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Australian Academic and Research Network will be commissioned in April

AARN will provide improved network services between Australian tertiary and research institutions. Initial benefits will include faster and more transparent file services, the ability to log in onto remote computers and improved mail and conferencing services.

AARNet concept

xxxxxxxxx High Speed Backbone

——— Medium Speed Regional links
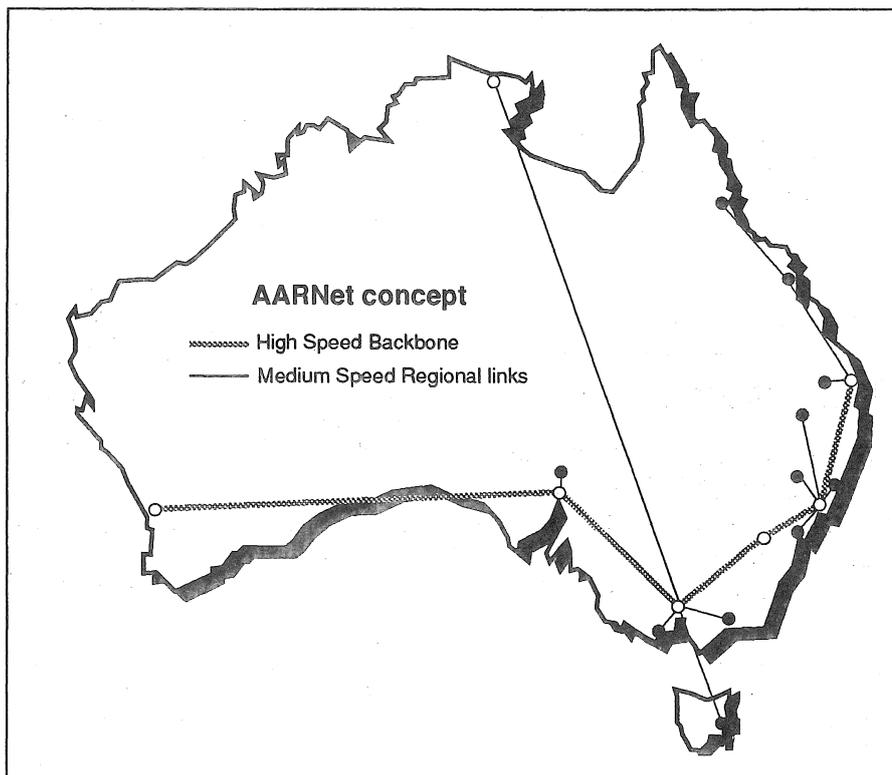
The Australian Vice-Chancellors Committee (AVCC) and the Australian Committee of Directors and Principals Limited (ACDP) have moved to establish a high-performance computer communications network within Australian tertiary education institutions. This national facility is to be constructed through the interconnection of Institutional Local Area Networks to form a set of Regional networks, and the connection of these Regional networks to a National network. This National network will also include links to international research networks.

The activities to be supported on this network include:

EXCHANGE of information, software and computer data between users of the network.

A FAST and reliable electronic mail delivery system for effective peer communication.

ACCESS to information sources, through either direct remote interactive access or through distributed database applications.

USE of local workstations to access remote high performance computing facilities in a productive manner across the network.

International collaboration, which is playing an increasingly important role within all areas of research activity, will be fostered and encouraged by AARN.

Future areas of service provision may include the addition of audio and video facilities in the next generation of the data network.

The first implementation phase of the National Backbone network uses 2 million bits/second (2Mbit/sec) links between the Regional networks of New South Wales, the Australian Capital Territory and Victoria. Other Regional networks will be served in the first instance by 48Kbit/sec links in a radial configuration from a National hub. This phase will also fund a link to the research networks of the United States (which in turn have high capacity connectivity to European networks).

Subsequent phases of the National Backbone will extend additional capacity to the Regional networks of Queensland, South Australia, Western Australia and Tasmania.

Some of the applications which will initially be supported over AARNet are electronic mail, remote access to other computers, UseNet News and file transfer facilities.

Season's Greetings

As this is the last Bulletin for 1989, the Director and Staff of Prentice Computer Centre extend their best wishes for the festive season to clients and friends.

Merry Christmas and a Happy New Year.
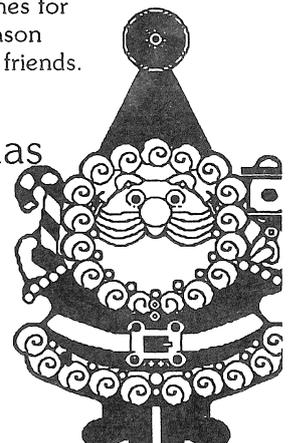
Printing PostScript files from MSDOS

PostScript puts considerable power in the hands of PC users who want to produce clean and professional-looking documents. Most modern word processing, spreadsheet and graphics programs can produce PostScript (PS) files on demand. The PCC offers comprehensive facilities for printing these files.

There are two laser printers available through the network, a Digital LPS-40 and an Apple LaserWriter IINTX. If you have an account on either UQVAX or UQVM and your PC is connected by a serial line to the campus network, you can simply send (upload) the file to your area and use the command PSPRINT to print it.

If you don't have an account but still have access to a network serial line, you may login on the UQVAX account PRINTER which does not require a password. As you login you will be asked for a surname. This is used to identify your output when you collect it from the Help!Desk.

The PRINTER account allows you to run a small set of commands, including DIRECTORY, DELETE, KERMIT, PSPRINT and LOGOUT. KERMIT allows you to send your PS file to UQVAX. You can then print it with PSPRINT.

To obtain a PS file from you application you will need to consult the documentation, but in general terms, it is usually required that you set your printer driver to Postscript and that you print not to the printer port but to a disk file. It is necessary that you name the file with an extension "ps" (e.g. chapter1.ps). Many common applications can produce PS files, for example: WordPerfect, Microsoft Word, PC-Write, Ventura Publisher, Microsoft Excel, Borland Quattro and Adobe Illustrator. Bear in mind that some programs (such as Microsoft Word) do not output a complete file but one without a "header". The header has to be prepended to the print file before sending it to the printer.

Once you have obtained the PS file, you can log-in on UQVAX (either as a normal user or under the PRINTER account). You will require a communications package that supports Kermit.

Once your are logged in, type:

```
kermit <return>

receive <return>
```

If you are running Kermit itself on your PC you must learn the "uploading" sequence:

```
Control-]

c

send <filename> <return>
```

If you are using Procomm or Procomm+ you will simply press PgUp, choose Kermit from the menu, respond to the prompt by typing the filename and press <return>.

Once the file is uploaded, send it to the printer with the following command (remember that your file must have the extension "ps")

(for the LPS40)
```
psprint <filename> <return>
```

(for the LaserWriter IINTX)
```
psprint/queue=psa$print
          <filename><return>
```

A number of other facilities are available through PSPRINT for files that aren't in PS format. They allow you to convert files in other common formats into PostScript so you can use these printers. Enquire about these facilities if your application cannot produce PS output. For specific information on conversion and printer control read the help pages for PSPRINT either on UQVAX or UQVM. Contact the Help!Desk on 377 3025 for more general information.

Discount *Microsoft* software

We supply Microsoft software at significant discounts through an agreement between Microsoft Corp. and the PCC. A number of popular packages can be obtained as Academic Editions (a fully-functional product with "no frills" packaging) at discounts of up to 80% off the retail price. Below is an updated list of Academic Edition packages.

For MS-DOS (available on 3.5" and 5.25" diskettes)

Microsoft Excel for Windows	$199.00
Microsoft Word	$150.00
Microsoft Works	$90.00
Microsoft QuickC	$75.00
Microsoft QuickPascal	$75.00
Microsoft QuickBASIC	$60.00

For Macintosh

Microsoft Excel	$199.00
Microsoft Word	$150.00
Microsoft Works	$90.00
Microsoft Powerpoint	$75.00

You must be a member of the University community (staff or student) to qualify for these discounts. Forms for this purpose are available through the Help!Desk on 377 3025. For further information contact Mr Dal Anderson on 377 3166.

Mal
Math Algorithm Library

Patrick ffyske Bowden has developed a math library package that will run on PCs, Macintosh and Apple II. Dr Bowden claims that Mal is the best problem-solving computer toolkit in numerical and applied mathematics available.

It includes a sophisticated on-screen calculator, facilities to perform single-line, 2D and 3D plots, data fit and interpolation, polymath, fast fourier, linear and non-linear equations, differentiation, integrator and differential equations.

The package comprises a manual where the BASIC source code is included and a set of disks with the same source code.

For further information contact Mr Martin Lack at UniQuest, Phone (07) 377 2829, FAX (07) 870 3313. Brochures are also available for perusal at the PCC Help!Desk.

Laser Printing Charges

In Edition 3 of this Bulletin the prices given for laser printing over the network were incorrect. The correct figures are:

Digital LPS40: 15 cents per page
LaserWriter NTX: 19 cents per page.