Microprocessors and supercomputers

By the 1970s, the rise of local computing systems was evident. The Division bought Hewlett Packard mini-computers, mainly for data acquisition. These mini-computers were also going to be used for processing of data for CSIDA (the satellite processing system). At the time the proposals were being developed and submitted to CSIRO management for funding, Arch Dyer remarked that with so much money being asked for, the request would probably be granted! He was right.

In the late 1970s, the Division installed its first microcomputers for experiment control and data collection, and microprocessors began to be incorporated into data acquisition systems developed by the Electronics Workshop.

Neil Bacon led the computing group, which in 1977 moved into the cream-brick building vacated by Bill Priestley upon his retirement as Chairman of CSIRO's Environmental Physics Research Laboratories. Tony Davies joined the group in time to help with the move. His job was to write computer programs, usually in Fortran, for Divisional scientists. Graham Rutter looked after software and hardware for the Hewlett Packard machines. Tony Davies took over from Neil Bacon as head of the group in 1978. Subsequent leaders were Del Smith, Robert Bell, Tony Eccleston and Russell O'Brien.

In the early 1980s, personal computers arrived and began to take over such tasks as typing (word processing), as well as being used for general purposes. In the mid-1980s, after corporate CSIRO had installed a Cyber 205, it became clear that the Division needed to extend its own facilities. By 1989 we had a Divisional UNIX system, UNIX workstations, and a local-area network (LAN), consisting of a combination of thick and thin Ethernets connecting all offices and laboratories.

During the early 1990s, the Division continued upgrading local systems and the LAN with personal computers, workstations, X-terminals and upgraded central UNIX servers, while the CSIDA system was moved onto a separate network of UNIX workstations. The Climate Modelling Group bought and regularly upgraded a dedicated multi-processor system for climate modelling.

In 1990, large-scale scientific computing was transferred to a CRAY Y-MP in Port Melbourne. The Division established a 2 Mbit/s link that provided for the first time access to the Australian Academic Research Network (AARNet), and to the rest of the world on the Internet. Electronic mail became widely used, so that by 1994 nearly all staff members used it.

The Information Technology Group, as it became known in 1995, includes manager Russell O'Brien, programmer Russell Howden, and Romy Soriano and Shane McEwan who help run the Divisional network and support the more than 100 computer users on site.

Hal Gordon (left) with Barrie Pittock, and the CSIRO CRAY Y-MP2/216 supercomputer located at Leading Edge Technology, Port Melbourne.