C.S.I.R.O.

COMPUTING RESEARCH SECTION

NEWSLETTER NO. 10 — 1.3.66

I. GENERAL

The New Mailing System for C.R.S. Publications

Where in the past only the Newsletter has been automatically mailed to members on the mailing list the new system is designed to include the mailing of the other section publications such as Manual Supplements, Technical Notes, etc. As this will involve major changes in our present system it is necessary for every person or group who wishes to continue receiving our publications to complete an application form giving details of name, address and particular requirements. The forms will be converted to punched cards, two per person, and the cards will form the basis of the mailing list. This list and the new system will be in operation for the distribution of the May Newsletter and other relevant publications.

The form should be completed as indicated on the form with one letter or number in each block. Spaces i.e. blank blocks should be included as appropriate. The surname (or position such as Librarian, Officer-in-Charge) should begin in block 7.

The address on the envelope will appear in exactly the same form as it is written in the four lines on the right of the form.

The last section defines the type and number of publications required. The classification of section publications is as follows:

Group EP :—   Education Publications

Group LM :—   Library Accession Lists and Miscellaneous Publications

Group M6 :—   Manual Supplements for the 3600 computer system

Group M2 :—   Manual Supplements for the 3200 computer system

Group NL :—   Newsletters

Group TM :—   Technical Notes and Memoranda.

The group names appear on the form with a block-pair under each name. The number of publications required in any particular group is to be indicated in the blocks. The block pairs should be left blank when no publications of a particular type are required.

The last full list of the Section's Publications appeared in Newsletter No. 6, and from that time onwards, only new publications were listed.

Note

Apart from the advantages of a more comprehensive system and an improvement in flexibility this new system is also being implemented to reduce the library work involved in those areas of distribution which are presently unsatisfactory. If follows that this change in the system should not be interpreted as the chance for every user to request one or more copies of every future publication. This is not the intention. You should only indicate on the form those categories of publication which are necessary. In most cases this will be the Newsletter and either or both of M6 and M2. All new publications will be listed in the Newsletter and if you are interested in a particular Technical Note or Educational Publication, etc. they will always be available from your local centre or directly from the library at Canberra.

C.S.I.R.O. Divisions and Sections Receiving Multicopies of C.R.S. Publications (Reference: Replies to Dr. Lance's Memorandum of 18th March 1965 to the Chiefs and Officers-in-Charge)

The following Divisions and Sections elected to receive our publications in bulk for internal distribution:

1. Division of Animal Physiology
   (Copies of Newsletters sent to the Librarian)

2. Division of Applied Mineralogy
   (Copies of C.R.S. publications sent to the D.A.O.)

3. Division of Applied Physics
   (Copies of Newsletters sent to the Divisional Records Officer)

4.   Division of Building Research
        (Copies of Newsletters to the Secretary to the Chief)

5.   Division of Chemical Physics
        (Copies of publications sent to the Librarian)

6.   The Chairman, Chemical Research Laboratories
        (Receives copies of publications)

7.   Division of Coal Research
        (Copies of Newsletter sent to the Librarian)

8.   Division of Entomology
        (Copies of Newsletters to the Secretary to the D.A.O.)

9.   Division of Fisheries and Oceanography
        (Copies of the Newsletter to the Chief)

10. Horticultural Research Section, Glen Osmond
        (Copies of Newsletters sent to O.I.C.)

11. Katherine Research Station, Division of Land Research
        (Copies of Newsletters sent to the Secretary of the O.I.C.)

12. Meat Research Laboratory, Cannon Hill
        (Copies of publications sent to the Secretary of the O.I.C.)

13. Division of Organic Chemistry
        (Copies of publications sent to the Secretary of the O.I.C.)

14. Pastoral Research Laboratory, Armidale
        (Copies of publications sent to Miss Vilma McFarlane)

15. Pastoral Research Laboratory, Townsville
        (Copies of Newsletters sent to the Librarian)

16. Division of Physical Chemistry
        (Copies of all publications sent to Chief, Newsletters to
        individuals)

17. Division of Soils, Canberra
        (Copies of publications to the D.A.O.)

18. Tasmanian Regional Laboratory, Hobart
        (Copies of publications sent to Librarian)

19. Veterinary Parasitology Laboratory, Yeerongpilly
        (Copies of Newsletters sent to O.I.C.)

20. Division of Wildlife
        (Copies of Newsletters sent to Librarian)

There has been a certain amount of overlap with individuals in these Divisions/Sections sometimes receiving Newsletters direct from C.R.S., as well as from their Division/Section. Now that the C.R.S. Librarian has completed a file of persons arranged by their Divisions/ Sections, the overlap is being eliminated.

In the case of the above Division and Sections which receive bulk copies, the forms requesting distribution of other C.R.S. publications should be completed by the individuals concerned and then returned to the Sectional/Divisional Secretary. The Secretary (or Librarian, Records Officer, etc) should return the forms as a group to the Librarian, C.R.S. who will do the necessary work to accumulate the requests from the forms.

Programming Exercise No. 2

Following the basic Fortran courses given at the network centres and elsewhere groups of inexperienced programmers were formed to tackle programming exercises which would improve their programming ability. Members of the group would attempt the problem and then pass on their flowchart, Fortran program and results to the others in the group. Execution time was the criterion of performence and when no further improvement seemed likely the group would meet to discuss the points that had arisen in the methods tried. As an example the first programming exercise consists of reading in 5000 random numbers sorting them into ascending sequence and then printing out the sorted numbers. From an initial attempt of about $3\frac{1}{2}$ minutes the group at Canberra reduced the time to about 65 seconds.

The second programming exercise, Education Publication P.E.2. makes use of the graph plotter. Any user wishing to take part in a group working on this problem should contact J.S. Armstrong, C.R.S. Canberra.

Data Trend

The Editor of "Data Trend" (247 Elizabeth Street, Sydney) has advised us that in future the magazine will be published monthly. He also makes the point that as their readers are predominantly scientists there is a demand for more articles on scientific applications. Anyone interested in contributing should contact the Editor directly.

Job/Job Request Cards

As from 1st March 1966 the compatibility of programs must be defined on both the job request card (as currently pertains) and also in columns 77-80 of the job card.

For the job card, columns 77-80 contain:

Compatible (3200 or 3600) jobs	blanks (i.e. no change)
3200 only jobs	punch 3200
3600 only jobs	punch 3600

The correct cards for the defined machine should be used compatible jobs will contain 3200 control cards.

Introduction of this feature will enable the most efficient scheduling of jobs in the subsidiary areas.

3200 Note also that on the same date, the mnemonics used to equip units to the paper tape station will be varied. For most users, the following changes will suffice:

EQUIP, 1=TR	becomes	EQUIP, 1=XR
EQUIP, 1=TP	becomes	EQUIP, 1=XP
EQUIP, 1=YR	becomes	EQUIP, 1=TR
EQUIP, 1=YP	becomes	EQUIP, 1=TP

Project Sheets

An analysis of the jobs being run on the network is being made from the project sheets which each user must complete before submitting work to any of the machines. In due course an index of the more general applications will be available so that users can be more aware of developments in their own and allied fields.

Computing in the C.S.I.R.O.

Following the two-day conferences in Canberra and Sydney in 1965 similar events were held at Adelaide and Melbourne during February. Both the recent conferences drew large audiences and it was evident that the purpose of the exercise in illustrating some of the applications to non-users was achieved.

It was felt that some of the contributions to these conferences would also be interesting to other people. These will be available from the library on request.

As the written contributions are received they will be noted in the Newsletter.

Presently a precis of the paper "Using a Computer for Time Control of Building Projects" by Mr. M. Anson, Division of Building Research, C.S.I.R.O. is available. This paper deals with the use of Critical Path Methods in some actual building projects.

II. 3600

New Publications

Educational Publication E.P.A. 4 (3600)
Error Analysis in Fortran Programs.
J.S. Armstrong, January 1966.

Education Publication E.P.A. 5 (3600)
Interpretation of the Assembly Listings of 3600
Fortran Programs.
J.S. Armstrong, January, 1966.

Please note that E.P.A. 5 consists of two parts the first being Lecture notes and the second being the assembly listing and dump from a demonstration program. This publication is not in a form suitable for individual reading. It is designed to accompany the corresponding advanced lecture.

The corresponding publications relevant to 3200 Fortran will be issued shortly.