Z77-8048

# TECHNICAL INFORMATION EXCHANGE

COMBINING ALL TYPE I 1400 DISK COMPILERS

ON A SINGLE SYSTEM PACK

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This paper describes a technique for building a single system pack which contains Autocoder, COBOL, FORTRAN, RPG and their associated libraries on disk. The work areas for the compilers (and the loaderfile in FORTRAN) are assigned to a second drive. The following programs were consolidated on a single pack on both a 12K 1440 and a 12K 1401:

1401-AU-008 AUTOCODER on disk, 1440-CB-073 COBOL for 1440/or/60,
1401-FO-051 FORTRAN IV on disk, 1401-01. 1. 051 PALE OR 1440-01. 0. 001 PALE,
1401-IO-068 1401/60 I DCS on disk OR 1440-IO-010 IOCS,
1401-RG-032 1401/1311 RPG on disk OR 1440-RG-020 1440/1311 RPG,
1401-UT-053 1401/1311 disk file organization OR 1440-UT-040 disk file orgs.



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Introduction

The announcement of the special educational allowance for the 1401 gave considerable impetus to marketing disk systems for academic usage allowing for instruction in RPG, COBOL, FORTRAN, as well as Autocoder/IOCS and File Organization Routines.

Under present techniques, in order to provide the above language capabilities, a customer might need to generate and reserve as many as four systems packs.

For those 1401/1440/1460 users who have a two or more disk drive system and multi-language requirements, the technique discussed in this paper may offer an avenue for efficient disk pack usage.

The technique used for consolidation was to change the standard system assignments so that the system area was expanded, the libraries (FORTRAN & Autocoder/COBOL/IOCS/File Organization) were extended to cover the rest of the systems pack. Work Area and Loader File assignments were made to the second drive.



Procedure

Use the directions for "Building a ...System" in SRL Manuals C24-3242 and C24-3259 as a guide with the following modifications.

1. Clear Disk Utility Program parameters.

| Mode | Address |
|---|---|
| MOVE | 000000-000199 |
| LOAD | 000200-000259 |
| MOVE | 000260-000299 |
| LOAD | 000300-008599 |
| MOVE | 008600-19979 |

2. Run the Write File-Protected Addresses Deck. The Control Card of the Deck should be modified to read:

| | |
|---|---|
| 1-15 | File-Protect on |
| 17-20 | 1311 |
| 22 | Ø |
| 24-42 | From Normal Address |
| 44-49 | 002500 |
| 51-52 | To |
| 54-59 | 008600 |

3. Run the Autocoder System Control Card Build Deck as indicated in C24-3259.

4. Run the Autocoder Update Deck <u>without</u> the Macros.

5. Do a System Control Modification Run as specified in C24-3242 using the deck shown in Fig. I instead of the supplied deck.

6. Run the COBOL Update Deck <u>without</u> the Macros.

7. Make the FORTRAN Update Run. As noted in C24-3322, this includes a FORTRAN Librarian Run loading the standard subprograms.

8. Do the File Organization Pre Phase Run if applicable.

9. Collate the Autocoder, COBOL, File Organization and IOCS Macros by alphabetic name as listed in Appendix I.

10. Do the Librarian Run as directed in A/C Manual C24-3259. The control cards are:

Autocoder Run

Initialize Option

Autocoder Run

Library Option

ALERT INSER (First Card from the "ACEPT" Macro)

________
________
________

All Macros from Step 9.

________
________
________

End Card

Note: Be sure there is <u>only one end</u> card at very end of all the Macros.



IBM GENERAL PURPOSE CARD PUNCHING FORM

Ø = ALPHA O

PUNCHING INSTRUCTIONS

| | |
|---|---|
| JOB | |
| BY | DATE |

| | |
|---|---|
| WRITTEN AS: | |
| PUNCH AS: | |

NOTES:

FIELD IDENTIFICATION: 1-10 | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80

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1           SYSTM       UPDATIØP,PATCH
2  82755000   DMP            3843268600026254100 2                                   020
3           SYSTM       UPDATSEL,PATCH
4  W1658X16L69  MK84L01  MG22364  MG28590  B334 BT87  129002010400  11200200480
5  W74590  124002011200  129002012400  9380001 05 0500000 86  00780 0  00840020 07
6  X3361800  0089002008400  M00940020089 00002  M00990020 09400002  M0104002009
7           SYSTM       UPDATFHW,PATCH
8  24261  FILE      WK1M01120020048000 02  WK2M01240020112000 02  WK4          Ø
9  303 61M1T        WK3M01290 02012400002  2010400001  WK5       ØMIT        CT
10 364 62L       READER  1  CRD        ØMIT           LDRM0120002010400001  TABL
11 42662E        LST          PRINTER  2  MSG          PRINTER  2  LIBM019380001050
12
14          CØBØL       UPDATDM2,PATCH
15 U4202  †2
16 K1901  M
17                HALT       END ØF SYSTEM CØNTRØL UPDATE...CØNSØLIDATED
18
19
20
```

FIGURE 1

11. Modify the RPG System Card Deck (1440-RG-024 or 1401-RG-032) as follows:

    Change column 35 of card 001IRPG I (identified in Cols 72-80) from Ø to 2.

    Change columns 36 & 37 of card 2933A5900 (identified in Cols 72-80) from 91 to 76.

12. LOAD the entire RPG Deck as instructed in C24-3300.

13. PACE (a type III program). May be loaded in the area indicated in Figure 2.

All standard assignments for the work files and loader files as listed in the respective language manuals will have exactly the same <u>sector addresses</u>. They will, however, be assumed on device #2. See figure 44 in C24-3322 and figure 32 in C24-3259 for work area, and loader area assumed sector assignments. A careful perusal of the manuals and the cards listed in Figure I will allow any assumed assignments desired to be made.



CONSOLIDATED SYSTEMS PACK
DISK MAP

| File | Range |
|---|---|
| Autocoder Preprocessor | 000000 - 000899 |
| RPG | 000900 - 002499 |
| Autocoder, FORTRAN, COBOL and System Control | 002500 - 008599 |
| FORTRAN Library | 008600 - 010499 |
| Autocoder, COBOL, IOCS, File Organization Library | 010500 - 019380 |
| PACE may be loaded at | 019400 - 019799 |

FIGURE 2

## APPENDIX 1

MACROS IN ALPHABETIC ORDER
FOR CONSOLIDATED SYSTEM PACK

ACEPT
ADD
ALCOM
CALL
CLOSE
COMPR
CSADD
CSDL1
CSDL2
CSLOD
CSUNL
DCLOS
DIVDE
DIVID
DIVMC
DSPLY
DTFF1
DTFTP
EDIT1
EXPIN
EXPNI
FEDRL
FGCOM
FILE
FILE1
FILE2
FILE3
FILE4
FILE5
FILE6
GET
GOTOD
IFALP
IFNUM
INDIX
IOCS
LDRCL
LOOP
MA
MACOP
MLTPY
MPYMC
MULTY
MVALL
MVFTR
OPEN
OVLAY
PASS1
PASS4
PUT
RDLIN
RELSE
RNDEL
RNUNL
SCAN
SEEK
SKIP
SPACE
SPLIT
SUB
SUBS1
SUBS2
SUBS3
SYSCL
TRAIL
XAMIN
18000
9000F
9000I