

public X.25 carrier (Telecom or OTC). Some time must be spent in developing several scenarios and evaluating the scenario that provides the most functionality for the least cost and effort.

#### Benefits of the project:

Many sites within AARNet have private leased X.25 facilities. These facilities cost the individual sites a large amount of money in leased lines and traffic costs. An consolidation of X.25 services will decrease the amount of money being spent in leased services. Further cost savings will also be achieved in decreased traffic costs for X.25 traffic within the AARNet members.

Additional benefits can be offered to smaller AARNet members who do not require full X.25 facilities. Gateways can be provided that allow these smaller institutions access to X.25 without requiring them to run X.25 to their doorstep. This will reduce the expertise and equipment required at these sites to provide this service to their clients.

When completed, this project will be one of the first that uses AARNet to rationalise networking expenses and concentrate value-added services in a central area. It will be through projects such as this that tangible benefits of AARNet can be determined.

#### Qualifications and Experience to undertake the project:

The Prentice Centre is recognised for networking initiatives over the past decade. We have been involved with X.25 in Australia since its inception, being the first customers to connect. Our knowledge and experience in X.25 has been recognised by Telecom Australia in resolving teething problems with their Austpac network.

Staff will be Danny Smith who has worked with X.25 for 7 years. He developed the X.25 Packet Switch that is the mainstay of the X.25 networking in Queensland institutions, and was heavily involved in a contract to develop X.25 services for a livestock auctioning system.

#### AARNet Funding Proposal

#### PROJECT NAME :

X.400 in AARNet

#### BUDGET REQUESTED :

\$15,000

#### ORGANISATION TO WHICH GRANT IS TO BE PAID :

Name : The Prentice Centre

Address : The University of Queensland  
QLD 4072

Responsible Officer : George Michaelson

Position : Senior Systems Programmer

#### CO-OPERATING ORGANISATIONS :

None at this stage, but collaboration with other bodies within and outside AARNet is foreseeable.

#### SYNOPSIS :

The Project will investigate the impact of running an X.400

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based MHS within AARNet. It will additionally provide a bi-directional gateway into AUSTPAC and OTC services for AARNet members not running X.400 software. Melbourne University is currently providing such a service based on the EAN software package. Our project seeks to complement this facility and possibly reduce dependency on Melbourne University for similar AARNet services.

The Project will use the PP software from University College London and Nottingham University. PP is implemented in ISODE, and complements the existing QUIPU system being explored in the AARNet Directory Services project. If possible, the project will be run on the UQ AARNet DS machine. This allows at least 3 other institutions to test X.400 services at no added cost.

The Project will examine the feasibility of using X.400 features such as multi-part bodies and private body types to support targeted communications. Two examples would be the exchange of tagged word processing documents by AVCC members, and privacy enhanced email through added authentication and data encryption. Given additional effort, EDIFACT and other layered applications' use of X.400 could be explored with tremendous implications for the AARNet institutions.

#### BENEFITS OF THE PROJECT :

X.400 experience within the AARNet community will be established.

It will develop cost recovery mechanisms for charged networks being used by AARNet members.

E-mail based services will be extended to encompass added features. These include data security, reliable transfer, multi-part messages, and binary encoded messages such as word processing documents.

The Project will give services conforming to the new Australian GOSIP.

E-mail connectivity for AARNet members will expand to the wider community. This includes federal government, state education departments, FAX and TELEX users.

#### QUALIFICATIONS & EXPERIENCE TO UNDERTAKE THE PROJECT :

George Michaelson has experience working with 3 distinct X.400 products since 1987, consults on X.400 and X.500 within Australia, and is the key researcher for the AARNet X.500 DS project, which has close relevancy.

There are established links between The Prentice Centre and the software developers within JANET.

Danny Smith is available for additional input to a X.400 project.

#### BUDGET JUSTIFICATION :

Registration of a PRMD with Austpac/OTC for 1 year.

Additional costs to negotiate with Telecom and OTC towards added functionality required from their gateways. Principally, this involves multiple points of contact from AARNet into PTT provided services.

Travel costs for the above, and attendance at conferences & workshops.

Part funding for an estimated 6 months labour, and use of CPU and Diskspace.

Implementation of charging and accounting software to complement a suitable system for cost recovery of the gateway.

Liaison with other projects within the Internet community.

Documentation of the project conclusions, in particular a report to the AVCC detailing the long-term feasibility of X.400 within AARN.

