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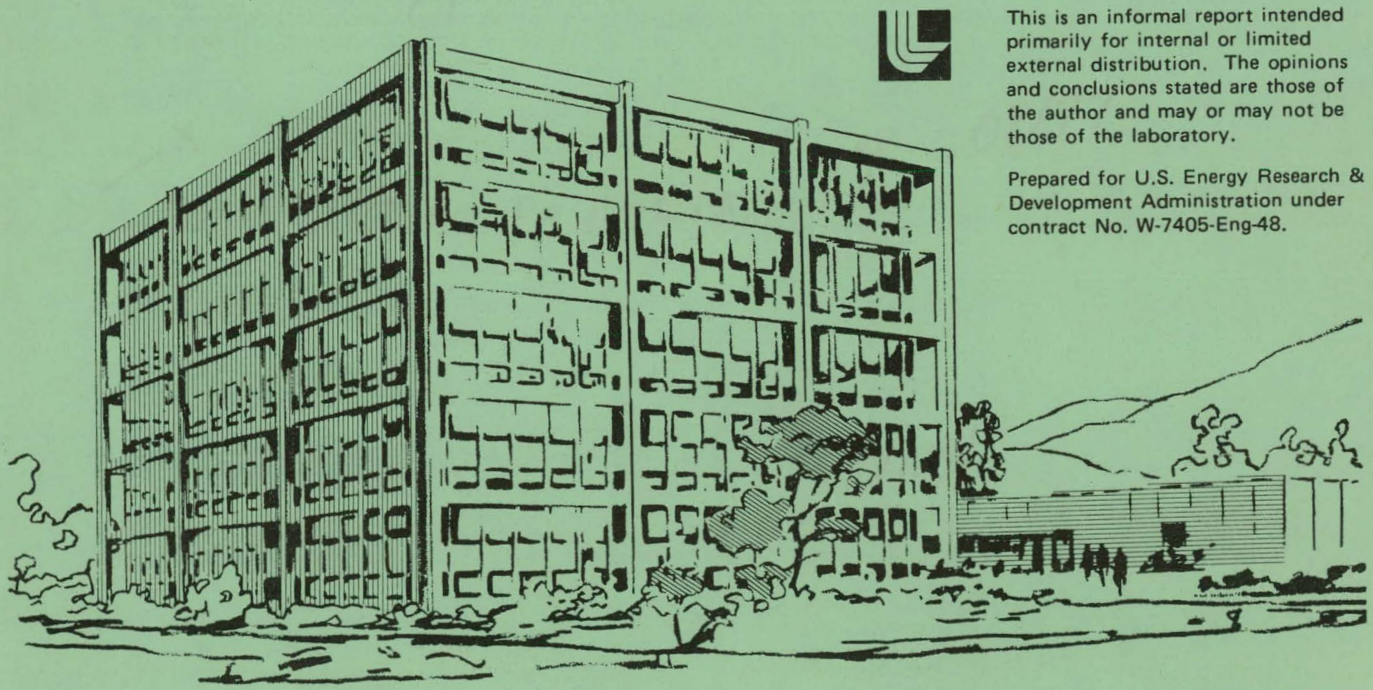
THE NURE RABBIT AND CARD READER

S. C. BOURRET

AUGUST 31, 1977



Prepared for U.S. Energy Research & Development Administration under contract No. W-7405-Eng-48.

DISCLAIMER

THE NURE RABBIT AND CARD READER

1.0 INTRODUCTION

The NURE* Rabbit and IBM Card Reader is a LSI-11 based microcomputer system. The purpose of the rabbit and card reader is to read the drilled code (ID) on the polyethelene rabbit, read the punched data on the traveler card and then store the code (ID) and the card data together as a record in a file on a floppy diskette. A record is 82 words long with the first 2 words being the rabbit ID number.

2.0 HARDWARE

The components involved are shown in Figure 1 and consists of the card reader, the rabbit reader, the LSI-11 microcomputer and chassis, the ADM-3 terminal and a dual floppy disk drive. The rabbit reader is made up of a laser light source that shines into the holes drilled into the rabbit. The light is then detected with a Scan-A-Matic photodetector. The rabbit is rotated around with a stepping motor.

3.0 SOFTWARE

The software was written entirely in Fortran IV and the name of the program is IDJ.SAV. The operating system is RT-11.

4.0 OPERATION

To start from the power off position.

4.1 Turn all power switches on.

- 4.1.1 ADM-3
- 4.1.2 LSI-11 Chassis
- 4.1.3 Laser
- 4.1.4 Air to Rabbit Reader
- 4.1.5 Power to Rabbit Reader Interface Chassis
- 4.1.6 Disk Drive

4.2 After about a minute the ADM-3 should be warmed up enough to display a "$" on the screen. If not, turn power to LSI-11 chassis on and off again.

4.3 Insert the RT-11 system disk into drive number zero which is the left drive. Also, insert a data disk into drive number 1.

*NURE is an acronym standing for the National Uranium Resource Evaluation.

4.4 Type the following that are underlined.

$DX↵ Note: ↵ means return key

RT-11SJ VØ2C-02C

.ASS DX1:DK↵

.R IDJ

4.5 Type "H" to get the HELP package of instructions displayed on the screen and you should see the following:

E - ERASE ONE RECORD
R - READ AND PRINT FILE
S - STOP AND END FILE
K - KICK OUT A CARD
H - HELP PACKAGE

4.6 You are now ready to start processing rabbits and cards.

4.6.1 Place a rabbit in the rabbit reader and press the button alongside of the reader.

4.6.2 Place a card in the reader. The card must be upside down and column one on the card is inserted first. The card should read in automatically and come out automatically. If the card refused to come out on its own, pressing the "K" key should send it out again. In the case where K had to be pressed, the rabbit must be read again.

4.7 To examine the data stored on the floppy while the program is running, press "R" and all of the records in the file will be read out and displayed on the terminal. The first record is the number of records in the file including itself. Only the number in the rabbit ID position of the first record is significant and is the number of records in the file. The stuff in the card data position of the first record is junk.

4.8 To erase one record of a file, press "E" and it will delete the last record of the file.

4.9 When the user has read in all the rabbits and cards, he must press "S" to stop and close the file on the floppy disk. This must be done before the floppy is removed.

4.10 If at any time it becomes necessary to abort the program and the data already taken on the current runs, type "Control C" and you should be returned to RT-11 monitor indicated by a period "." on the terminal.

5.0 CONCLUSIONS

The NURE Rabbit Reader Code is also used in the Rabbit Driller Station, the Rabbit Transport Station, and the Rabbit Loader and Sorter Station. Each one of these stations are controlled by a DEC LSI-11 microcomputer running under the RT-11 disk operating software.

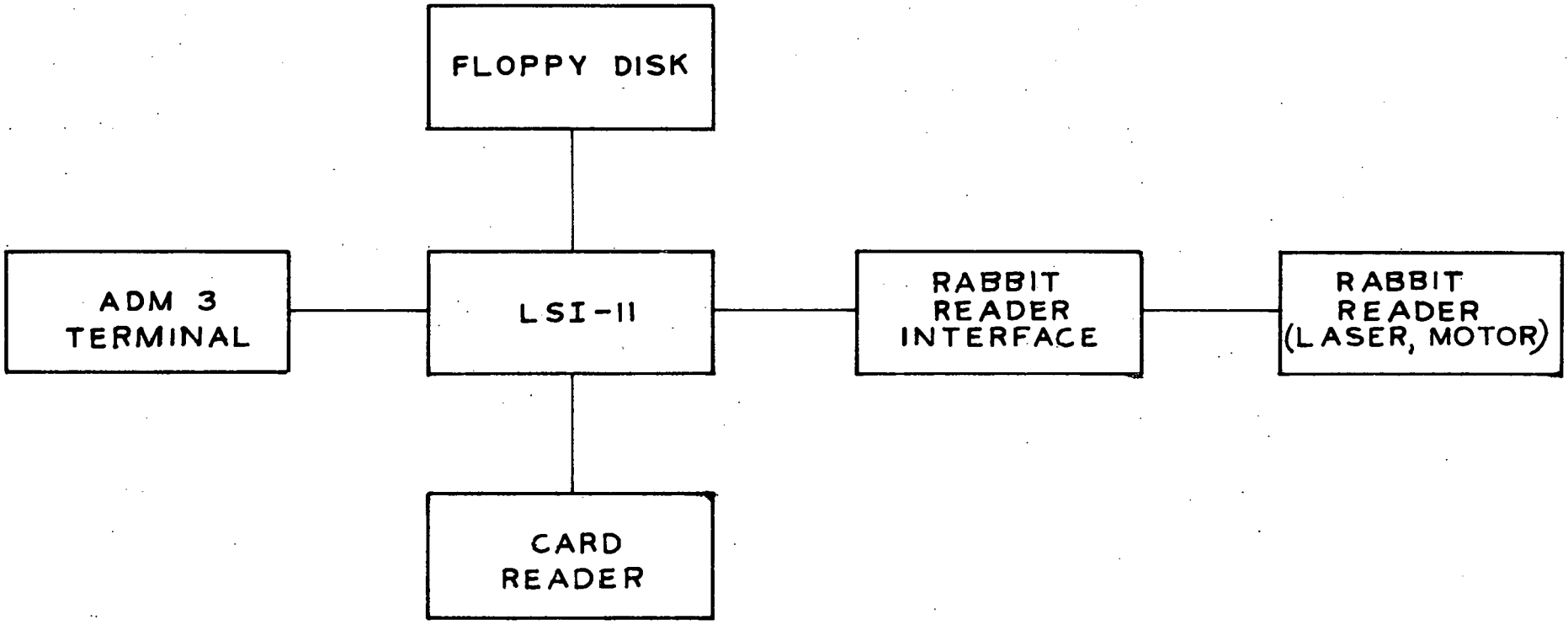


FIGURE 1
BLOCK DIAGRAM OF NURE RABBIT AND CARD READER

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Printed in the United States of America
Available from
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Price: Printed Copy $; Microfiche $3.00

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