



Australian Vice-Chancellors' Committee

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International Research Communications Networks

The major objective of participation in the international arena by AARNet is to ensure that AARNet can effectively service the requirements associated with the international collaborative activities undertaken by the academic and research sector through the provision of an internetworking communications service.

The means by which this objective is being achieved by AARNet includes the primary activities of:

- the deployment of communications services across the national environment which are compatible with, and can interoperate with, our international peers and partners in this endeavour;
- to enter into agreements with our international peers and partners to provide the means of communications access on an international scale; and
- to participate within the sphere of activities of relevant international and national bodies to ensure that the highest possible levels of quality of service are available to the national end-user population.

In undertaking this activity, AARNet's activities effectively commence with our participation in the PACCOM program. This program is one of the provision of general infrastructural links in the Pacific region, together with an associated coordination of the activity of operation and management of this regional network. A brief overview of the current organisational structure is attached to this document.

Through PACCOM, AARNet uses a 256Kbps satellite connection from the AARNet National Hub to the major US west coast interconnection point (FIX-West). This link supports the TCP/IP protocol stack, and associated TCP/IP user applications. International connections from FIX-West are also supported through the PACCOM program to NEW Zealand, Japan, Korea, and shortly Hong Kong, again using TCP/IP protocol and associated applications.

From the US connection point similar access is possible into the domestic network infrastructure of the US. Traffic transit authority granted by the NSF and NASA within the US also allows general access to other exchange points, and hence to other international networks. These include Canada, and other parts of the American continent, and, from the east coast of the US, access to a number of general-purpose trans-Atlantic links connecting into the European networking structures. Through the TCP/IP protocol stack, and various application gateways into other protocol domains, access to the majority of European destination points are also supported.

In terms of AARNet's level's of commitment into the structure of international access our financial outlay is currently that of funding the Australian half-circuit costs of the link into FIX-West. There are no further access or incremental charges associated with the access and usage of this global network infrastructure.

This resultant networking infrastructure is not one where AARNet should adopt the role of a passive consumer. Already within 12 months AARNet is a major user of this international network (preliminary figures supplied by the NSFnet indicate that Australia is now the second highest international user of the US NSFnet, coming behind only Canada on a national basis). We have quickly reached a point where international communications services provided through AARNet are an integral component of our research and academic environment, and there is a consequent commitment to ensure that AARNet takes an appropriately active role in the international domain in seeking to provide continued quality of access to such services.

Such a commitment implies undertaking an active role in two major areas:

- that of continued participation in the PACCOM program and related activities in the Pacific region; and
- that of participation in the inter-regional activities which effectively coordinate and bind the European, American and Pacific programs of activity.

Over the last two years these programs of activity have been commenced by AARNet, and documentation of progress to date has been produced as a record of this undertaking. These documents already produced include a general overview of the structure of the regional networks and national networks across the global internetworking environment, reports of PACCOM activities in 1989 and 1990, and a report of the October 1990 meetings of the Coordinating Committee for Intercontinental Research Networks and the Intercontinental Engineering and Planning Group (which were attended by an AARNet representative in a Pacific regional role). Three further documents have now been produced, and are attached. The first is a general description of the current organisation structure of PACCOM (as a precursor to the current activity of seeking a coordinating policy group to work in the Pacific region). Secondly a document providing an overview of the current issues confronting European academic and research networks, following attendance at the 1991 RARE conference by representatives of AARNet, and thirdly a report of the May 1991 meeting of the IEPG. A report of the May 1991 CCIRN meeting is anticipated shortly.

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