

computers was provided. This service commenced in April 1965 and is still available. During the first complete fiscal year, the Bureau provided computer time worth \$721,000 to departments which did not have their own installations. Of this total, 55% was provided on existing government computers, thus making use of surplus time and effecting a substantial economy.

Establishment of Central Installation

Early in 1965, it became apparent that the availability of surplus time on existing computers would decrease and that the Bureau must obtain a central installation of its own to satisfy the growing needs of federal government departments. At this time, two major developments in computing techniques were on the horizon:

- (a) multi-programming, which was seen as facilitating the sharing of an installation between a number of users;
- (b) remote job entry, which would allow access to a central computer facility by user departments in a manner which would enable them to retain control over the processing of their work.

Accordingly, specifications were written, tenders were called and in November 1965, after a considerable period of evaluation, the Bureau ordered an IBM System /360 Model 65 Computer. The initial configuration of this computer installation is shown in Figure 1. The emphasis in design was on flexibility of operation and on the capability of expanding its power without a major system reorganization.

A schematic diagram of the Bureau installation, which will go into operation in August 1966, is shown in Figure 2. The heart of the processing system is the powerful Model 65 central processor. Jobs awaiting processing are held in a job stack on the input file. Once a job has been selected for processing, it is transferred into core memory for execution. During execution, data may be transferred to and from magnetic tape or disk files as specified by the user. After processing, resulting data are placed on the output file for transfer to the appropriate output devices.

Procedure for Utilization of the Service

Users can have access to the Bureau installation by one or more of the following methods:

- (a) Direct access to the input and output files via a communication link from suitable terminal equipment installed in the user's own data centre. Such a link allows jobs to be transferred directly on to the input file and will allow the output to appear directly on a printer at the user's data centre.