sensible to negotiate a site-licence.

The result is that you can choose from a comprehensive set of well-known, proven, and reliable software for around £200—many users may never need to spend more than this.

For those who need more specialised software, we try to find the right package and to negotiate a good price, especially if more than one user is interested. However, we sometimes have to mention a word of caution, as the quality of specialised software (and the quality of support for it) is sometimes not as good as for the more popular packages.



## Fax from your terminal

If you need to send faxes but can't justify buying a machine, the central fax server attached to the network might interest you. You can now send a fax by electronic mail from your normal UserID, addressing it to the fax number required (see details below). Text only at this stage: we hope to handle graphics like .PCX files later.

Fax is short for 'facsimile' and it is essentially a telephone photocopier. The method has been around since the late 1800s, and has been used widely in newspapers since the 1920s (remember all those pix labelled 'API Wirephoto'?). Microchip technology brought in cheap office faxes about seven years ago, and we have now got the circuitry fitted into a PC.

Details of how to use it are in the panel below. Notice that in all cases you must start the number with the country dial code and follow it with the area code (less the leading 0), even for local messages. UK faxes must use the proper international code (country 44), not the fudged '03' method. Charges are the normal Telecom ones for a phone call to the same number, plus the time for text conversion, so you need authorisation to use this service. You are notified of the cost after each fax sent, and then billed monthly—please ask the Advisory Office for details.

If the recipient's machine is engaged, unobtainable or turned off (yes, believe it or not, some people turn off their fax machine at night!), the message is just returned to you saying so: there is no queue or automatic re-try yet, but we are working on it.

### To address electronic mail as a fax

All you need to know is the fax number of the machine you want to send it to, exactly as for a manual fax. A fax number is a plain telephone number. When MAIL asks you for the address (with the 'to:' prompt), you use the normal format of an electronic mail address, but type the full fax number as the UserID *including the country dial code and area dial code (less the leading 0) in all cases, even for local faxes*; and type the Nodename as 'fax.ucc.ie'. You can optionally include the recipient's name and organisation in parentheses before you close the quotes.

As an example, to send a fax to Jürgen Heimat of XYZ GmbH whose fax number is Essen 123456, you would address the message to

```
in%"49201123456@fax.ucc.ie (Juergen Heimat, XYZ GmbH)"
```

and to send a fax to Pat Murphy in their Cork office (fax number [021] 543210) you would address the message to

```
in%"35321543210@fax.ucc.ie (Pat Murphy, XYZ Co Ltd)"
```

We also have the software to receive faxes for forwarding into the mail network, but this will not be installed until later in the year. When it is working, it will mean that your contacts who do not have electronic mail can send you a fax on plain paper, (10-pitch Courier type, no graphics) with the first line as a valid electronic mail address, and it can then be forwarded to you.



## Recipe for failure

A true but sad story: a student had collected a large quantity of data on a particular research item over several years. Being bright and enthusiastic, the student quickly realised that a computer was the tool to use to analyse the data with.

All the figures were carefully typed into a spreadsheet (an attractive one, recommended by the department concerned), and some preliminary analysis done. The results were so interesting that the student was encouraged to do some further, much heavier, analysis.

A mainframe statistics package was required, so the student needed to export the data from the spreadsheet into a plain data file so that it could be uploaded to the mainframe. Now began the trouble.

The spreadsheet had no mechanism for getting data out (other than onto a printer or the screen). Both of those were in graphical (drawn) form, rather than character based, so it was not possible to capture the image to a character file. Eventually the actual spreadsheet disk files were examined

with an editor, and a macro written to strip off the positional gunk and break apart the row-by-column format into the more normal column-by-row format.

This only worked for a few files. The remainder turned out to be in a relational format where they were completely intractable. It would have been theoretically possible to write a tailor-made program to read the file and re-write it, but it would have taken longer than typing in the data afresh, which is what the student had to resort to.

**The moral of this story is: don't use packages which stop you getting your data back out again in a meaningful, sensible and portable form, no matter how attractive they may appear at first sight. To do so simply multiplies the effort needed for further work on the data.**

We try to be sympathetic in such cases: clearly it was not the user's own fault. Having made the point, however, if you are worried that you may be getting stuck with this kind of difficulty, come and talk about it: we can sometimes help if we catch the problem at an early enough stage.

We don't want to *make* people use particular packages, but there are often very sound reasons for trying to make people *not* use particular packages!

## Guide to network services

Electronic mail (E-mail) is the sending of messages between users on different computers connected by a network. At UCC, all mainframe and mini users on campus can send E-mail to each other and to any user on almost any academic or research computer in the westernised world. It is becoming the normal means of communication between academics and researchers worldwide, and like fax, has the advantage that you do not need to be there to receive it at the time: it just waits until you are ready to read it.

Because of its popularity, a number of Email-based services have grown up around the networks. These include *discussion lists* (a form of electronic journal), *file servers* (repositories from which you can retrieve files)

and *database servers* (formalised, structured stores of data).

The discussion lists allow groups of users interested in a specific topic to exchange E-mail messages with each other, without the users having to send multiple copies. Lists are either *moderated* (contributions are edited and then circulated in digest form on a regular basis) or *unmoderated* (contributions get sent out as they stand, as they arrive). A list manager (either a program or a person) maintains the membership of the list.

For example, people involved in teaching or writing English can join the *english* list. This list is unmoderated, and is managed by a server program called *LISTSERV* on the EARN/BITNET network. Another example is the *music-research* list hosted on the UK's JANET network at the University of Oxford.

There are many hundreds of such lists covering most research topics: a list is available in the Advisory Office, and you can also scan it online on the VAX by typing *search lib:listserv.lists* (also contact Advisory for details of how to subscribe to lists).

**Servers** are programs running on remote computers which respond to commands you send them. Commands are normally sent by E-mail, but servers on EARN/BITNET also respond to interactive messages (the VAX *send/remote* command). Some servers on the Internet and JANET also allow you to log into them and retrieve files manually.

There are **file servers** in many areas of interest, but the most common general-purpose repositories on EARN/BITNET are run by the *LISTSERV* and *NETSERV* programs, at a variety of sites on the network. Many commonly-used systems and packages have their own server: for example, Macintosh users can retrieve software from *macserve@irlearn* and PC users can do the same from *TRICKLE@AWIWUW11* (most servers respond to *help* as a command).

The *TRICKLE* server provides access to the *SIMTEL-20* repository of PC, Mac and UNIX software. There is a list of all the PC stuff in file *lib:simibm.lst* if you want to use the *search* command to see what is available. It's always worth checking if a program to do what you want exists in the public domain (or as share-

ware) before you go spending your hard-earned cash elsewhere.

**Database servers** are still relatively rare when compared to file servers, mainly because of the time required to keep them up-to-date. There is a useful database of IBM study contracts at *astra@icnucev*m and several IBM sites on EARN/BITNET are pursuing the use of the *SPIRES* database system for future applications.

Dial-up databases are much more common, but these are chargeable and are not just on the academic network. For these services, you must take out a private subscription to each one you want, and they then give you a UserID and password with a telephone number. Fortunately, many are also accessible through the VAX, rather than by phone (eg *LEXIS*, *DIALOG* etc), and we are investigating the use of a group service account with a variety of these databases which might cut the costs.

```
if flagbyte ≥ 240 then case
flagbyte of 240...250: begin i
← 0 step 1; do print
i,flagbyte,sqrt(flagbyte)
```

## Software update

If you are using the freely-distributed software (asterisked below), please try to make sure you are running the current version as we are unable to support more than one version back. The prices quoted are valid until the end of April and include both academic discount and VAT.

**PC-Write\*** (editing/wordprocessing) 3.02 (manual £20) guaranteed ASCII, files now up to installed memory, multiple columns, Hewlett-Packard downloadable fonts.....**free**  
**T<sub>E</sub>X** (typesetting/DTP) 2.99x (manual £25) includes WYSIWYG preview and choice of dot-matrix drivers (laser drivers from £250). Extra fonts include Times, Helvetica, Euler, Old English, Copperplate, IPA, and a variety of symbols. **ozT<sub>E</sub>X** for the Macintosh can now be downloaded from the VAX. The UCC crest has been digitised via MetaFont (see page 1), and is available in all standard sizes for any supported printer (Epson/IBM, Toshiba, HP, PostScript etc).....**free**  
**P-Stat\*** (data management / statistics) 2.25 (manual £30) includes PostScript tables, faster sorting, Quality Control Analysis (and an improved window interface on the PC version).....**free**

**Nota Bene** does excellent footnotes and bibliographies and also handles non-roman alphabets, but support is atrocious, and it still cannot print some characters correctly. Because of the support time it requires, we cannot supply any more copies until the makers guarantee it will actually work.

**WordPerfect** (wordprocessing) 5.02 screen preview, HP fonts . . . . . **£455**

**Glyphix** (typefaces): downloadable fonts for the HP LaserJet. 24 faces; generates all sizes and variations (bold, slanted etc). Works well with PC-Write, WordPerfect, Ventura, T<sub>E</sub>X, etc. Per disk of four faces **£100**

**Kermit\*** (communications and file transfer) 3.22 improved and expanded script capabilities, and Tektronix 4010 graphics emulation. **free**

**InstaCalc** (spreadsheet) 2.50 has better macros and extended help, and runs both memory-resident and non-resident. . . . . **£50**

**DataEase** (database system) 4.0 much improved interface, larger choice of functions, formats and layouts, and clearer documentation. **£60**

**Graph\*** James van Zandt's public-domain plotting program . . . . . **free**

**Graph-in-the-Box** (business graphics) 2.2 memory-resident (pop-up) graphs and charts now reads your data off the screen (saves retyping) **£140**

**Harvard Graphics** is a more sophisticated business graphics package with a choice of typefaces and a wider selection of layouts . . . . . **£300**

**DesignCAD** (computer-aided design) voted best value CAD by BYTE Magazine . . . . . **£250**

### Other PC programs

- dBase IV . . . . . £370
- Lotus 1-2-3 . . . . . £270
- Supercalc 5 . . . . . £203
- PC-Tools . . . . . £92
- Microsoft C . . . . . £180
- Microsoft BASIC . . . . . £135
- Microsoft FORTRAN . . . . . £180
- Microsoft PASCAL . . . . . £125
- Microsoft Windows 2.03 . . . . . £55

### Apple Macintosh

- Excel (spreadsheet) 2.2 . . . . . £160
- Microsoft Word 4.0 . . . . . £160
- Microsoft Works 2.0 . . . . . £140
- Macwrite II . . . . . £130
- MacDraw II . . . . . £240
- Claris CAD . . . . . £450



## Hardware pricelist

- Memory
- 5¼" floppy
- Hard disk
- printer port
- spare slots
- Co-processor
- 3½" floppy
- network card
- comms port
- CGA monitor type

All prices include academic discount and VAT at 23%.

### Apple Macintosh

**Mac +** 68000/8MHz 1m (no hard disk) . . . . . **£1,490**

**Mac SE/30** 68030/16MHz 2m . . . . . **£3,600**

**Mac IICI** 68030/25MHz 4m colour . . . . . **£7,450**

### IBM PC(ompatibles)

**Atari Portfolio** 80C86/S handheld MHz 128k + 128k card || CGA (8x40) **£590**

**Digital DECstation 200** 80286/12 MHz 1m || VGA (£2,000 less & ). . . . . **£2,675**

**Gate AT** 80286/12MHz 640k || Herc . . . . . **£1,575**

**Gate XT** 8086/10MHz 640k || Herc . . . . . **£1,375**

**IBM PS/2-30** 8086/8MHz 640k VGA monochrome . . . . . **£1,740**

**Memorex 7045** 80286/12MHz 1m || VGA **£2,500**

**Schneider EuroPC** 8086/10MHz 512k || Herc . . . . . **£600**

**Tandon PAC286** 80286/10MHz 1m || VGA . . . . . **£3,375**

**Toshiba 1200HB** 80C86/10MHz laptop 1m || CGA monochrome . . . . . **£2,495**

**Toshiba T5100** 80386/16MHz laptop 2m || EGA monochrome . . . . . **£5,425**

**Ethernet Card** . . . . . **£400**

**80287 coprocessor M** . . . . . **£275**

### Printers

**Apple ImageWriter II** 180dpi, 75cps, dot-matrix . . . . . **£453**

**Apple LaserWriter NTX** =PostScript, 300dpi, 8ppm, laser . . . . . **£4,678**

**Epson LQ400** =Epson LQ, 60/180cps, 180dpi, dot-matrix . . . . . **£380**

**Hewlett-Packard LaserJet Series II** =HP/Diablo/Epson, 8ppm, 300dpi **£1,900**

**Memorex 2824** =Diablo/IBM/Epson FX, 240cps, 132col, dot-matrix . . **£1,100**

**Star L010** =IBM/Epson FX, 36/144cps, 120/240dpi, dot-matrix . . . . . **£240**

**Toshiba 301** =Epson/Toshiba, 60/42cps, 180dpi, thermal dot-matrix, portable . . . . . **£435**



## Viruses

This careless and antisocial activity has not yet been catastrophic here, but it will be unless the use of unchecked software stops immediately. There are virus-checking and antidote programs available in the Computer Centre for anyone to use. The general rule is: don't run any program unless you are sure it has come from a reliable source. All the software we supply from this office is checked for viruses, but copies you get elsewhere may have been contaminated by someone else.



## Data Protection Act

The Data Protection Act requires you to inform us if you keep personal information about other people on computer (the College is registered with the Data Protection Registrar). Note that this does not mean asking permission, merely registering the fact. The Act gave individuals on whom you store the data the right to see What you keep on them, and request it to be corrected if it is in error (they only have the right to see their own record, of course, not anyone else's). Please act on this.



## Stop Press

A few new things just out: power failure protection on a PC card from Emerson, £200. Ethernet adaptor for a laptop (parallel port) from Xircom, £900. Modem-operated power switch for use with PC-Anywhere, £210.

We will be running courses soon: the Introduction to Computing will begin in May: others on Wordprocessing, Spreadsheet, Database, Graphics, Communication and DTP will follow. Details will be published in the next few weeks. Bookings should be made to x2215.

*Next Issue:* after Easter.

### Contact Numbers

- Advisory Service . . . x2611 or x2609
- E-mail address .. advisory@vax1.ucc.ie
- Hardware Problems . . . . . x2227
- Administration . . . . . x2215