



NEWSLETTER No. 1 - 3/7/64

This is our first newsletter, and is intended as a means of disseminating brief notes on matters of current interest. Newsletters will appear from time to time as the need arises, and not necessarily at regular intervals.

1. STATUS

The 3600 computer and the Computing Research Section central staff have been installed in the new building at Black Mountain, Canberra. Trials of the equipment are in progress, and card input jobs for running on the machine will be accepted from July 13th, but no guarantee about turn around time can be given at the moment. Intending users should study "Procedure for Submission of Jobs" which is now being distributed.

The 3200 computers for the Adelaide and Sydney subsidiaries have arrived in Australia, the Adelaide machine is in position awaiting power wiring which should be complete early in August, and the Sydney machine is in store in Sydney awaiting completion of accommodation, expected about the same time. Trials of these equipments are expected to delay acceptance of 3200 jobs until toward the end of August. The Melbourne subsidiary depends on the completion of the new building at Clayton, and currently it is expected to be installed and running in September, but prior to that 3200 jobs will be accepted for running on the Monash University's 3200 from about mid August.

2. EQUIPMENT

The equipment configurations at Canberra and at the subsidiaries have been changed from those described in the first two memoranda, and the new configurations and reasons for the changes are set out in memorandum No.4 (in preparation). From a users point of view the addition of store to a total of 16,384 words and a third magnetic tape drive at each subsidiary are of most interest.

3. PROGRAMMING

(a) FORTRAN. There will be two different FORTRAN's available for the 3200 machines, namely "4K FORTRAN II for the 3200" (Digitek) and FORTRAN 32, the FORTRAN for the 3600 is 3600 FORTRAN, and these could be termed F2, F32, and F36 respectively. Strictly speaking, these languages are not identical, but very roughly F2 is a subset of F32 which is a subset of F36, so that programs written in F2 will be able to run with minimum difficulty on any of the three compilers. The authoritative manual for F36 is publication number 60053700 "3600 FORTRAN Reference Manual Preliminary" and these are available; F2 and

its manuals will be available early in July, and F32 will not be available until some later date. Only users who are either based on Canberra or know that their job is too large or slow for a 3200 machine should use F36; all others should confine themselves to F32, but for the first few months must use F2 or their jobs will be sent to Canberra. Further details are available from Computing Research Section staff.

(b) SCOPE. The monitor system for the 3600 computer is SCOPE, and it is intended to run the 3600 computer with this monitor except in exceptional circumstances, e.g. for running certain 1604 systems. On the 3200 machine, the SCOPE 32 monitor will not be available until October 1964; it has features in common with SCOPE, and upward compatibility between the two should be achievable. The F2 system will contain its own elementary monitor.

(c) COMPASS. The assembly language for the 3600 is COMPASS. It is important that 3600 users realize that SCOPE monitors all I/O, and hence users should either use the SCOPE macros (see SCOPE reference manual p.4-1) supplied with COMPASS, or should refrain from attempting I/O operations in the COMPASS language. For the 3200 there is a basic assembly program BAP 32 which will later be replaced by COMPASS 32 of which it is a subset, and COMPASS 32 will operate under SCOPE 32, and hence the same remarks regarding I/O apply.

(d) OTHER LANGUAGES. Versions of ALGOL and COBOL are or shortly will be available for the 3600, and are well on the way for the 3200. Intending users should see Computing Research Staff before embarking on programming in these languages.

(e) 1604 SYSTEMS. There is a wealth of material originally written for the 1604 computer available through the CO-OP users organization; however much of it would require extensive modification before being available on the 3600. Even subroutines written nominally in FORTRAN can be troublesome, as the FORTRAN 60 system on the 1604 allowed the use of assembly language interludes, and these are inadmissible in other FORTRANS. Full scale 1604 systems require the 1604 CO-OP monitor for successful running on the 3600, and this is currently not available. (PERT and linear programming systems for the 3600 will however, be available shortly, so the 1604 versions will not be made available).

4. PUBLICATIONS

The following is a list of Computing Research Section publications to date:-

+ Procedure for Submission of Jobs. J.P. Penny 22/6/64.

Memorandum No.1 The Central Laboratory. T. Pearcey and
T.S. Holden. September 1963. (Out of print).
(Superseded by Memorandum No.4)

- Memorandum No.2 The C.S.I.R.O. Subsidiary Systems.
T. Pearcey. November, 1963. (Superseded by
Memorandum No.4)
- Memorandum No.3 Character and Code Sets. T. Pearcey.
June, 1964.
- x Memorandum No.4 Revised Equipment Configurations.
T.S. Holden. July, 1964.
- x Technical Note No.1 Planned Subroutines for the C.S.I.R.O.,
CDC 3200 Subsidiary Computing System.
T. Pearcey. May, 1964.
- y Technical Note No.2 Specification of FORTRAN II/4K language
for the CDC 3200 (as known at 16/4/64).
T. Pearcey. May, 1964.
- y Technical Note No.3 Representation of Line Printer Characters
on other media. T.S. Holden. June, 1964.
- y Technical Note No.4 Instructions for conversion of IBM 1620
FORTRAN II programs for use on a CDC 3600.
S.R. Albright. June, 1964.
- x Manual Supplement No.1 Addenda and Errata to 3600 FORTRAN
Reference Manual D.J. Langridge. 18th June,
1964.
- y Manual Supplement No.2 Structure of Standard 3600 FORTRAN Decks.
J.P. Penny. 30th June, 1964.
- y Manual Supplement No.3 Structure of Standard 3600 COMPASS
Decks. J.P. Penny. 30th June, 1964.
- Newsletter No.1 T.S. Holden. July 1964.

Other Technical Notes dealing with SCOPE options, labelling of magnetic tapes, use of paper tape and use of plotter are planned.

A word of explanation might be in order. The Memoranda are intended to be carefully worded statements which will be widely circulated and will be valid for a reasonable length of time. The Technical notes are short summaries of currently useful information, of a less formal nature than the memoranda. The Procedure for submission of Jobs, which has recently appeared, together with manual Supplement No.2 is required reading for all prospective users of the system. Manual Supplements are notes, comments, errata and addenda, intended to be filed by the user with the manual to which they refer.

T.S. Holden