<u>C.S.I.R.O.</u>

<u>COMPUTING RESEARCH SECTION</u>

<u>NEWSLETTER NO. 13 - 1.6.66</u>

I. <u>GENERAL</u>

<u>Computer Conference, Canberra.</u>

Those who were unable to attend the recent conference can
consult a reference set of the conference papers at the C.R.S.
Library, Canberra. In most cases copies of individual papers
can be obtained directly from the Authors.

<u>Publications issued this month.</u>

NL - Newsletter No. 13.

<u>Mailing System.</u>

To date 380 users have completed a reply form. Further copies
of this form can be obtained from the local centres. Any queries
about the mailing list should be directed to The Librarian,
Computing Research Section, C.S.I.R.O., P.O. Box 109, Canberra
City, A.C.T.

<u>Subroutines.</u>

In the next Newsletter an up-to-date list of the subroutines
held in the Section library will be supplied.

<u>New Class of Publication.</u>

A new class of publication called Seminar Paper will be
issued when the information given in a seminar, workshop, etc.,
is considered to be of sufficient general interest. See Index
of New Publications page 2.

Professional Officers, Melbourne - Adelaide - Sydney Subsidiaries.

ADELAIDE

D.C. Knight   -   Manager

E.H. Kinney

D.R. Ross

MELBOURNE

J.J. Russell   -   Manager

R.J. Hurle

J. Tindale

P.P. Hanlon

SYDNEY

C.H. Gray   -   Manager

W.A. Burridge

J.D. Hayhurst   (Miss)

G.S. Masters

R.N. Walker

The operations Manager at Canberra is R.H. Hudson.

Index to New Publications.

May 1966

Seminar Paper No. S.P.1   The Use and Abuse of Algol 60.
     J. Boothroyd. University of Tasmania. January 1966.

Seminar Paper No. S.P.2   Early and Later Version of the
     Theory of Transformational Grammer. R. Zatorski.
     Melbourne University. May 1966.

Seminar Paper No. S.P.3   Aspects of the Syntax of Simple
     Pictorial Displays. M.B. Clowes, C.R.S. May 1966.

No other publications were produced in May. A complete list
of publications to date can be found in Newsletter No. 12.

Additions to the Subroutine and Program Library.

E2 CSIR CHEBPOL

Author: Dr. J.K. Mackenzie. Division of Chemical Physics.
Purpose: Evaluates the coefficients in the chebyshev
polynomial expansion of a function.

PROGRAM UNTANGLE   (In preparation)

This program re-orders the statement labels in a Fortran program
so that they appear consecutively. It treats the Fortran source deck
as data and ammends all references to the original labelling system.
The program is particularly useful for interpreting programs received
from outside sources.

Author: P. Ewens. Division of Land Research.

II. 3600

Fortran Course - Canberra.

A basic Fortran course will be held at the C.R.S. Canberra from
Tuesday, June 14th to Friday, June 17th. Enquiries to J.S. Armstrong,
40455 extension 503.

Compass Course.

An enquiry for instruction in Compass programming to a level such
that users could write small subroutines in the assembly language has
been received. This course if held would not be a full Compass
programming course which could take up to four weeks full time, but
would be intended for users already versed in machine or assembly
language for a different machine. Anyone interested please contact
J.S. Armstrong, C.R.S. Canberra.

Visitors to Canberra Centre.

Customers visiting the Section at Canberra are urged to leave
their names and contact points whilst in Canberra with Miss C. Green
at the Enquiry Counter. This will facilitate distribution of mail,
telegrams and the transfer of telephone calls and other messages.

DAD Manuals.

The user manuals describing the new system have been written
and will be issued shortly.

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<u>The DAD System - A brief outline.</u>

The diagram on page 5 indicates the type and number of the input/output units which will be in operation in a time-shared mode.
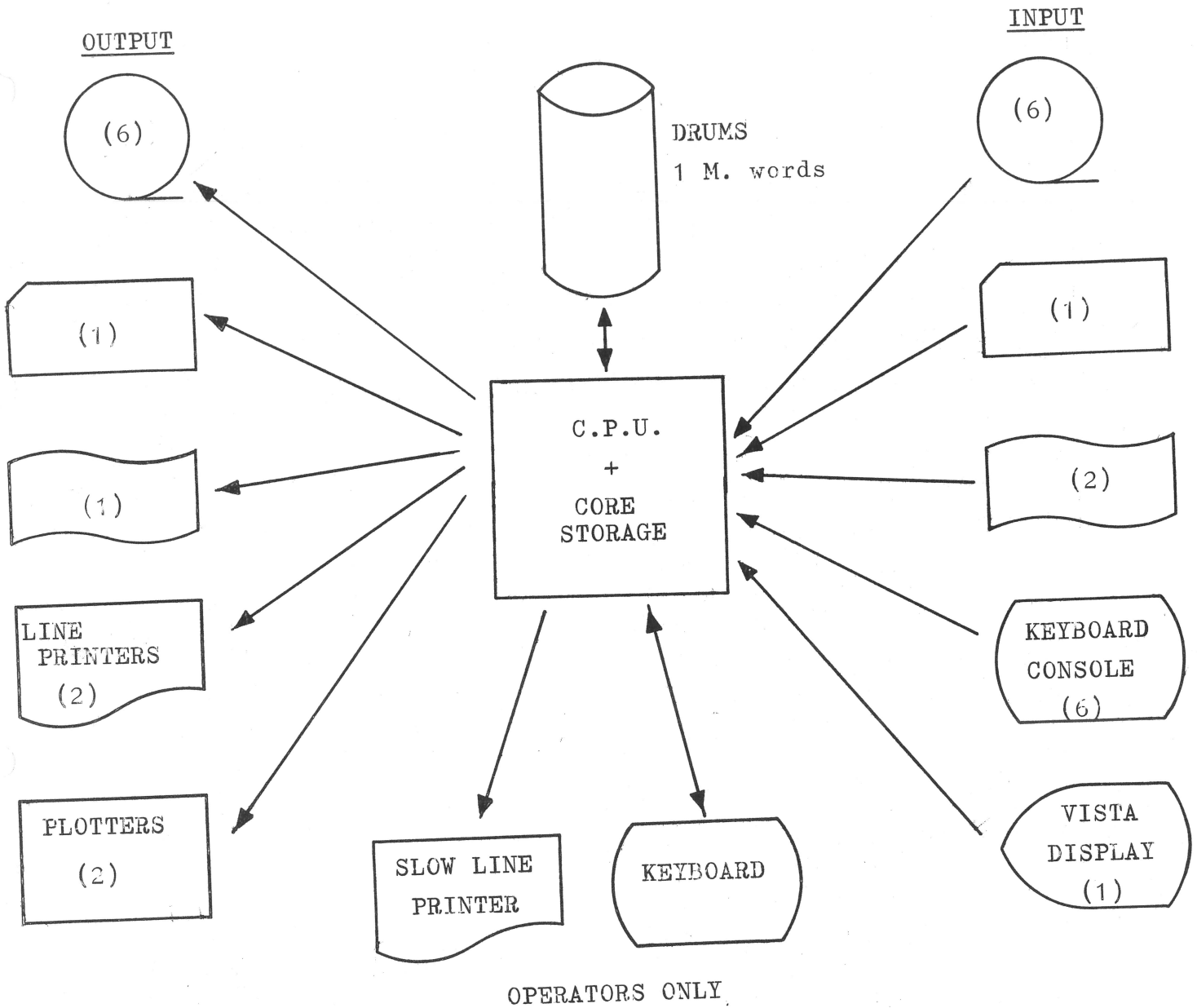
The basic item of information is a document which can be for example a program, a sub-progra, data, program and data, etc. In general a stack of documents will be read by the card reader and whatever their final requirements the information from these documents will be written on to the magnetic drum under the control of a background program. Similarly input from the paper tape or magnetic tape stations and from the keyboard consoles can be routed to the drums by the background program. These documents if required for execution as indicated on the relevant control cards will be entered on to one of two Execution Lists either EL1 or EL2. Short running jobs i.e. less than K mins., (K at present is 5) will be placed on EL1 which will have priority over all the jobs in EL2.

The jobs in Execution List 1 are examined and the first to have all the relevant documents available will be compiled, if necessary, executed, and the results are sent not to the relevant output unit but back to a section of the magnetic drum. There is an equivalent output part to the background program and calls for the printing, punching etc. are queued on one of two Output Lists OL1 and OL2. OL1 is for output requiring less than N drum segments (N is presently 50 i.e. about 1000 lines of output on the line printer).

When the relevant output unit is free the system initiates the transfer from the drum to the device. Consequently it can be seen that the DAD system will provide for simultaneous input/output together with more efficient use of the central processor.

When the DAD system is fully operational the user will be able to retain documents containing data or relocatable subroutines or Fortran subroutines on the drum. Using the keyboard consoles he will be able to edit old documents, create new documents and call documents for execution.

DAD SYSTEM

OUTPUT

INPUT

DRUMS
1 M. words

(6)

(6)

(1)

(1)

(2)

C.P.U.
+
CORE
STORAGE

(1)

LINE
PRINTERS
(2)

KEYBOARD
CONSOLE
(6)

PLOTTERS
(2)

SLOW LINE
PRINTER

KEYBOARD

VISTA
DISPLAY
(1)

OPERATORS ONLY

p.t.o.

III.   3200

3200/3600 Compatibility.

The arrangement for increasing compatibility by use of
3200 ONLY; 3600 ONLY statement cards included in Newsletter
No. 12 was a joint effort by Dr. J.K. Mackenzie, Division of
Chemical Physics and J.J. Russell, Officer-in-Charge, Computing
Research Section, Melbourne. At the time of publication the
editor was unaware that there had been a contribution from
outside the Computing Research Section.