

BLACK MOUNTAIN

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# UNIX\* on CSIRONET Workstations

Neology Ltd, the leading UNIX\* software house in Australia, has won the contract from CSIRONET to install UNIX on its new multi-user workstations.

## Background

The workstations have been designed and developed by CSIRONET in collaboration with a Canberra-based company, Office Automation Pty Ltd, based on the proven design of the present CSIRONET Micronode (see *CSIRONET News* No 171, June 1983, pages 8-13).

During the early stages of the Micronode project, CSIRONET staff recognised a need to increase the computing power available at the termination points of our network. We believed that the Micronode architecture was a suitable base for the creation of such a product, which we now call the multi-user workstation.

The need for the new product was clearly verified by an extensive market survey commissioned in 1984, and was enhanced by the growing number of UNIX systems in the industry.

## Design

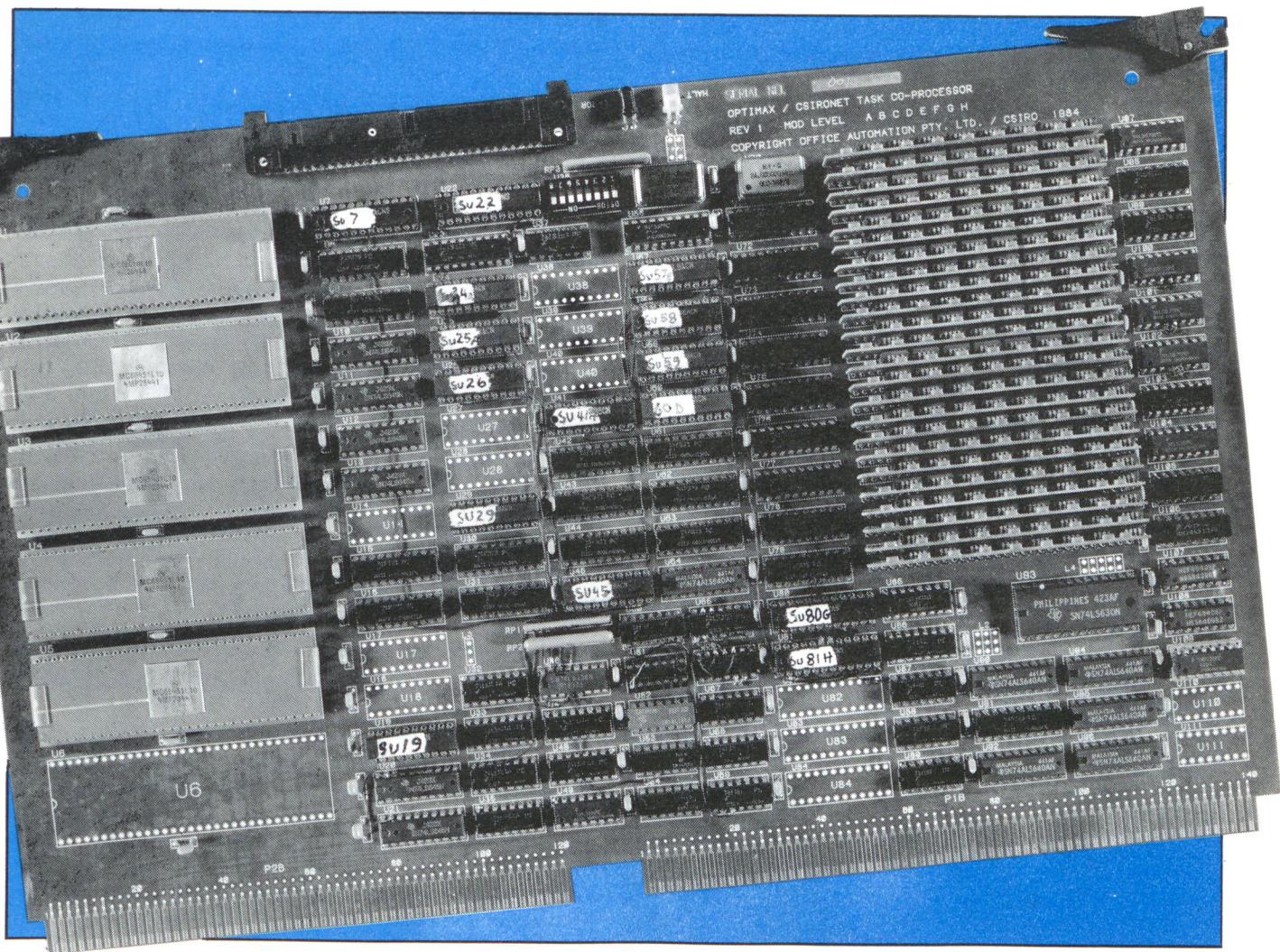
The design of the workstation incorporates a fresh view of the requirements of a hardware system within a UNIX environment. A number of features have been implemented to specifically cater for areas that have not been efficiently addressed by other UNIX systems. These areas include:

- multiple cooperating task co-processors with large amounts of local memory to execute users' code;
- intelligent file co-processor with large cache memory;
- intelligent serial co-processors to minimise terminal loads on the rest of the system;
- integration into heterogeneous host and network systems.

Most of these system goals have already been achieved, with the balance in the process of final development. ▶

\* Unix is a trademark of AT&T Bell Laboratories.

Below: CSIRONET Workstation task coprocessor board.



In order to take advantage of these features and include the implementation of the UNIX software, CSIRONET had to give very careful consideration to selecting a suitable software collaborator. Neology was chosen because of their direct expertise and experience, and our confidence in their ability to make use of the features of our system. Their selection also follows CSIRONET's philosophy to join with Australia's high technology companies to produce innovative and much-needed Australian-designed and manufactured products of excellence.

Neology will undertake all UNIX development on the systems, which will offer facilities for word processing, data entry and scientific applications. The design of the new workstations was configured to match the novel and efficient adaptation of UNIX version V.2 by Neology, so the combination of hardware and software would provide a cost/performance ratio superior to any systems available from commercial suppliers in Australia.

#### **Applications**

Built around the Motorola 68000 chip series, the workstations are powerful, general-purpose UNIX systems, designed to support 15 to 40 users and provide distributed processing facilities which interface with the CSIRONET network. The machines will find extensive

application in many scientific, commercial and industrial areas requiring a high performance system to support a large number of users. They will be more powerful and cheaper than competing imported machines.

#### **Integration into CSIRONET**

A number of concurrent activities are underway within CSIRONET to integrate the workstation into the network. These include:

- file transfers to dissimilar host systems;
- access to specialised peripherals;
- terminal access to any CSIRONET host;
- access to other networks via gateways;
- downline loading of application programs;
- remote system management including operating system upgrades.

#### **Prototypes**

The first two prototypes of the workstation will be benchmarked in October this year.

The work is expected to result in a commercial product which will be viable in the general computer industry. To this end, we are finalising discussions with companies to manufacture and market the product on a much larger scale. ■

## **Appointment of General Manager (Marketing)**



Mr Bernard Green has accepted a three year term as General Manager (Marketing), beginning on Thursday 1 August 1985.

Bernie will be remembered by some staff as the visiting consultant who conducted the market survey on the CSIRONET Workstation last year. He comes to CSIRONET with a wealth of experience in sales and marketing in a computing environment.

English born, Bernie began his career as a teacher in the UK before moving into a sales career with British Olivetti in 1962. A number of sales, marketing and management positions with Anfield Computer Services, IBM, DEC and Gammya Associates followed until late 1979. At that time he became an independent consultant undertaking assignments in technology marketing and information systems.

Bernie and his family migrated to Melbourne in January 1982 and accepted the position of General Manager, CL Systems Ltd, a small software house.

In July 1982 he moved to his present position as a senior consultant with Peat Marwick Mitchell, consulting in information technology and marketing. He is currently Deputy President of the Australian Software Houses Association and is a member of the Institute of Data Processing Managers, Australian Computer Society, Institute of Management Consultants, British Institute of Management and the Institute of Marketing. ■