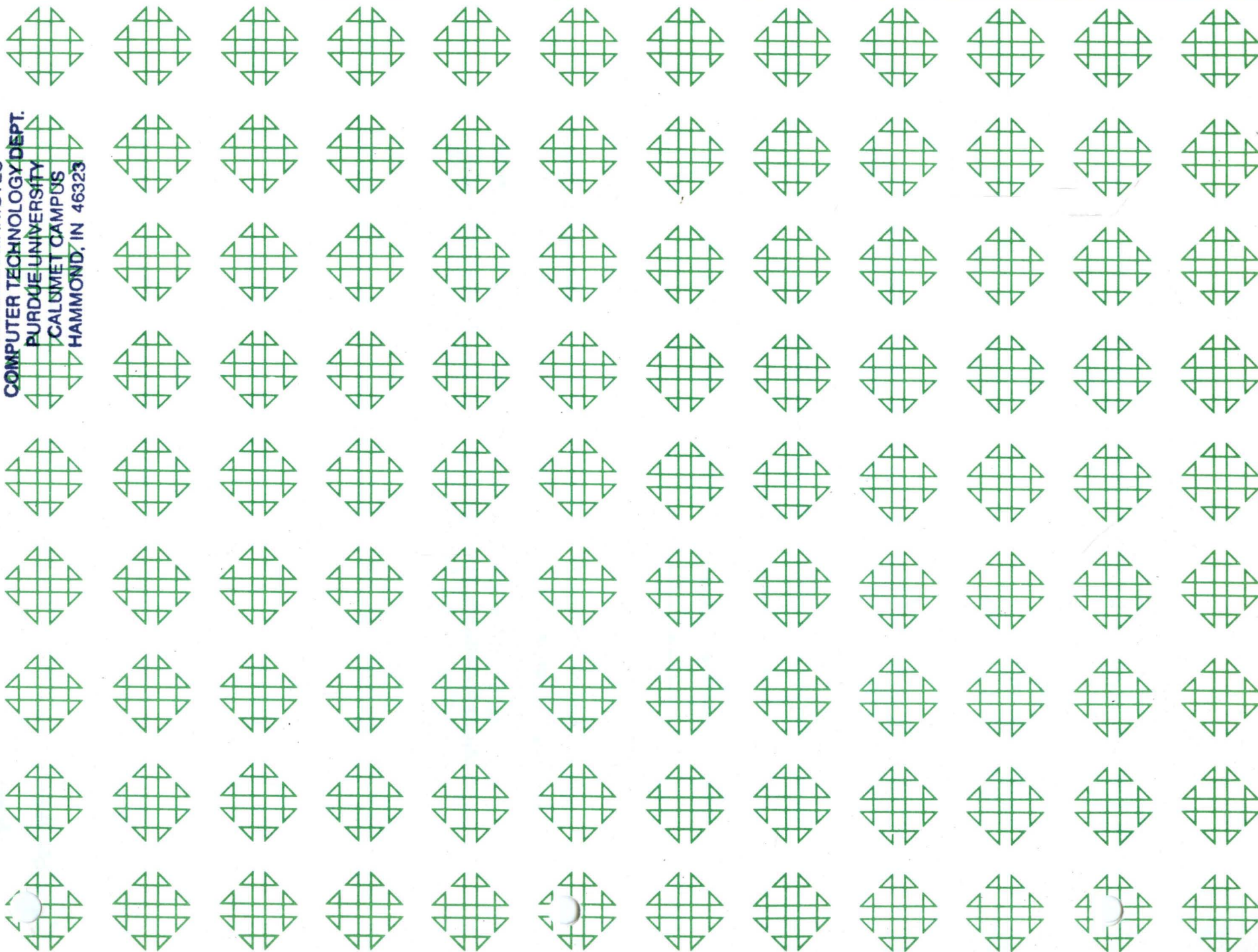


COMPUTER
TECHNOLOGY

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1620 USERS GROUP PROGRAM REVIEW AND EVALUATION

(fill out in typewriter or pencil, do not use ink)

Program No. _____

Date _____

Program Name: _____

1. Does the abstract adequately describe what the program is and what it does? Yes ___ No ___
Comment _____
2. Does the program do what the abstract says? Yes ___ No ___
Comment _____
3. Is the Description clear, understandable, and adequate? Yes ___ No ___
Comment _____
4. Are the Operating Instructions understandable and in sufficient detail? Yes ___ No ___
Comment _____
Are the Sense Switch options adequately described (if applicable)? Yes ___ No ___
Are the mnemonic labels identified or sufficiently understandable? Yes ___ No ___
Comment _____
5. Does the source program compile satisfactorily (if applicable)? Yes ___ No ___
Comment _____
6. Does the object program run satisfactorily? Yes ___ No ___
Comment _____
7. Number of test cases run _____. Are any restrictions as to data, size, range, etc. covered adequately in description? Yes ___ No ___
Comment _____
8. Does the Program Meet the minimal standards of the 1620 Users Group? Yes ___ No ___
Comment _____
9. Were all necessary parts of the program received? Yes ___ No ___
Comment _____
10. Please list on the back any suggestions to improve the usefulness of the program. These will be passed onto the author for his consideration.

Please return to:

Mr. Richard L. Pratt
Data Corporation
7500 Old Xenia Pike
Dayton, Ohio 45432

Your Name _____

Company _____

Address _____

User Group Code _____

THIS REVIEW FORM IS PART OF THE 1620 USER GROUP ORGANIZATION'S PROGRAM REVIEW AND EVALUATION PROCEDURE. NONMEMBERS ARE CORDIALLY INVITED TO PARTICIPATE IN THIS EVALUATION.

11/09/64

[The text in this document is extremely faint and illegible. It appears to be a multi-paragraph document with several sections, but the specific content cannot be transcribed.]

CARD PUNCH OR LIST

DECK KEY

1. SPS Deck
2. Compressed, Assembled Deck -
38 cards 0000 through 0037

Author: William G. Davidson
Flight Simulation Laboratory
AMTED - EML
White Sands Missile Range
New Mexico

Modifications or revisions to this program, as they occur, will be announced in the appropriate Catalog of Programs for IBM Data Processing Systems. When such an announcement occurs, users should order a complete new program from the Program Information Department.

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ABSTRACT

Title: Card Punch or List

Subject Classification: 1.6

Author: William G. Davidson
Flight Simulation Laboratory
AMTED - EML
White Sands Missile Range
New Mexico

Direct Inquiries to: Author listed above

Purpose/Description: This program types and/or punches on cards the numeric and alphabetic information punched in the first N columns of each card of an input deck, including all record marks. The number N (between 01 and 80) is specified by the user.

Mathematical Method: N/A

Restrictions, Range: Only legitimate 1620 card character codes can be read from the input cards.

Storage Requirements: 1378 digits for the main program and associated program storage; 322 digits for arithmetic tables and work areas.

Equipment Specifications: Any size memory, card input-output, indirect addressing, BLC feature (use of the BLC feature can be avoided by a minor program change).

Remarks: This program was written in SPS for a 20K machine. It was assembled with a DORG 402, and can be relocated by reassembling with a new origin. Running time is essentially determined by input-output speeds, especially when listing cards on the typewriter.

Contents of Manual

Abstract

Operating Instructions

Remarks

Flow Chart

Program Listing

OPERATING INSTRUCTIONS

1. After loading the program push start (or transfer manually to location 402). The following message will be typed:

TURN SW 1 ON TO PUNCH, 2 ON TO TYPE,
ENTER NR OF COLUMNS TO BE PUNCHED OR LISTED,
PRESS RELEASE AND START

2. Set the sense switches as desired. If switches 1 and 2 are both on, the input cards will be both listed and reproduced. Type a 2-digit number (01 through 80) specifying the number of card columns to be punched or listed. All columns to the right of the last column specified will be punched as blanks and will not be typed. Press the release and start buttons.

3. After the last input card has been read, the following message will be typed:

END OF PROCESSING. TO PUNCH OR LIST MORE CARDS,
PUSH START BUTTON.

4. If another deck of cards is to be punched or listed, press the start button. The following message will be typed:

ENTER NR OF COLUMNS TO BE PUNCHED OR LISTED,
PRESS RELEASE AND START

5. Return to step 2.

REMARKS

1. As presently assembled, program storage is assigned as follows:

00080-00400 arithmetic tables and work area;
00402-01779 main program and associated storage;
19999 record mark storage.

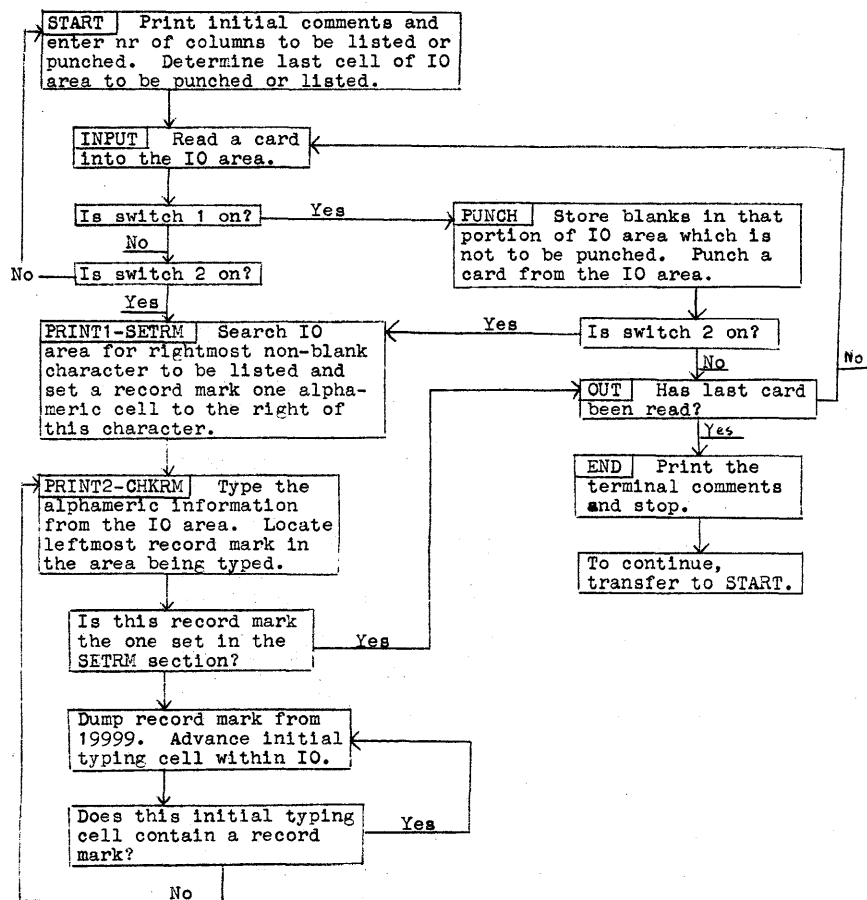
The main program can be relocated by reassembling the program with a new DORG card. If this is done, the compressed, reassembled deck must be modified as follows:

<u>card nr</u>	<u>column nr</u>	<u>change to</u>
25,27,29	1-49	$\bar{0}$ in odd columns, 0 in even columns
26,28,30	1-29	$\bar{0}$ in odd columns, 0 in even columns

These changes are necessary in order to place the needed flags in the alphameric storage areas.

2. If the program is to be used on a 1620 without the ELC feature, change the "OUT" card from "ELC END" to "B INPUT" and reassemble the program. If this is done, the compressed, reassembled deck must be modified as described above.
3. Program running time, excluding input-output time, will vary from 5 to 155 milliseconds per card, depending upon the number of record marks on the input card, the number of columns to be punched or listed, and the settings of sense switches 1 and 2. This time is relatively insignificant compared to the time used by the input-output devices (card reader, card punch and especially the typewriter).
4. Note that this program can be used to reproduce the first 72, for example, columns of Fortran data output cards, thus deleting any unwanted sequencing numbers. Also, it is felt that the program should be of some use to those organizations that do not have off-line card reproducers or listers.

FLOW CHART



PROGRAM LISTING

```

START  DORG 00402
        RCTY
        WATY REM1
        RCTY
        WATY REM2
        RCTY
        WATY REM3
        RNTY NR-1
        SF NR-1
        RCTY
        MM NR,2,9
        AM 99,IO-2
INPUT   RACD IO
        BC1 PUNCH
        BNC2 START
PRINT1  TF TEMP1,99
        BNR A,TEMP1,11
SETRM   TF TEMP2,TEMP1
        AM TEMP2,2,10
        TD TEMP2,19999,6
        TF TEMP3,TEMP2
        B PRINT2
        DORG *-3
A       CM TEMP1,0,610
        BNZ SETRM
        SM TEMP1,2,10
        B PRINT1+12
        DORG *-3
PRINT2  TFM TEMP2,IO
        RCTY
        BNR CHKRM-12,TEMP2,11
        B CHKRM+12
        DORG *-3
        WATY TEMP2,,6
CHKRM   BNR B,TEMP2,11
        C TEMP2,TEMP3
        BZ OUT
        DNTY 19999
        AM TEMP2,2,10
        B PRINT2+24
        DORG *-3
B       AM TEMP2,2,10
        B CHKRM
        DORG *-3
PUNCH  TF TEMP2,99
        AM TEMP2,1,10
        TR TEMP2,BLANK-1,6
        AM TEMP2,80,10
        TR TEMP2,BLANK-1,6
  
```



```

WACD IO
BC2 PRINT1
OUT BLC END
B INPUT
DORG *-3
END RCTY
RCTY
WATY REM4
WATY REM5
RCTY
H
B START+24
DORG *-3
REM1 DAC 37,TURN SW 1 ON TO PUNCH, 2 ON TO TYPE,@
REM2 DAC 45,ENTER NR OF COLUMNS TO BE PUNCHED OR LISTED,@
REM3 DAC 27,PRESS RELEASE AND START @
REM4 DAC 41,END OF PROCESSING. TO PUNCH OR LIST MORE@
REM5 DAC 27, CARDS, PUSH START BUTTON.@
TEMP1 DS 5,START+6
TEMP2 DS 5,START+30
TEMP3 DS 5,START+54
NR DS 2,START+102
RM DC 1,@,19999
BLANK DAC 41,
IO DAC 40,0
DAC 40,0
DEND START

```

Note: If this program is to be reassembled, the compressed, reassembled deck must be modified as described previously in the "REMARKS" section.

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