

G. Butler

C.S.I.R.O.

COMPUTING RESEARCH SECTION

NEWSLETTER NO.26 - 1ST AUGUST, 1967

I. GENERAL

Publications Issued this Month

NL - Newsletter No.26

LM - Library Accession List No. 16 - May-June, 1967.

Other Publications Available

EP - A Simscript Primer (EP5), J.S. Armstrong and K.P. Tognetti.

M6 - Manual Supplement No.30. Corrections to the 3600 Simscript Manual. (Reference: Pub. No.60134600). K.P. Tognetti.

The above two publications will only be distributed to people attending the Simscript Course. Other users may obtain them on application to the Publications Assistant, C.R.S., Canberra.

K3 - CSIR EXAMINER Magnetic Tape Examination. 3600 only.

Author: G.R. Knowles, C.R.S., Canberra.

Basic Fortran Courses

Subject to sufficient applications being received, a Fortran course is to be given in Adelaide on 21st August. Anyone wishing to attend should apply to the Officer-in-Charge, Computing Research Section, C.S.I.R.O., University of Adelaide (Phone 235511).

Seminar - Canberra

At 2.00 p.m., Thursday, 10th August, in the Lecture Room, C.R.S., Canberra, Mr J.C. Kellett of Control Data Australia will give a talk on:

PERSPECTIVE DRAWING BY COMPUTER

While working as a Systems Analyst in the construction industry, Mr Kellett developed a set of programs which accept details of buildings and produce from these details any specified pictures in true perspective from any angle. The programs, which are written in Fortran, are quite general and can picture any object. Mr Kellett will describe the use of these programs.

C.R.S. Library

The collection of books in the C.R.S. Library has now been classified. Library Accessions List No.16 (and onwards) gives these shelf numbers for new items.

The classification is a modified version of "Automation - Classification - provisional edition", produced by the Library and Documentation Service of the Netherlands Automatic Information Processing Research Centre, Amsterdam, 1963. It has also been adopted by the British Computer Society Library.

Data Collection and Recording

As indicated below, Mr C.D. Gilbert has now taken up his position in Canberra. Mr Gilbert's responsibility will be to provide an advisory service on questions related to data acquisition, data recording and related topics. At a meeting held last September, a number of users stated that they thought that such an appointment was desirable, and Mr Gilbert will be contacting everyone who attended that meeting as soon as practicable. Meanwhile, if you have a problem of this nature, do not hesitate to contact Mr Gilbert direct. His extension number is 518.

The Western Front

The Section will shortly appoint an officer to the West Australian Laboratories of C.S.I.R.O. He will supervise the installation of a small computing station which will be linked to the PDP-6 computer at the University of Western Australia and will organize computing for the staff of the laboratories.

Program Identification

Occasionally a user has in the past submitted to one of the computing centres during the same period jobs which have the same identification.

As the operating and scheduling staff have been instructed that all program materials should be matched with their output before return to the programmer, it can be seen that difficulties arise.

This note is to remind programmers that their job identification must be unique.

No responsibility will be assumed where this regulation is not followed.

Storage and Transport of Computer Media

The storage of external computer media (e.g. punched cards, paper tape etc.) has received some attention in internal service documentation. Briefly, punched cards should, as far as possible, be stored flat, and in stable ambient conditions of 30-65% relative humidity, and similar requirements exist for punched paper tape. Outside this range permanent warp may develop. It should be noted that the computers of the C.S.I.R.O. network are maintained in an environment of 70°F. temperature and approximately 35-50% R.H.

Where these media are kept outside the computer centres difficulty may be experienced in their reading, as the high speed card reader adjustment is relatively critical.

Each user who is responsible for the transport of these materials to the computer centre should take considerable care in packaging so that foreign materials (including rain) are not permitted to be introduced. Care should also be taken to see that the materials are not subject to damage in any way, (for example bent card edges), as curled cards and paper tape with crushed edges will not necessarily give correct results. There is more than a little danger also of one bad card causing a card reader jam with disastrous results to succeeding cards.

Staff at the computer centres always take every precaution to guard against these possibilities. Users are urged to take similar precautions.

Staff News

Recent arrival:

Mr C.D. Gilbert, who is an Instrument Engineer, has begun work in Canberra as a Consultant.

Imminent departures:

Dr. C. Abraham will leave the Section this month to work in the Computer Centre at the University of Manitoba as a Research Associate.

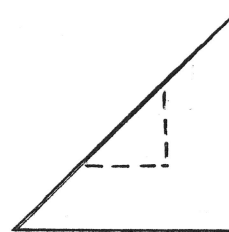
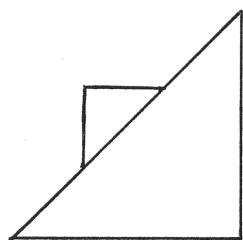
Dr. J.P. Penny is also going to Canada where he will be an Associate Professor in the Department of Computing Science at the University of Alberta.

Mr J.S. Armstrong is leaving the Section this month to work in the Department of Forestry at A.N.U.

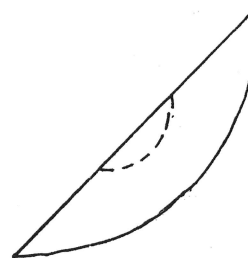
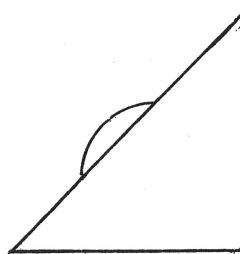
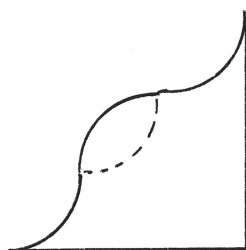
Puzzle Corner

Readers with three dimensional minds who submitted correct answers to the last puzzle were E.E. Adderley, Miss J. Clarke, E. Elston, J. Hasick, T.E. Lajovic, P. Moglia, G. Shearing, R.I. Tilley and N. Walker.

We had expected one (or both) of the following solutions for a solid bounded by plane surfaces.



But, as a number of readers pointed out, the problem was not restricted in this way so that an infinite number of solutions, such as those below, are possible.



This month's puzzle:

When each different letter in the words KING and KNIGHT is replaced by a different digit, the resulting numbers are perfect squares. What are these numbers?

II. 3600

Temporary Operations Change

Arrangements have been made to allow the Commonwealth Bureau of Census and Statistics to use the 3600 in Canberra during the

period 7th August to 27th August, 1967 inclusive. During this period we shall be operating the computer 22 hours/day, seven days a week. In this way 44 hours per week more will be obtained from the computer than we are obtaining at the moment. The arrangement with the Bureau is that they should use 42 hours per week so that it is clear that the total time available to our normal users is not being reduced. Nevertheless, the distribution of available time during the week will be altered, and it is inevitable that long jobs will be held until the weekend. These delays are very much regretted, but users will, no doubt, realise that the day may come when we shall ask for a reciprocal arrangement from the Bureau.

A side effect of this arrangement will be that it may be necessary to turn off the consoles before 2200 hours. This will not be necessary if users do their utmost to make their programs able to run when the displays are active, that is, try to avoid the use of the Displays Inactive option.

Fortran Input

The diagnostic:

ERROR IN IOPACK ILL READ, UNIT NO.nn, CALLED FROM pppp has been added to the 3600 Fortran input-output package. This diagnostic results if an attempt is made to read information into an area of the store occupied by the DAD monitor.

BREAKIN

A new drum document request, BREAKIN, can be made from the display consoles. BREAKIN is used in the same manner as EXECUTE, but causes immediate execution of the job, provided the job is short and BREAKIN is not already in use. Another facility is the ability to halt and restart a BREAKIN job. This enables more efficient use to be made of the VISTA graphic display device.

III. 3200

Saving the load-and-go tape

The load-and-go tape, logical unit 56, may now be saved by directly equipping it as a save tape, rather than by equivalencing it to a programmer tape.

e.g.

$\frac{7}{9}$ EQUIP, 56 = MT, (Label, edition, reel), SV

Conversion of blank numeric fields in Fortran

Blank B.C.D. fields read under E,F,I, or Ø format specifications are now converted and stored as -0. For the purpose of any arithmetic computation +0 and -0 are equivalent. This modification is directed towards 3600 compatibility.