C.S.I.R.O.

COMPUTING RESEARCH SECTION

NEWSLETTER NO. 21 - 1.3.67

I. GENERAL

Publications Issued since the last Newsletter

NL Newsletter No. 21

LM Library Accession List No. 12 - November 1966.

M6 Manual Supplement No. 28. SNAP dumps in the DAD system. B.J. Austin. February 1967.

N.B. Two manual updates for the 3600 Preliminary Fortran Reference Manual (600 537 00) are enclosed.

Other Publications Available

G6 CSIR FOURIOUS Fast Fourier Analysis.
Author: D.J. McLean, C.S.I.R.O., Division of Radio Physics.
Date: December 1966.

This routine is considerably faster than others presently available. Listings and/or source decks are obtainable using the normal SRLIST call.

Courses and Lectures

3600 Compass. Canberra, March 15th-16th. This course is for experienced Fortran users who wish to have an appreciation of the Compass Programming System. Further details and application forms from the Education Officer, C.R.S., Canberra.

Advanced Fortran - Brisbane. A series of lectures on Fortran topics not covered in the Basic course is to be arranged. Users who are interested in attending are asked to contact K.P. Haydock, Division of Mathematical Statistics, St.Lucia, Brisbane.

Advanced Fortran - Canberra.

March 22nd -	10.00 a.m.	Use of the Calcomp Graph Plotters
	2.00 p.m.	3600 Word Structure
March 29th	2.00 p.m.	The Use of Paper Tape on the 3600

This lecture is designed for users who have had little or no experience of the use of paper tape input/output for data or programs.

April 5th	10.00 a.m.	Efficient Use of Magnetic Tape
	2.00 p.m.	Error Analysis and Interpretation of Compass Listings.

APT Automatic Programmed Tools

Users who have applications which involve the numerical control of machine tools may be interested in the ADAPT system. It is described in Control Data Publication 60173400. Computer System ADAPT.

II. 3600

Saving Documents Future Policy

It is expected that within a few months the system will be able to save documents for extended periods. It will then become necessary, at times, to discard documents when the drums are full. Documents which have names with the last two characters in the identification field numeric and in the range 01 to 69 will be discarded first.

Users may already be aware that document names of the type

cc, ABCDEF01 cc = charge code

cc, ABCDEF02 etc

are inadvisable as the system in creating an output document replaces the last two characters by the logical unit number of the output device. In the case of the standard output unit the output document name for all the above input documents would be

cc, ABCDEF61

Thus if two or more jobs are input the system will create output documents of the same name but with different edition numbers. Only the latest version will be printed.

N.B. The character string in the identification field can begin with either a numeric or alphabetic character. Thus in the case above cc, 01ABCDEF

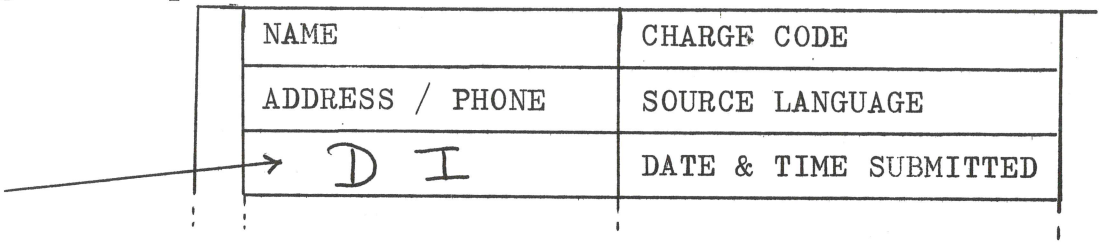
and cc, 02ABCDEF would be acceptable.

From the above it follows that document names which consist of only one or two characters should not be used.

Jobs - Displays Inactive

As indicated in last months Newsletter it is the responsibility of the programmer to include a $\frac{7}{9}$ DESC, DI card with his deck where his program will only run with the display system inactive, and this should be noted on the job request card in the space indicated.

This is particularly important for jobs which involve input of magnetic tapes.



Section of the Job Request Card

Display Programs

At the present time the following display programs are available:

(1)	CIDER	For use see Memorandum No. 6
(2)	INTERP	
(3)	LISTDOCS	Gives a listing of all documents held under the charge code entered on the program request form.
(4)	CORESNAP	Gives the actual representation of selected areas of the core storage.
(5)	NIM	Demonstration programs. Instructions for use are contained in the program.
(6)	PONTOON	
(7)	SOLITAIR	
(8)	KEYTEST	Engineers test program.

KWIC Indexing System

Two Key Word In Context indexing systems are now available. One is produced by Control Data the other was undertaken as a project at C.R.S. Adelaide.

Ref. Control Data. 3600/3800 KWIC Version 1.0 Publication No. 60175300.

Documentation for the C.R.S. version will be available shortly.

Paper Tape on the 3600

The following are suggestions relating to the submission of paper tapes for input to the Canberra 3600, adherence to these submissions will assist the operating staff considerably, and avoid unnecessary delays to users.

1. Tapes longer than 50ft. must be wound on a reel, clockwise with the side of the tape with 3 information bits between sprocket holes and edge away from the viewer.
2. Tapes should be provided with 3ft. of blank leader (sprocket holes only), with the charge code and ident clearly written at the head.

The length of leader may be reduced to 12" for short tapes (20ft. or under).

3. Headers must be proceeded by several "runout" (07 - lower case code) characters, then "newline" (02).

4. Headers must be terminated by "newline" followed by at least 6" of "runout".

5. An indication may be provided to the operator as to whereabouts a non-standard document should be started. This should not define a particular frame, but be marked in a group of repeated characters which the program will ignore.

6. Most splices give trouble on input, so that they should be avoided if at all possible. Badly spliced tapes will not be accepted.

Puzzle

Last month R. Buring, D.H. Colless, M.J. Cumming, M.G. Kovarik, B.McHugh, J.F. Nicholas, G. Petru, R.I. Tilley and B. Wall showed themselves to far from perfect squares by sending correct answers to the problem of the Venusians age.

The trick is to observe that the difference between two numbers one of whose digits is the reverse of the digits of the other cannot be less than 9 (unless the numbers are equal) for numbers in the decimal system and that the numbers represented in this problem must be base of 6. Alternatively the fact that Venusians have 6 fingers suggests that the number system is to base 6.

Further inspection shows that the only numbers satisfying the other conditions are 34_6 and 43_6 (22_{10} and 27_{10}) whose sum is 121_6 (49_{10}) that is $(11_6)^2$ or $(7_{10})^2$.

This month's puzzle is more difficult.

Vicar: The product of the ages of three of my parishoners is 2450. The sum of their ages is equal to twice your age. Can you tell me their ages?

Curate: No

Vicar: If I tell you that I am older than the oldest of them can you now tell me their ages?

Curate: Yes.

Question: What is the age of the vicar?