

University Computing Service

The University of Sydney



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15 April 1991

Mr T.J. Mullarvey
Acting Executive Director
Australian Vice-Chancellors' Committee
GPO Box 1142
Canberra,
ACT, 2601.

AARNET PROJECT SUBMISSION

Dear Sir,

re: AARNet Development Project Proposal

Please find attached, for the consideration of the AARNet Advisory Board and AVCC, a short summary of an AARNet Development Project proposed by the University Computing Service at the University of Sydney.

Should the AARNet Board or AVCC wish further details in relation to this proposal, please do not hesitate to contact me at the following addresses:

Post:	c/o University Computing Service, H08, University of Sydney, NSW, 2006.
Telephone:	(02) 692-3491
Email:	davidp@metro.ucc.su.oz.au

Could you please forward on copies of our Project Proposal to the AARNet Advisory Board and AVCC as required.

Yours Sincerely,

David C.W. Plipps
University Network Manager

Attached: AARNet Development Project Proposal



Request for Support from AARNet for Development of Central Information Archive Directories

Currently there is a growing number of AARNet Member sites which are archiving various information and making this information available, via the AARNet National Network, to other sites both within the AARNet community and elsewhere (internationally). Such archived information is stored within "publically" accessible disc space allocated for the purpose. The information archived covers a very wide range of interests and uses, including material such as start charts, manuals, research papers, standards documents, and in some cases public domain computer software.

However, there are several major short-comings with regard to the accessibility, cost-effective storage, and distribution of archived information nationally:

- At the moment a list of archive sites and a description of their contents is posted to an electronic news group `aus.archive`. Coordination of such broadcasts is somewhat hap-hazard and people needing to find specific information need to be regular readers of the archive announcement newsgroup.
- The archive index lists are transitory information which "disappears" as local news systems expire the news information. Indexes maintained on the various systems where information is actually archived, are not normally stored in "standard" locations where such information might be easily accessed on demand. The practicality of searching indexes across many archive sites to find the particular information required also arises.
- Because of the hap-hazard nature of archive index lists, their announcement and maintenance, more often than not, archived information, when located, is fetched from far distant sites even though local copies may also be available (unknown to the person requiring the information). This can lead to extremely wasteful use of network link capacity, a resource that is expensive and growing more precious as network usage climbs. Worse still, because much of the information originates from overseas, often many multiple copies of archived files are fetched across the expensive international link to the USA and beyond.
- Because of the lack of knowledge and coordination among archiving sites, archived information is often duplicated (sometimes within the same site). This represents a significant waste of computing resources within individual archiving sites and among these sites as a group.

At the University of Sydney we currently have a simple network accessible database facility which relies on The Finger User Information Protocol documented in Internet Standard RFC1196. It has the advantage that any computer with the finger client can access the database from anywhere on the Internet. Most software supporting TCP/IP facilities on a very wide range of computers systems including DOS personal computers, Apple Macintosh and larger UNIX, VMS and other systems, have the finger utility. At the moment the databases we support are:

- i. AARNet Resources Guide
- ii. Internet Resources Guide
- iii. Network-accessible libraries resource index
- iv. Index of Network Newsgroups
- v. Australian Postcodes

AARNet Archive Directory

- vi. Index of public archive files available at the University of Sydney on `archive.su.oz.au`.
- vii. Other Sydney University specific databases such as the University phone book and electronic mail addresses.

The University of Sydney finger service has proved to be very successful and is in wide use, despite very little in the way of announcements or publicity. The service is now fulfilling two roles:

1. Providing wide access to resource directories and other similar archived information at the University of Sydney, and
2. Providing wide access to our own index of archived material.

We would like to build on this service, improve the useability of the finger service itself, and expand our archive index (vi above) to include all files accessible at any archive site in Australia. Such a database would then be available to the whole AARNet community without any extra software required at individual sites. For example, a user wishing to acquire a index of all Australian archives with copies of the AARNet Quarterly progress Reports might use the following finger request:

```
User: quartertarchive
Host: directory.su.OZ.AU
```

We thus propose a project to:

- i. Investigate ways of improving the look and feel of the finger service to better suit those users who are less technically oriented. Such work might involve the development of better finger applications for several of the more common computing platforms used within the AARNet community (such as DOS and Apple Macintosh personal computers, and UNIX workstations).
- ii. Coordinate among the various information archive sites so that archive index lists are maintained at a standard location within their file systems. Most such sites already maintain such indexes, which in most cases can be generated automatically.
- iii. Put in place a simple system to fetch such lists and make the information available via the University of Sydney finger utility, to all who might have a need to search for particular archive information.
- iv. Enhance such a system to include heuristics which would list more favourable sites first (ie attempt to list archive sites by "closest archive site first") based on the source of the incoming queries. This would then hopefully provide an incentive to resist the wasteful use of international and interstate links to fetch already locally available material, or overseas material already brought to Australia.
- v. Explore ways of promoting and implementing archive services in such a way as to, whenever possible, make information available from the nearest supporting archive site.

It should be stressed that such development can proceed independently, but hopefully in coordination with, development of the archiving systems themselves, including in particular, features such as archive caching that have been suggested in the past by other AARNet member sites.

The University of Sydney Computing Service thus seeks funds for the equivalent of a half-time programmer (\$20,000, including on-costs) to enable it to undertake this work.

