4. Computer Control

It should not be thought that computers are capable only of being fed numbers on punched cards and producing lines of printed output. Devices now available will translate a wide variety of quantities into a form suitable for use by a computer, and similarly computer outputs vary in types. For example, one increasing application for computers is in the direct "on-line" monitoring and control of processes or experiments.

At the new Douglas Point nuclear-power station, a computer will be used to monitor several hundred temperatures, pressures, and flow rates to ensure that quantities remain within prescribed limits. If they do not, the computer will generate information to allow rapid correction of the deviation to be made. If necessary, the computer is capable of direct action such as turning a valve or manipulating a switch; - it will 'run' the power station. In an application like this, the computer is being used to relieve man of a routine, monotonous, but necessary task.

5. Non-Numeric Applications

Many interesting applications are being developed in problems with no obvious connection with the arithmetic or logical facilities so far described. These include the use of computers to play games such as checkers or chess, in the writing of poetry or music, and in language translations. Computers are being used to provide at least rough translations of several foreign languages into English. Before long, computers will be able to store vast dictionaries of words and grammar rules and so turn out useful translations many times faster than human translators.

Central Data Processing Service Bureau

The Central Data Processing Service Bureau (CDPSB) was created in accordance with a recommendation of the Glassco Commission to provide a central computing service for federal government departments. Establishment of the Bureau was regarded as a necessary alternative to the uneconomic acquisition of a number of medium-sized computers by various government departments. Such dispersed computers might not be utilized fully and almost certainly would not be wholly compatible in programming languages and computing techniques. The Bureau was created to provide a service to government departments which might otherwise feel that they must acquire a computer even if they could not load it fully. It was not the intention to prevent those departments having a legitimate need from acquiring their own facilities.

The Bureau was created in September 1964 and initially provided a service in which surplus time on existing government computers was offered to other government departments. However, if it were not possible to satisfy the requirements on government installations, time on commercial or university

K.J. Radford