



Training Manual
SELCOPY/i Release 3.10

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Documentation Notes

First Edition, November 2012

Information in this document details general features and functionality of the **SELCOPY Product Suite 3.10** component, **SELCOPYi**.

This document replaces any previous edition of *SELCOPYi Training Material* which are now obsolete.

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The following publications for SELCOPY Product Suite and its component products are available in Adobe Acrobat PDF format at CBL web page <http://www.cbl.com/selcdoc.html>:

- SELCOPY Product Suite Customisation Guide
- SELCOPY User Manual
- CBLVCAT User Manual
- SELCOPYi Reference and User Guide
- SELCOPYi Text Editor (CBLe) Manual
- SELCOPYi Structured Data Editor Manual
- SELCOPYi Training Material Manual

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The following generic terms are used throughout this document to indicate all available versions and releases of IBM mainframe operating systems:

MVS - z/OS, OS/390, MVS/ESA, MVS/XA, MVS/SP, OS.

VSE - z/VSE, VSE/ESA, VSE/SP, DOS.

CMS - z/VM, VM/ESA, VM/XA, VM/SP.

All - All MVS, VSE and CMS operating systems.

Summary of Changes

The **SELCOPYi** Training material and documentation were introduced for Release 3.10 in PTF RS00021.

First Edition (2012/12/14)

Option 2 - Data Edit

- ◊ *The SDE Edit/Browse Entry Panel*
- ◊ *Display Modes*
- ◊ *LAYOUT Command*
- ◊ *Scrolling the Display to a specific field/record*
- ◊ *Selecting/Ordering Visible Fields*
- ◊ *Adjusting Field Display Column-widths*
- ◊ *Using FIND, EXCLUDE and ONLY commands*
- ◊ *Using CHANGE commands*
- ◊ *Filtering records using ALL(WHERE)/MORE/LESS commands*
- ◊ *Using a FILTER to Select Records on Load*
- ◊ *Working with Multiple Record-Types*
- ◊ *Creating a Structured Data Object (SDO)*
- ◊ *Modifying Data*
- ◊ *Working with Segmented Records*

Second Edition (2013/01/31)

Option 5 - File Copy/Reformat

- ◊ *The File Copy/Reformat (FCOPY) Panel*
- ◊ *Copying a Standard Sequential Dataset*
- ◊ *Copying PDS/PDSE Library members*
- ◊ *Record Selection*
- ◊ *Specifying Start Record / Number of Records to Copy*
- ◊ *Browse the Output File (PF11)*
- ◊ *Using a FILTER to Select Records for Copy*
- ◊ *Browse Output File*
- ◊ *Specifying brackets in the FILTER expression.*
- ◊ *Generate FCOPY primary command*
- ◊ *Modify/Execute Generated FCOPY primary command*
- ◊ *Reformat*
- ◊ *Create Output Copybook*
- ◊ *Updating the Output Copybook*
- ◊ *Force Recompile of Updated Output Copybook*
- ◊ *Running File Copy Reformat in Batch*

Third Edition (2013/02/27)

Option 6 - File Search/Update

- ◊ *The File Search/update (FSU) Panel*
- ◊ *Searching a PDS/PDSE Library*
- ◊ *Search Report Output (Standard 80-column Screen Width)*
- ◊ *Displaying Additional Hit Information Fields*
- ◊ *Using PF6 to edit the Hit File/Record*
- ◊ *Adjusting Report Table View*
- ◊ *Selecting Library Members for Search/Update*
- ◊ *Condensing Selected Members by Timestamp/Size/Userid*
- ◊ *Condensing Selected Members using FIND*
- ◊ *Condensed Member Selection List*
- ◊ *Condensed Member Search Results*

Setup Training Material

Sample data files and COBOL/PL1 copybooks are supplied with the SELCOPYi program.

To create your own personal copies of these datasets, allowing you to follow the training manual in real time, select option **T** from the SELCOPYi Primary Option Menu.

```
SELCOPY/i - Primary Option Menu
File SwapList Window Help QuickRef
Command>
ZZSGPRIM

0 Settings          Set SELCOPY/i options
1 Text Edit         Edit/View small text-type files
2 Data Edit         Edit/Browse potentially large data files
3 List              List Volumes,VTOCs,Datasets,Members etc
4 Home              Edit and execute point-and-shoot commands
5 Copy/Reformat     File Copy with optional copybook reformat
6 Search/Update     File Search/Update/Copy/Reformat
7 Compare           File/Library Compare Utilities
8 Utilities         General utilities
9 Structure         Create structure from copybooks etc
10 Filter           Create record selection filter
11 Print            Print Dataset (Batch)
12 DB2              Work with DB2, browse/edit tables etc
T Training          Setup SELCOPY/i Training Material
W Window List       Display active windows, select with cursor to switch focus
X Exit             Exit SELCOPY/i

User: USER123
Version: 3.2B
Date: 2013/01/31
Time: 13:54:46
OpSys: z/OS 1.11.0
System: ADCC
VM User: ZOS111

Use PF9 to switch between SELCOPY/i display windows.
Use PF21 to switch to other ISPF split-screens.
Use "=" command(+optional fastpath e.g. =3.4) to access this menu/sub-options.
```

Figure 1. SELCOPYi - Setup SELCOPY/i Training Material.

Option 2 - Data Edit (SDE)

Data set records may have an associated file structure that maps field information (position, length and data type) for all data within each data set record. These structures often exist as a PL/1 or COBOL copybook.

The **SELCOPYi** Structured Data Environment (**SDE**) allows users to display and process structured data sets using a pre-defined SDE structure so that record data is formatted and arranged in field columns. An SDE structure may be generated from a copybook or using SDE's Create Structure internal syntax, and can contain a number of mappings, one for each different type of data set record.

During this section you will learn how to:

- *Change Display Modes*
- *Use the LAYOUT command to display the active structure*
- *Scroll the display to an individual Field*
- *Select/Order visible Fields*
- *Adjust Field display column-widths*
- *Use the FIND, EXCLUDE and ONLY commands*
- *Use the CHANGE command*
- *Use UNDO/REDO*
- *Filter records using ALL/MORE/LESS commands*
- *Work with Multiple Record Types with different Layouts*
- *Modify record data/length*
- *Work with Segmented Records*

The SDE Edit/Browse Entry Panel

The SDE panel may be started using any of the following methods:

- Select option **2** from the **SELCOPYi** Primary Option Menu (=).
- At any primary command prompt type **=2**.
- At any primary command prompt type **SDE**.
- From any dataset, library or HFS path list window, use the **SD** line-command.

```

SELCOPY/i - Structured Data Browse/Edit
File Command Structure Replace Help          wS wR      Scroll> Csr
Command>                                     Lines 1-21 of 21
ZZSGSDE0
PDS/PDSE member, Sequential, VSAM or HFS path:
Name> USER123.SELCTRN.ZZST1DAT              + Member>
Volume>                                     If dataset is uncataloged.

Action:
Browse Data.
Edit Full.      (Insert/Update/Delete)      - Edit Full Auxiliary. (AUX File)
Edit In-Place.  (Update only)                - Edit Full Read-Only. (DISP=SHR)
                                           - Edit Full Read-Only & Auxiliary.

Structure/Copybook overlay:
Dsn> USER123.SELCTRN.SAM1                    Member> ZZST1CPC
Type:      - SDO      - AData  / Cobol  - PL1

Record Selection:
Start>      + / Record  - Key  - RBA
For>        @ # records
Filter> Q Filter selected records. (F=File; Q=Quick) (PF6=Edit Filter)
File>
Additional Options:  - (Enter "/" to display HFS and Profile options.)
  
```

Figure 2. SELCOPYi - Data Edit (SDE) Panel (=2).

To follow the demonstration use the panel to edit the sample dataset using the supplied **COBOL** or **PL1** copybook.

- Specify the *Data File*:
 - ◆ Type **userpfx.SELCTRN.ZZST1DAT** in the *Name* field, where *userpfx* is your own user prefix. If wildcards are specified then a dataset list will be displayed from which you can make a selection.
 - ◆ The *Member* field may be left blank, but regardless will be ignored when the *Name* field refers to a non-PDS dataset. If wildcards are specified then a member list will be displayed from which you can make a selection.
- Specify the *Action*:
 - ◆ Activate option *Edit Full* by entering a / in the left margin field.
- Specify the *Structure/Copybook overlay*:
 - ◆ Activate the option by entering a / in the left margin field. This option is provided so that you may deactivate / reactivate structure formatting without needing to remove / retype the dataset / member name.
 - ◆ Type **userpfx.SELCTRN.SAM1** in the *Dsn* field, to specify the PDS library containing the supplied COBOL / PL1 copybook. If wildcards are specified then a dataset list will be displayed from which you can make a selection.
 - ◆ Type **ZZST1CPC** in the *Member* field (for COBOL installations). Type **ZZST1CPP** in the *Member* field (for PL1 installations). If wildcards are specified then a member list will be displayed from which you can make a selection.
 - ◆ Check the *Type* option for *Cobol* or *PL1* as appropriate for your installation.
- Press **ENTER** to edit the sample dataset.

Note: The following sample commands and screen-shots depict use of the **COBOL** copybook.

Editing Sample Dataset 1

- The first sample dataset represents a music collection, with each **"Track"** described by a separate logical record.
- The initial view of the data is presented in formatted multi-record (table) display mode.
- Use **PF10** / **PF11** to scroll the display left/right in order to view further data fields.

Record type: TRACK Fixed(407) Offset=0 Data elements=18	
PERSISTENT-ID	TRACK-NAME
#2	#3
AN 1:16	ZD 17:3
<---+---1---+>	<-->
00000001 CB12DD714D51828C	001 2083 Rolling In the Deep
00000002 2648A25633D15404	002 2085 Rumour Has It
00000003 9815923C6D2E6830	003 2087 Turning Tables
00000004 7D003FF752074C18	004 2089 Don't You Remember
00000005 AED739D8574AA4C5	005 2091 Set Fire to the Rain
00000006 E755BCE1CF5CDEA7	006 2093 He Won't Go
00000007 6798C2AB0AFB2571	007 2095 Take It All
00000008 962835D1647DE75E	008 2097 I'll Be Waiting
00000009 D8A6C8FDC2802177	009 2099 One and Only
00000010 2502515DEB535010	010 2101 Lovesong
00000011 E374BE6EE7C86B1D	011 2103 Someone Like You
00000012 D4EB4EBF4651EF20	012 2105 I Found a Boy (Bonus Track)
00000013 CEC92B1BA3204A0A	013 2107 Adele 21 - A Track By Track Interv
00000014 6D4C2C7BA7E01593	001 4169 Hold On
00000015 E241B09CC251C386	002 4171 I Found You
00000016 E74C16BCB319870C	003 4173 Hang Loose
00000017 214ED5D95884533C	004 4175 Rise to the Sun
00000018 0E421AFCD141D22D	005 4177 You Ain't Alone
00000019 FF47FB9E05DE8967	006 4179 Goin' to the Party
00000020 5D46C681552440BF	007 4181 Heartbreaker
00000021 C54FE77922485624	008 4183 Boys & #38; Girls
00000022 8D4B5913F78CEEE3	009 4185 Be Mine
00000023 B044D8ED2337A412	010 4187 I Ain't the Same

Figure 3. SELCOPYi - SDE Table View.

Display Modes

Display HEX Data

- Type **HEX ON** to set hexadecimal display on.
- Type **HEX OFF** to set hexadecimal display off.
- Type **HEX** to toggle hexadecimal display on/off.
- Type **Help HEX** for full information.

Notes:

1. Where sample commands are provided, uppercase denotes the minimum abbreviation.
2. To use any SDE command from a non-SDE browse / edit command prompt you must prefix the command with **SD** .
e.g. **SD Help HEX**
3. From an SDE browse/edit command prompt the **SD** prefix is unnecessary. e.g. **Help HEX**

```

SELCOPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
  TRACK-#2 TRACK-#3 TRACK-#4 TRACK-#5 NAME
  AN 1:16 ZD 17:3 ZD 20:4 AN 24:120
  <---+---1---+> <---> <---> <---+---2---+---3---
00000001 CB12DD714D51828C 001 2083 Rolling In the Deep
CCFFCCFFCCFFCCFF FFC FFFC D9998984C94A884C8894444444444444
3212447144518283 001 2083 963395709503850455700000000000000000

00000002 2648A25633D15404 002 2085 Rumour Has It
FFFCFFFCFFFCFFFC FFC FFFC DA99A94C8A4CA44444444444444444444
2648125633415404 002 2085 944649081209300000000000000000000000

00000003 9815923C6D2E6830 003 2087 Turning Tables
FFFFFFFFCFCFCFFF FFC FFFC EA998984E8898A44444444444444444444
9815923364256830 003 2087 349595703123520000000000000000000000

00000004 7D003FF752074C18 004 2089 Don't You Remember
FCFFFCFFFCFFFCFF FFC FFFC C997A4E9A4D89898894444444444444444
7400366752074318 004 2089 465D30864095454259000000000000000000

00000005 AED739D8574AA4C5 005 2091 Set Fire to the Rain
CCFFFCFFFCFFFCFF FFC FFFC E8A4C8984A94A884D8894444444444444444
1547394857411435 005 2091 25306995036038509195000000000000000000

00000006 E755BCE1CF5CDEA7 006 2093 He Won't Go
CFFFCFFFCFFFCFFF FFC FFFC C84E997A4C9444444444444444444444444
5755235136534517 006 2093 850665D3076000000000000000000000000000
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 4. SELCOPY/i - SDE HEX ON.

Formatted Single-Record (MAP/FMT) Display Mode

- Type **MAP** or **FMT** to set formatted single-record display mode.
- Use **PF7** / **PF8** to scroll the display up/down in order to view further fields within the same record.
- Use **PF10** / **PF11** to scroll the display to the previous/next record.
- Use the **SHOW (S)** command to control various aspects of the display.
Type **Help Show** for full information.
- Use the **OFFSET (OFST)** command to control the format of the field offset column.
Type **Help OFST** for full information.
- Use the **GROUP (G)** command to control display of group fields.
Type **Help Group** for full information.
- Type **HEX** to toggle hexadecimal display on/off.

```

SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
Record> 00000001 Flags: f Length: 407
Ref Field Type <---+---1---+---2---+---3---+---4---+---5
#1 TRACK AN 1:407
#2 PERSISTENT-ID AN 1:16 CB12DD714D51828C
#3 TRACK-NUM ZD 17:3 001
#4 TRACK-ID ZD 20:4 2083
#5 NAME AN 24:120 Rolling In the Deep
#6 ARTIST AN 144:70 Adele
#7 ALBUM AN 214:70 21
#8 TOTAL-TIME FB 284:4 228093
#9 FILE-SIZE FB 288:4 8050806
#10 BIT-RATE FB 292:2 256
#11 SAMPLE-RATE PD 294:3 44100
#12 YEAR ZD 297:4 2011
#13 NORMALIZATION PD 301:3 5151
#14 DISC-NUMBER ZD 304:3 001
#15 ALBUM-ARTIST AN 307:41 Adele
#16 RELEASE-DATE AN 348:20 2011-01-21T08:00:00Z
#17 DATE-ADDED AN 368:20 2012-08-02T11:30:36Z
#18 DATE-MODIFIED AN 388:20 2011-08-19T12:29:17Z
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 5. SELCPYi - SDE MAP/FMT.

Unformatted Multi-Record (CHAR) Display Mode

- Type **CHAR** to set unformatted multi-record display mode.
- For non-segmented structures, this display is the equivalent of removing the structure.
- For segmented structures, each line represents an individual segment in its raw state, with the prefix area indicating the physical record to which it belongs.
- Type **HEX** to toggle hexadecimal display on/off.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST10X
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll>  Csr
Command>
Record type: UnMapped      Fixed(407) Offset=0 Data elements=1
UnMapped
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7
00000001 CB12DD714D51828C00A208C Rolling In the Deep
00000002 2648A25633D1540400B208E Rumour Has It
00000003 9815923C6D2E683000C208G Turning Tables
00000004 7D003FF752074C1800D208I Don't You Remember
00000005 AED739D8574AA4C500E209A Set Fire to the Rain
00000006 E755BCE1CF5CDEA700F209C He Won't Go
00000007 6798C2AB0AFB257100G209E Take It All
00000008 962B35D1647DE75E00H209GI 'll Be Waiting
00000009 D8A6C8FDC280217700I209I One and Only
00000010 2502515DEB53501001{210A Lovesong
00000011 E374BE6EE7C86B1D01A210C Someone Like You
00000012 D4EB4EBF4651EF2001B210EI Found a Boy (Bonus Track)
00000013 CEC92B1BA3204A0A01C210GA Adele 21 - A Track By Track Interview
00000014 6D4C2C7BA7E0159300A416I Hold On
00000015 E241B09CC251C38600B417AI Found You
00000016 E74C16BCB319870C00C417CHang Loose
00000017 214ED5D95B84533C00D417ERise to the Sun
00000018 0E421AFCD141D22D00E417G You Ain't Alone
00000019 FF47FB9E05DE896700F417IGoin' to the Party
00000020 5D46C681552440BF00G418A Heartbreaker
00000021 C54FE7792248562400H418C Boys & Girls
00000022 8D4B5913F78CEEE300I418E Be Mine
00000023 B044D8ED2337A41201{418GI Ain't the Same
00000024 6E44D77A948E8A6D01A418I On Your Way
00000025 BD48544197975CAB01B419A Heavy Chevy
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 6. SELCOPY/i - SDE CHAR.

MAP/FMT Line-Command

- You may also use **MAP** or **FMT** as a line-command (typed in the prefix area) to display the marked line in formatted single-record mode.
- Alternatively use **PF2** to open a separate window displaying the focus record in formatted single-record (zoomed) mode.
- Note that on a standard 80-column screen **SELCOPYi** operates in *window-maximised mode* so that the new window will entirely obscure the original display.
- On a **wide screen** operating in **windowed mode**, the new window will open top-right justified, with the intention that both the table view and single record view are simultaneously visible.
- Significantly for **windowed mode**, multiple "zoomed" windows may be opened for different records, with the ability to **move and resize each window** as desired.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll>  Csr
Command>
Record type: UnMapped      Fixed(407) Offset=0 Data elements=1
UnMapped
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7
00000001 CB12DD714D51828C00A208CRolling In the Deep
00000002 2648A25633D1540400B208ERumour Has It
00000003 9815923C6D2E683000C208GTurning Tables
00000004 7D003FF752074C1800D208IDon't You Remember
00000005 AED739D8574AA4C500E209ASet Fire to the Rain
00000006 E755BCE1CF5CDEA700F209CHE Won't Go
00000007 6798C2AB0AFB257100G209ETake It All
00000008 962835D1647DE75E00H209GI'll Be Waiting
00000009 D8A6C8FDC280217700I209IOne and Only
00000010 2502515DEB53501001{210ALovesong
MAP      E374BE6EE7C86B1D01A210CSomeone Like You
00000012 D4EB4EBF4651EF2001B210EI Found a Boy (Bonus Track)
00000013 CEC92B1BA3204A0A01C210GAdele 21 - A Track By Track Interview
00000014 6D4C2C7BA7E0159300A416IHold On
00000015 E241B09CC251C38600B417AI Found You
00000016 E74C16BCB319870C00C417CHang Loose
00000017 214ED5D95884533C00D417ERise to the Sun
00000018 0E421AFCD141D22D00E417GYou Ain't Alone
00000019 FF47FB9E05DE896700F417IGoin' to the Party
00000020 5D46C681552440BF00G418AHeartbreaker
00000021 C54FE7792248562400H418CBoys &#38; Girls
00000022 8D4B5913F78CEEE300I418EBE Mine
00000023 B044D8ED2337A41201{418GI Ain't the Same
00000024 6E44D77A948E8A6D01A418IO n Your Way
00000025 BD48544197975CAB01B419AHeavy Chev
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 7. SELCOPYi - SDE MAP Line-Command.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll>  Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
Record> 00000011      Flags: f      Length: 407

Ref  Field      Type      <---+---1---+---2---+---3---+---4---+---5
#2  PERSISTENT-ID  AN  1:16      E374BE6EE7C86B1D
#3  TRACK-NUM      ZD  17:3      011
#4  TRACK-ID      ZD  20:4      2103
#5  NAME          AN  24:120    Someone Like You
      51 - 100
      101 - 120
#6  ARTIST        AN  144:70    Adele
      51 - 70
#7  ALBUM         AN  214:70    21
      51 - 70
#8  TOTAL-TIME    FB  284:4      285240
#9  FILE-SIZE     FB  288:4      -958995243
#10 BIT-RATE      FB  292:2      256
#11 SAMPLE-RATE   PD  294:3      44100
#12 YEAR          ZD  297:4      2011
#13 NORMALIZATION PD  301:3      3362
#14 DISC-NUMBER   ZD  304:3      001
#15 ALBUM-ARTIST  AN  307:41    Adele
#16 RELEASE-DATE  AN  348:20    2011-01-21T08:00:00Z
#17 DATE-ADDED    AN  368:20    2012-08-02T11:30:36Z
#18 DATE-MODIFIED AN  388:20    2011-08-19T12:30:25Z
Se | Line=11 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 8. SELCOPYi - SDE ZOOM.

Unformatted Single-Record (UNFMT) Display Mode

- Type **UNFMT** to set unformatted single-record display mode.
- Type **HEX** to toggle hexadecimal display on/off.
- Use **PF7 / PF8** to scroll along the record.
- Use **PF10 / PF11** to scroll the display to the previous/next record.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST10)
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: UnMapped  Fixed(407) Offset=0 Data elements=1
Record> 00000011  Flags: f      Length: 407
Field      <---+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6
UnMapped   E374BE6EE7C86B1D01A210C Someone Like You
61 - 120
121 - 180
181 - 240      Adele
241 - 300      21
301 - 360      1 FOUN      201A
361 - 407      :00:00Z2012-08-02T11:30:36Z2011-01-21T08
Se | Line=11 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 9. SELCOPYi - SDE UNFMT.

Hex Dump (HEXD) Display Mode

- Type **HEXD** to set hex-dump display mode.
You may add the **NEW** parameter in order to open the display in a new window.
- Use **PF7** / **PF8** to scroll along the record.
- Use **PF10** / **PF11** to scroll the display to the previous/next record.
- Use the **SPM** command to show a popup menu providing display options for the hex-dump screen. The popup menu may also be displayed by pressing **PF4** with the cursor in data area.
Type **Help HEXD** for full information.
- The offset field on the first displayed line of data may also be overtyped in order to scroll the display to the specified offset within the record.
- While in multi-record (table) view the **HEXD** line-command may also be typed into record the prefix area to show the selected record in hex-dump format.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C)
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command>
Record type: UnMapped  Fixed(407) Offset=0 Data elements=1
Record> 00000011  Flags: f  Length: 407
000000  C5F3F7F4  C2C5F6C5  C5F7C3F8  F6C2F1C4  E374BE6EE7C86B1D
000010  F0F1C1F2  F1F0C3E2  96948596  958540D3  01A210CSomeone L
000020  89928540  E896A440  40404040  40404040  ike You
000030  40404040  40404040  40404040  40404040
000040  40404040  40404040  40404040  40404040
000050  40404040  40404040  40404040  40404040
000060  40404040  40404040  40404040  40404040
000070  40404040  40404040  40404040  40404040
000080  40404040  40404040  40404040  404040C1
000090  84859385  40404040  40404040  40404040  dele
0000A0  40404040  40404040  40404040  40404040
0000B0  40404040  40404040  40404040  40404040
0000C0  40404040  40404040  40404040  40404040
0000D0  40404040  40F2F140  40404040  40404040  21
0000E0  40404040  40404040  40404040  40404040
0000F0  40404040  40404040  40404040  40404040
000100  40404040  40404040  40404040  40404040
000110  40404040  40404040  40404000  045A38C6  .!.F
000120  D6E4D501  0044100C  F2F0F1C1  03362CF0  QUN. ...201A...0
000130  F0C1C184  85938540  40404040  40404040  0AAdele
000140  40404040  40404040  40404040  40404040
000150  40404040  40404040  404040F2  F0F1F160  2011-
000160  F0F160F2  F1E3F0F8  7AF0F07A  F0F0E9F2  01-21T08:00:00Z2
000170  F0F1F260  F0F860F0  F2E3F1F1  7AF3F07A  012-08-02T11:30:
Se | Line=11 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 10. SELCOPY/i - SDE HEXD.

Formatted Multi-Record (VFMT) Display Mode

- Type **VFMT** to return to the default multi-record formatted display mode.

```

SELPCOPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
      TRACK-#1 TRACK-#2 TRACK-#3 TRACK-#4 TRACK-#5
      AN 1:16 ZD 17:3 ZD 20:4 AN 24:120
      <---+---1---+> <---> <---> <---+---1---+---2---+---3---
00000011 E3748E6EE7C86B1D 011 2103 Someone Like You
00000012 D4EB4EBF4651EF20 012 2105 I Found a Boy (Bonus Track)
00000013 CEC92B1BA3204A0A 013 2107 Adele 21 - A Track By Track Interv
00000014 6D4C2C7BA7E01593 001 4169 Hold On
00000015 E241B09CC251C386 002 4171 I Found You
00000016 E74C16BCB319870C 003 4173 Hang Loose
00000017 214ED5D95884533C 004 4175 Rise to the Sun
00000018 0E421AFCD141D22D 005 4177 You Ain't Alone
00000019 FF47FB9E05DE8967 006 4179 Goin' to the Party
00000020 5D46C681552440BF 007 4181 Heartbreaker
00000021 C54FE77922485624 008 4183 Boys &#38; Girls
00000022 8D485913F78CEEE3 009 4185 Be Mine
00000023 B044D08ED2337A412 010 4187 I Ain't the Same
00000024 6E44D77A948E8A6D 011 4189 On Your Way
00000025 BD48544197975CAB 012 4191 Heavy Chevy
00000026 0E9D90BEF653FB3D 001 2109 Converted
00000027 394900B434520082 002 2111 Speed Up the Sound of Loneliness
00000028 7CEC684D57FADD0B 003 2113 Woke Up This Morning
00000029 10FEE2A0203CF89B 004 2115 U Don't Dans 2 Tekno
00000030 7CB7FD20ADBE19AD 005 2117 Bourgeoisie Blues
00000031 417934474BD283DC 006 2119 Ain't Goin' to Goa
00000032 D776D98916C07D6A 007 2121 Mao Tse Tung Said
00000033 F21C824DDCD69F3 008 2123 Hypo Full of Love (The 12 Step Pla
Se | Line=11 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 11. SELPCOPYi - SDE VFMT.

Controlling Table Headings

- A fixed heading displays the **Record Type** name. Other items on this line are described in the following table.


Item	Description
Fixed(n)	Displayed when the record-type is of a fixed length n .
Variable(n1,n2)	Displayed when the record-type may vary in length. Its lower length limit being n1 . Its upper length limit being n2 .
Offset=n	Indicates the offset (n) into the record at which record-type mapping is applied.
Data Elements=n	Indicates the number of fields (n) mapped by this record-type.

- The first **column heading** is fixed and displays the **Field Name**.
- Subsequent **column headings** are optional. The table below indicates the primary commands used to control each one.

Item	Description	Primary Commands
Field Number	Displays the field reference number (#n).	REF ON REF OFF
Data Type	Optionally displays one of the following: 1. A combination field of the format data-type position:length . e.g. AN 111:30 2. A combination field of the format length/format . e.g. 30/CHAR 3. The position or offset defining the field's location within the record. e.g. 111 4. The field's picture string . e.g. X(30)	TYPE ON TYPE OFF TYPE FMT TYPE OFFSET TYPE PIC
Scale	Displays the scale. Use command OFST X to display a hexadecimal offset scale.	SCALE ON SCALE OFF OFST P OFST X

LAYOUT Command

- Type **LAYout** to display the current structure details in a separate list-window.
- Select the *Text* menu-bar item or type **TEXT** to place the information in a text-edit document window, which may be saved in the usual fashion.
- From the LAYOUT window, use **PF3** to return to the edit/browse view.



SELCOPY/i - Layout from USER123.SELCTRN.SAM1(ZZST1CPC)

View Refresh Back Forward FDB Text Help

Command>

	Name	Picture	RefNo	Start	End	Length
1	TRACK	Group	1	1	407	407
5	PERSISTENT-ID	X(016)	2	1	16	16
5	TRACK-NUM	S9(003)	3	17	19	3
5	TRACK-ID	S9(004)	4	20	23	4
5	NAME	X(120)	5	24	143	120
5	ARTIST	X(070)	6	144	213	70
5	ALBUM	X(070)	7	214	283	70
5	TOTAL-TIME	S9(007)	8	284	287	4
5	FILE-SIZE	S9(009)	9	288	291	4
5	BIT-RATE	S9(004)	10	292	293	2
5	SAMPLE-RATE	S9(005)	11	294	296	3
5	YEAR	S9(004)	12	297	300	4
5	NORMALIZATION	S9(005)	13	301	303	3
5	DISC-NUMBER	S9(003)	14	304	306	3
5	ALBUM-ARTIST	X(041)	15	307	347	41
5	RELEASE-DATE	X(020)	16	348	367	20
5	DATE-ADDED	X(020)	17	368	387	20
5	DATE-MODIFIED	X(020)	18	388	407	20

Line 1 of 18 | Col 1 of 50 | Views 1 | select *

Figure 12. SELCOPYi - SDE VFMT.

Scrolling the Display to a specific field/record.

Locating a Field

- Use the **LOCATE** command to scroll a formatted (either multi- or single-record) display to a specific field. LOCATE may be abbreviated to **L**.
- Field names may be abbreviated.
- The field may be referred to either by its name or by its field reference number, e.g. using the supplied sample COBOL copybook the following commands are functionally equivalent.
 - ◆ L SAMP
 - ◆ L #11

The result of issuing either of these commands from a VFMT display is shown below.

- The parameters **FIRST**, **LAST**, **NEXT** or **PREV** may optionally be added to the command, with **NEXT** being the default.

```

SELCPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
      SAMPLE-RATE      YEAR  NORMALIZATION  DISC-NUMBER  ALBUM-ARTIST
      #11      #12      #13      #14      #15
      PD 294:3  ZD 297:4      PD 301:3      ZD 304:3  AN 307:41
      <---+>      <--->      <---+>      <--->      <---+---1---+---2---
00000001      44100      2011      5151      001 Adele
00000002      44100      2011      7474      001 Adele
00000003      44100      2011      6529      001 Adele
00000004      44100      2011      5189      001 Adele
00000005      44100      2011      9255      001 Adele
00000006      44100      2011      3374      001 Adele
00000007      44100      2011      3615      001 Adele
00000008      44100      2011      10626     001 Adele
00000009      44100      2011      4629      001 Adele
00000010      44100      2011      2020      001 Adele
00000011      44100      2011      3362      001 Adele
00000012      44100      2011      3893      001 Adele
00000013      0         2011      0         000 Adele
00000014      44100      2012      4808      001 Alabama Shakes
00000015      44100      2012      6070      001 Alabama Shakes
00000016      44100      2012      5761      001 Alabama Shakes
00000017      44100      2012      7294      001 Alabama Shakes
00000018      44100      2012      7353      001 Alabama Shakes
00000019      44100      2012      2058      001 Alabama Shakes
00000020      44100      2012      9197      001 Alabama Shakes
00000021      44100      2012      1145      001 Alabama Shakes
00000022      44100      2012      6287      001 Alabama Shakes
00000023      44100      2012      8411      001 Alabama Shakes
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 13. SELCPYi - SDE LOCATE field.

Locating a Record

- Use the **LOCATE nnn** command to scroll to a specific record number **nnn**.
- Alternatively you may use **:nnn**
e.g. the following commands are functionally equivalent.
 - ♦ L 1001
 - ♦ :1001
 The result of issuing either of these commands from a VFMT display is shown below.
- The LOCATE command may also be used to
 - ♦ scroll a VSAM ESDS to the record at a specific RBA.
 - ♦ scroll a VSAM KSDS to the record at a specific key, partial key or RBA.
- Type **Help Locate** for full information.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: TRACK    Fixed(407) Offset=0 Data elements=18
  #2      #3      #4      #5
AN 1:16   ZD 17:3  ZD 20:4  AN 24:120
<---+---1---+>    <-->    <--->    <---+---1---+---2---+---3---
00001001 4D17E66D893AE49E    005    1969 Vagabond of the Western World
00001002 D48D5001F4E2E9F0    010    1973 Black Boys on the Corner
00001003 92AC52CA6ACFEDFE    011    1975 Randolph's Tango
00001004 90559B50A6E0F362    012    1977 Broken Dreams
00001005 8A6F1BD714A9CEA6    006    1971 Little Girl In Bloom
00001006 C19C990E8700067B    005    4287 50 Ways to Say Goodbye
00001007 43EED60467C11B25    003    4479 Drops of Jupiter
00001008 A02159C78BD2DB08    001    4289 Hey, Soul Sister
00001009 D0CAE063307BE777    003    2015 When I Look To The Sky
00001010 B0F4DD08C25311E8    002    4291 Ordinary
00001011 E0E14542481D9232    001    2007 Calling All Angels - Radio Version
00001012 1164825C5AD2CC49    001    3893 Blue Hour
00001013 BCA7AB8D236B0F94    002    3895 Average Man
00001014 DE2FF2860345143D    003    3897 Long Distance
00001015 8E1B2E243367374B    004    3899 Self Help
00001016 0BF4067BF1653873    005    3901 Falling Down
00001017 9C5EA59620F7E953    006    3903 Stone Thrown
00001018 A593C29E5F969670    007    3905 Clear Blue Air
00001019 F0B61DAA1CF007A8    008    3907 Pain Killer (Summer Rain)
00001020 5DFA5E0D57590C8F    009    3909 Full Of Stars
00001021 1D5C6B0F4E3F51AF    010    3911 Panic Attack
00001022 78FF0C2A18C3FB36    011    3913 Little Brother
00001023 45D95EB9E8EB45C3    012    3915 Rain City
Se | Line=1001 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | V

```

Figure 14. SELCOPYi - SDE LOCATE record.

Selecting/Ordering Visible Fields

- Type **SElect** followed by a comma separated list of fields in order to restrict the display to those fields of particular interest.
- Fields may be referred to either by their name or by their field reference number.
- Type either of the following commands to produce the results displayed below.
 - ♦ **SEL TRACK-NUM,ALBUM,ARTIST,NAME**
 - ♦ **SEL #3,#7,ARTIST,NAME**

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST10)
File Edit Actions Options Utilities Window SwapList Help  WS WR  Scroll> Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
      TRACK-NUM  ALBUM
      #3        #7
      ZD 17:3   AN 214:70
      <--> <--+---1---+---2---+---3---+---4---+---5---+---6
000000001      001 21
000000002      002 21
000000003      003 21
000000004      004 21
000000005      005 21
000000006      006 21
000000007      007 21
000000008      008 21
000000009      009 21
000000010      010 21
000000011      011 21
000000012      012 21
000000013      013 21
000000014      001 Boys &#38; Girls
000000015      002 Boys &#38; Girls
000000016      003 Boys &#38; Girls
000000017      004 Boys &#38; Girls
000000018      005 Boys &#38; Girls
000000019      006 Boys &#38; Girls
000000020      007 Boys &#38; Girls
000000021      008 Boys &#38; Girls
000000022      009 Boys &#38; Girls
000000023      010 Boys &#38; Girls
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 15. SELCOPYi - SDE SELECT 1.

- The following results will be displayed after scrolling right once.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST10)
File Edit Actions Options Utilities Window SwapList Help  WS WR  Scroll> Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
      ALBUM      ARTIST
      #7        #6
      AN 214:70  AN 144:70
      ----+----> <--+---1---+---2---+---3---+---4---+---5---+---
000000001      Adele
000000002      Adele
000000003      Adele
000000004      Adele
000000005      Adele
000000006      Adele
000000007      Adele
000000008      Adele
000000009      Adele
000000010      Adele
000000011      Adele
000000012      Adele
000000013      Adele
000000014      Alabama Shakes
000000015      Alabama Shakes
000000016      Alabama Shakes
000000017      Alabama Shakes
000000018      Alabama Shakes
000000019      Alabama Shakes
000000020      Alabama Shakes
000000021      Alabama Shakes
000000022      Alabama Shakes
000000023      Alabama Shakes
Se | Line=1 | Col=61 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 16. SELCOPYi - SDE SELECT 2.

- Type **SElect *** to reset the display to show all fields in their default order

Preventing Fields from Scrolling Off-screen (HOLD)

- By adding the **Hold** keyword following the field-name/ref, that field may be prevented from scrolling off the screen.
- **HOLD** need only be specified once i.e. for the last (right-most) of a sequence of held fields.
- Type the following command to produce the results displayed below.
SEL #3 HOLD,#5,ALBUM,ARTIST
- Held fields are highlighted in a different colour.
Type **Help COLOUR** for full information.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
      TRACK-NUM  NAME
      #3 #5
      ZD 17:3 AN 24:120
      <--> <--+---1---+---2---+---3---+---4---+---5---+---6
000000001      001 Rolling In the Deep
000000002      002 Rumour Has It
000000003      003 Turning Tables
000000004      004 Don't You Remember
000000005      005 Set Fire to the Rain
000000006      006 He Won't Go
000000007      007 Take It All
000000008      008 I'll Be Waiting
000000009      009 One and Only
000000010      010 Lovesong
000000011      011 Someone Like You
000000012      012 I Found a Boy (Bonus Track)
000000013      013 Adele 21 - A Track By Track Interview
000000014      001 Hold On
000000015      002 I Found You
000000016      003 Hang Loose
000000017      004 Rise to the Sun
000000018      005 You Ain't Alone
000000019      006 Goin' to the Party
000000020      007 Heartbreaker
000000021      008 Boys &#38; Girls
000000022      009 Be Mine
000000023      010 I Ain't the Same
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 17. SELCOPYi - SDE SELECT 3.

Adding All Previously Unselected Fields to the Display

- By adding the pseudo-field **asterisk (*)** to the end of the SELECT command, all previously unselected fields will be included in their default order.
- Type the following command then scroll right to produce the results displayed below.
SEL #3 H,#5,ALBUM,ARTIST,*

TRACK-NUM	SAMPLE-RATE	YEAR	NORMALIZATION	DISC-NUMBER	ALBUM-ARTIST
00000001	44100	2011	5151	001	Adele
00000002	44100	2011	7474	001	Adele
00000003	44100	2011	6529	001	Adele
00000004	44100	2011	5189	001	Adele
00000005	44100	2011	9255	001	Adele
00000006	44100	2011	3374	001	Adele
00000007	44100	2011	3615	001	Adele
00000008	44100	2011	10626	001	Adele
00000009	44100	2011	4629	001	Adele
00000010	44100	2011	2020	001	Adele
00000011	44100	2011	3362	001	Adele
00000012	44100	2011	3893	001	Adele
00000013	0	2011	0	000	Adele
00000014	44100	2012	4808	001	Alabama Shake
00000015	44100	2012	6070	001	Alabama Shake
00000016	44100	2012	5761	001	Alabama Shake
00000017	44100	2012	7294	001	Alabama Shake
00000018	44100	2012	7353	001	Alabama Shake
00000019	44100	2012	2058	001	Alabama Shake
00000020	44100	2012	9197	001	Alabama Shake
00000021	44100	2012	1145	001	Alabama Shake
00000022	44100	2012	6287	001	Alabama Shake
00000023	44100	2012	8411	001	Alabama Shake

Figure 18. SELCOPY/i - SDE SELECT 4.

Adjusting Field Display Column-widths

- Use **COLWidth** command to control the number of characters occupied by any particular field.
- Type the following sequence of commands to produce the results below.
 - ♦ **SEL #3,#5 H,ALBUM,ARTIST,***
 - ♦ **COLW NAME 20**
 - ♦ **COLW #7 20**
 - ♦ **COLW #6 18**

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
      TRACK-NUM  NAME      ALBUM      ARTIST
      #3      #5      #7      #6
      ZD 17:3 AN 24:120 AN 214:70 AN 144:70
      <---> <---+-----1-----+> <---+-----1-----+> <---+-----1-----+>
000000001 001 Rolling In the Deep 21 Adele
000000002 002 Rumour Has It 21 Adele
000000003 003 Turning Tables 21 Adele
000000004 004 Don't You Remember 21 Adele
000000005 005 Set Fire to the Rain 21 Adele
000000006 006 He Won't Go 21 Adele
000000007 007 Take It All 21 Adele
000000008 008 I'll Be Waiting 21 Adele
000000009 009 One and Only 21 Adele
000000010 010 Lovesong 21 Adele
000000011 011 Someone Like You 21 Adele
000000012 012 I Found a Boy (Bonus 21 Adele
000000013 013 Adele 21 - A Track B 21 Adele
000000014 001 Hold On Boys &#38; Girls Alabama Shakes
000000015 002 I Found You Boys &#38; Girls Alabama Shakes
000000016 003 Hang Loose Boys &#38; Girls Alabama Shakes
000000017 004 Rise to the Sun Boys &#38; Girls Alabama Shakes
000000018 005 You Ain't Alone Boys &#38; Girls Alabama Shakes
000000019 006 Goin' to the Party Boys &#38; Girls Alabama Shakes
000000020 007 Heartbreaker Boys &#38; Girls Alabama Shakes
000000021 008 Boys &#38; Girls Boys &#38; Girls Alabama Shakes
000000022 009 Be Mine Boys &#38; Girls Alabama Shakes
000000023 010 I Ain't the Same Boys &#38; Girls Alabama Shakes
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 19. SELCOPYi - SDE VFMT.

After pressing **PF11** the display will be updated as follows.

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
      TRACK-NUM  NAME      PERSISTENT-ID      TRACK-ID      TOTAL-TIME
      #3      #5      #2      #4      #8
      ZD 17:3 AN 24:120 AN 1:16 ZD 20:4 FB 284:4
      <---> <---+-----1-----+> <---+-----1-----+> <---+-----1-----+>
000000001 001 Rolling In the Deep CB12DD714D51828C 2083 228093
000000002 002 Rumour Has It 2648A25633D15404 2085 223266
000000003 003 Turning Tables 9815923C6D2E6830 2087 250000
000000004 004 Don't You Remember 7D003FF752074C18 2089 243200
000000005 005 Set Fire to the Rain AED739D8574AA4C5 2091 242973
000000006 006 He Won't Go E755BCE1CF5CDEA7 2093 278040
000000007 007 Take It All 6798C2AB0AFB2571 2095 228293
000000008 008 I'll Be Waiting 962B35D1647DE75E 2097 241351
000000009 009 One and Only D8A6C8FDC2802177 2099 348226
000000010 010 Lovesong 2502515DEB535010 2101 316240
000000011 011 Someone Like You E374BE6EE7C86B1D 2103 285240
000000012 012 I Found a Boy (Bonus D4EB4EBF4651EF20 2105 217338
000000013 013 Adele 21 - A Track B CEC92B1BA3204A0A 2107 875000
000000014 001 Hold On 6D4C2C7BA7E01593 4169 226186
000000015 002 I Found You E241B09CC251C386 4171 179653
000000016 003 Hang Loose E74C16BCB319870C 4173 144200
000000017 004 Rise to the Sun 214ED5D95884533C 4175 188613
000000018 005 You Ain't Alone 0E421AFCD141D22D 4177 284600
000000019 006 Goin' to the Party FF47FB9E05DE8967 4179 105653
000000020 007 Heartbreaker 5D46C681552440BF 4181 227440
000000021 008 Boys &#38; Girls C54FE77922485624 4183 205986
000000022 009 Be Mine 8D4B5913F78CEEE3 4185 254760
000000023 010 I Ain't the Same B044D8ED2337A412 4187 175800
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 20. SELCOPYi - SDE VFMT.

Using FIND, EXCLUDE and ONLY commands

Searching for Data (FIND/F)

Type the following commands to produce the results displayed below.

- SEL *
- L 1
- F HEART

Press **PF5** (RFIND) to search for the next occurrence.

```

SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1D
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
PERSTENT-ID TRACK-NUM TRACK-ID NAME ARTIST
#2 #3 #4 #5 #6
AN 1:16 ZD 17:3 ZD 20:4 AN 24:120 AN 144:70
<---+---1---+> <---> <---> <---+---1---+> <---+---1---
000000001 CB12DD714D51828C 001 2083 Rolling In the Deep Adele
000000002 2648A25633D15404 002 2085 Rumour Has It Adele
000000003 9815923C6D2E6830 003 2087 Turning Tables Adele
000000004 7D003FF752074C18 004 2089 Don't You Remember Adele
000000005 AED739D8574AA4C5 005 2091 Set Fire to the Rain Adele
000000006 E7558CE1CF5CDEA7 006 2093 He Won't Go Adele
000000007 6798C2AB0AFB2571 007 2095 Take It All Adele
000000008 962835D1647DE75E 008 2097 I'll Be Waiting Adele
000000009 D8A6C8FDC2802177 009 2099 One and Only Adele
000000010 2502515DEB535010 010 2101 Lovesong Adele
000000011 E3748E6EE7C86B1D 011 2103 Someone Like You Adele
000000012 D4EB4EBF4651EF20 012 2105 I Found a Boy (Bonus Adele
000000013 CEC92B1BA3204A0A 013 2107 Adele 21 - A Track B Adele
000000014 6D4C2C7BA7E01593 001 4169 Hold On Alabama Shake
000000015 E241B09CC251C386 002 4171 I Found You Alabama Shake
000000016 E74C16BCB319870C 003 4173 Hang Loose Alabama Shake
000000017 214ED5D95B84533C 004 4175 Rise to the Sun Alabama Shake
000000018 0E421AFCD141D22D 005 4177 You Ain't Alone Alabama Shake
000000019 FF47FB9E05DE8967 006 4179 Goin' to the Party Alabama Shake
000000020 5D46C681552440BF 007 4181 Heartbreaker Alabama Shake
000000021 C54FE77922485624 008 4183 Boys &#38; Girls Alabama Shake
000000022 8D4B5913F78CEEE3 009 4185 Be Mine Alabama Shake
000000023 B044D8ED2337A412 010 4187 I Ain't the Same Alabama Shake
Se Line=1 Col=1 Alt=0,0;0 Size=1070 Recl=407 Fmt=F Files=1 View

```

Figure 21. SELCOPYi - SDE FIND 1.

Restricting the Search to a Specific Field

The search may be restricted to a specific field e.g.

• F ALABAMA #5

If fields are to be referred to by name, then they must be specified in brackets e.g.

• F ALABAMA (NAME)

If none are specified then the search will be restricted to those fields specified by the most recent SELECT command, provided one has been issued. Otherwise all fields will be searched in their default order.

```

-SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
PERSISTENT-ID TRACK-NUM TRACK-ID NAME ARTIST
#2 #3 #4 #5 #6
AN 1:16 ZD 17:3 ZD 20:4 AN 24:120 AN 144:70
<---+---1---+> <--> <---> <---+---1---+> <---+---1---
00000653 7A380D28DA910A7B 001 3363 Sweet Home Alabama Lynyrd Skynyrd
00000654 FA976D14F7EEF623 002 3339 I Ain't the One Lynyrd Skynyrd
00000655 7D828FF66DE1B03D 002 3365 Crossroads Lynyrd Skynyrd
00000656 8FE27D812957B9A5 003 3341 Saturday Night Speci Lynyrd Skynyrd
00000657 6BC665A358DB5475 003 3367 Free Bird (Undubbed) Lynyrd Skynyrd
00000658 25533C315171FCE5 004 3343 Searching Lynyrd Skynyrd
00000659 F06C5E8FF9E73897 004 3369 Introduction By Alex Lynyrd Skynyrd
00000660 F6775CC2575D9F02 005 3371 I Ain't the One (Alt Lynyrd Skynyrd
00000661 8F12ADF0A2D03C4B 005 3345 Travellin' Man Lynyrd Skynyrd
00000662 1C83C54551DA904B 006 3373 Searchin' (Alternate Lynyrd Skynyrd
00000663 3A8D35D8E4E94317 006 3347 Simple Man Lynyrd Skynyrd
00000664 AF1B4500D8892FE5 007 3375 Gimme Three Steps Lynyrd Skynyrd
00000665 90B364BC56E5D4D9 007 3349 Whiskey Rock-A-Rolle Lynyrd Skynyrd
00000666 FB62E8C234527D6E 008 3351 The Needle and the S Lynyrd Skynyrd
00000667 94627829ECA49843 008 3377 Call Me the Breeze Lynyrd Skynyrd
00000668 458342D207B0BC77 009 3353 Gimme Back My Bullet Lynyrd Skynyrd
00000669 8D0B7C18B78DE112 009 3379 Sweet Home Alabama ( Lynyrd Skynyrd
00000670 867C61A98F5AC380 010 3381 Crossroads (Alternat Lynyrd Skynyrd
00000671 94EE123CE522DEF4 010 3355 Tuesday's Gone Lynyrd Skynyrd
00000672 4F8AF925660E6850 011 3357 Gimme Three Steps Lynyrd Skynyrd
00000673 30956502EC125D30 011 3383 Free Bird Lynyrd Skynyrd
00000674 3B3298C3172E369E 012 3359 Call Me the Breeze Lynyrd Skynyrd
00000675 3CF5025D22F1607E 013 3361 T for Texas (Blue Yo Lynyrd Skynyrd
Se | Line=653 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vi

```

Figure 22. SELCPYI - SDE FIND 2.

Restricting the Search to a List of Fields

- The search may be restricted to a list of comma separated fields e.g.
 ♦ **F ALABAMA #5,#6**
- Again, if fields are to be referred to by name, then they must be specified in brackets e.g.
 ♦ **F ALABAMA (NAME,ARTIST)**

```

SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
  TRACK-#2 TRACK-#3 TRACK-#4 TRACK-#5 TRACK-#6 TRACK-#7
  AN 1:16 ZD 17:3 ZD 20:4 AN 24:120 AN 144:70
  <---+---1---+> <---> <---> <---+---1---+> <---+---1---
00000001 CB12DD714D51828C 001 2083 Rolling In the Deep Adele
00000002 2648A25633D15404 002 2085 Rumour Has It Adele
00000003 9815923C6D2E6830 003 2087 Turning Tables Adele
00000004 7D003FF752074C18 004 2089 Don't You Remember Adele
00000005 AED739D8574AA4C5 005 2091 Set Fire to the Rain Adele
00000006 E755BCE1CF5CDEA7 006 2093 He Won't Go Adele
00000007 6798C2AB0AFB2571 007 2095 Take It All Adele
00000008 962835D1647DE75E 008 2097 I'll Be Waiting Adele
00000009 D8A6C8FDC2802177 009 2099 One and Only Adele
00000010 2502515DEB535010 010 2101 Lovesong Adele
00000011 E374BE6EE7C86B1D 011 2103 Someone Like You Adele
00000012 D4EB4EBF4651EF20 012 2105 I Found a Boy (Bonus Adele
00000013 CEC92B1BA3204A0A 013 2107 Adele 21 - A Track B Adele
00000014 6D4C2C7BA7E01593 001 4169 Hold On Alabama Shake
00000015 E241B09CC251C386 002 4171 I Found You Alabama Shake
00000016 E74C16BCB319870C 003 4173 Hang Loose Alabama Shake
00000017 214ED5D95884533C 004 4175 Rise to the Sun Alabama Shake
00000018 0E421AFCD141D22D 005 4177 You Ain't Alone Alabama Shake
00000019 FF47FB9E05DE8967 006 4179 Goin' to the Party Alabama Shake
00000020 5D46C681552440BF 007 4181 Heartbreaker Alabama Shake
00000021 C54FE77922485624 008 4183 Boys & #38; Girls Alabama Shake
00000022 8D4B5913F78CEEE3 009 4185 Be Mine Alabama Shake
00000023 B044D8ED2337A412 010 4187 I Ain't the Same Alabama Shake
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 23. SELCPYi - SDE FIND 3.

Restricting the Search to a Range of Fields

- A range of fields may also be specified by separating the start and end field with a colon e.g.
 ♦ **F ALABAMA #2:#6**
- Again, if any field is to be referred to by name, then they must be specified in brackets e.g.
 ♦ **F ALABAMA (#2:ARTIST)**
- Type **Help Change** for full information.

Excluding Records Based on Field Content (EXCLUDE/X)

- The **EXCLUDE** command takes the same parameters as **FIND** e.g.
 ♦ **X ALL ALABAMA #5,#6**

```

SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
ZZSD187I 27 lines of record type TRACK containing string "alabama" were
excluded.
#2 #3 #4 #5 #6
AN 1:16 ZD 17:3 ZD 20:4 AN 24:120 AN 144:70
<---+---1---+> <--> <---> <---+---1---+> <---+---1---
00000001 CB12DD714D51828C 001 2083 Rolling In the Deep Adele
00000002 2648A25633D15404 002 2085 Rumour Has It Adele
00000003 9815923C6D2E6830 003 2087 Turning Tables Adele
00000004 7D003FF752074C18 004 2089 Don't You Remember Adele
00000005 AED739D8574AA4C5 005 2091 Set Fire to the Rain Adele
00000006 E7558CE1CF5CDEA7 006 2093 He Won't Go Adele
00000007 6798C2AB0AFB2571 007 2095 Take It All Adele
00000008 962835D1647DE75E 008 2097 I'll Be Waiting Adele
00000009 D8A6C8FDC2802177 009 2099 One and Only Adele
00000010 2502515DEB535010 010 2101 Lovesong Adele
00000011 E374BE6EE7C86B1D 011 2103 Someone Like You Adele
00000012 D4EB4EBF4651EF20 012 2105 I Found a Boy (Bonus Adele
00000013 CEC92B1BA3204A0A 013 2107 Adele 21 - A Track B Adele
00000014 ----- 24 line(s) excluded: record type TRACK -----
00000038 3042FAD7E89FCDF3 016 2133 Uninvited Alanis Moriss
00000039 D1EF53B14D5A4790 001 2135 All I Really Want Alanis Moriss
00000040 02EACE532929B38F 002 2137 You Oughta Know Alanis Moriss
00000041 C63A3B24D837898D 003 2139 Perfect Alanis Moriss
00000042 B26EEC33174DCC60 004 2141 Hand In My Pocket Alanis Moriss
00000043 8276C65D2939EE38 005 2143 Right Through You Alanis Moriss
00000044 74E398087479A309 006 2145 Forgiveness Alanis Moriss
00000045 D6876CE5B59004CF 007 2147 You Learn Alanis Moriss
00000046 AF138361B3B3E268 008 2149 Head Over Feet Alanis Moriss
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 24. SELCPYi - SDE EXCLUDE.

Excluding Records Based on Field Content (ONLY/O)

- The **ONLY** command may be used to display only the matching records and also takes the same parameters as **FIND** e.g.
 ♦ **ONLY ALABAMA #5,#6**
- **ONLY** may be abbreviated to **O**.
- Use the **ALL** command to redisplay any excluded records.

```

SELCPY/1 - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST10
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
ZZSD186I 27 occurrences of string "alabama" were found in records of type
TRACK.

```

	PERSISTENT-ID	TRACK-NUM	TRACK-ID	NAME	ARTIST
	#2	#3	#4	#5	#6
AN 1:16		ZD 17:3	ZD 20:4	AN 24:120	AN 144:70
<---+---1---+>	<-->	<---+---1---+>	<---+---1---+>	<---+---1---+>	<---+---1---+>
00000014	6D4C2C7BA7E01593	001	4169	Hold On	Alabama Shake
00000015	E241B09CC251C386	002	4171	I Found You	Alabama Shake
00000016	E74C16BCB319870C	003	4173	Hang Loose	Alabama Shake
00000017	214ED5D95B84533C	004	4175	Rise to the Sun	Alabama Shake
00000018	0E421AFCD141D22D	005	4177	You Ain't Alone	Alabama Shake
00000019	FF47FB9E05DE8967	006	4179	Goin' to the Party	Alabama Shake
00000020	5D46C681552440BF	007	4181	Heartbreaker	Alabama Shake
00000021	C54FE77922485624	008	4183	Boys & #38; Girls	Alabama Shake
00000022	8D4B5913F78CEEE3	009	4185	Be Mine	Alabama Shake
00000023	B044D08ED2337A412	010	4187	I Ain't the Same	Alabama Shake
00000024	6E44D77A948E8A6D	011	4189	On Your Way	Alabama Shake
00000025	BD48544197975CAB	012	4191	Heavy Chevy	Alabama Shake
00000026	0E9D90BEF653FB3D	001	2109	Converted	Alabama 3
00000027	394900B434520082	002	2111	Speed Up the Sound o	Alabama 3
00000028	7CEC684D57FADD0B	003	2113	Woke Up This Morning	Alabama 3
00000029	10FEE2A0203CF89B	004	2115	U Don't Dans 2 Tekno	Alabama 3
00000030	7CB7FD20A0BE19AD	005	2117	Bourgeoisie Blues	Alabama 3
00000031	417934474BD283DC	006	2119	Ain't Goin' to Goa	Alabama 3
00000032	D776D98916C07D6A	007	2121	Mao Tse Tung Said	Alabama 3
00000033	F21C824DDCDD69F3	008	2123	Hypo Full of Love (T	Alabama 3
00000034	84788B78C8571DC9	009	2125	The Old Purple Tin (Alabama 3
00000035	B6787CDA1A22AAA6	010	2127	The Night We Nearly	Alabama 3

```

Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 25. SELCPYi - SDE ONLY 1.

Searching Numeric Data-Type Fields

- Numeric fields may also be searched without needing to be concerned about the underlying data-type (i.e. zoned-decimal, packed-decimal, binary or floating-point). e.g.
 - ♦ **ONLY 1 (TRACK-NUM)**
- Type **HIDE** to suppress display of shadow records.
- Type **RES HIDE** or **SHAD ON** resume display of shadow records.

```

-SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll>
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
  TRACK-NUM TRACK-ID NAME ARTIST
  #2 #3 #4 #5 #6
  AN 1:16 ZD 17:3 ZD 20:4 AN 24:120 AN 144:70
  <---+---1---+> <--> <---> <---+---1---+---> <---+---1---
00000001 CB12DD714D51828C 001 2083 Rolling In the Deep Adele
00000014 6D4C2C7BA7E01593 001 4169 Hold On Alabama Shake
00000026 0E9D90BEF653FB3D 001 2109 Converted Alabama 3
00000039 D1EF53B14D5A4790 001 2135 All I Really Want Alanis Moriss
00000052 ADDD7342D220CF76 001 7973 Mitzi Alex Harvey
00000061 498B4E8E921A948F 001 4407 Hells Bells AC/DC
00000071 043219699220BB08 001 2053 Rock 'N Roll Train AC/DC
00000086 8D9AD7F812B6E6CB 001 4349 Dirty Deeds Done Dir AC/DC
00000096 1ED550900D5C62FD 001 4337 It's A Long Way To T AC/DC
00000107 62ED978238D09CFE 001 4391 Highway To Hell AC/DC
00000119 B5715E2E8212B99E 001 4365 Go Down AC/DC
00000126 3A2C9735E5A76418 001 4379 Rock 'N' Roll Damnat AC/DC
00000137 244EF5D18EB0FF6A 001 4205 Blowin' In the Wind Bob Dylan
00000138 A9F9DB70A52F83F0 001 4257 Shelter from the Sto Bob Dylan
00000174 4B1E571BFAF437F2 001 2171 Red Headed Woman Bruce Springs
00000187 F4FD7E6EAB695B06 001 2529 Dead Man Walkin' Bruce Springs
00000188 67383B3AA37BF798 001 2197 Devils &#38; Dust Bruce Springs
00000190 BB3105139E236692 001 2201 Human Touch Bruce Springs
00000192 F3A02A1F4EB809E0 001 2205 Better Days Bruce Springs
00000196 53A457A18E068EFF 001 2211 The Ghost of Tom Joa Bruce Springs
00000209 E140BAA528E0A3D3 001 2235 Racing In the Street Bruce Springs
00000230 FDDF99D83FBB06D9 001 2277 The Wrestler Bruce Springs
00000231 63BEA82C58843DB4 001 2281 Leavin' Train Bruce Springs
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 26. SELCPYi - SDE ONLY 2.

Using a Relational Operator (EQ/NE/GT/GE/LT/LE)

- A relational operator (defaulting to EQ) may also be specified before the search value. Supported operators are as follow:

Operator	Description
EQ	Data must be equal to <i>value</i> . (Default)
NE	Data must be not equal to <i>value</i> .
GT	Data must be greater than <i>value</i> .
GE	Data must be greater than or equal to <i>value</i> .
LT	Data must be less than <i>value</i> .
LE	Data must be less than or equal to <i>value</i> .

- Type the following commands to produce the results displayed below, illustrating record selection based on the content of the **binary** numeric field *BIT-RATE*.
 - ◆ SEL BIT-RATE,*
 - ◆ ONLY GT 300 (BIT-RATE)

```

SELCPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: TRACK      Fixed(407) Offset=0 Data elements=18
      BIT-RATE  #10 #2  TRACK-#3  TRACK-#4  NAME
      FB 292:2  AN 1:16  ZD 17:3  ZD 20:4  AN 24:120
      <---+> <---+-----1-----+> <--> <---+-----1-----+>
00000091      320 2914E5BA132025B3      006      6641 There's Gonna Be Som
00000099      320 FAE8D4D8AF11B744      004      6995 Live Wire
00000597      320 20D7CEDE6E323CB0      002      1701 Babe I'm Gonna Leave
00000600      320 11BAC51E6846898C      001      1693 Black Dog
00000605      320 734A4EED8255AC47      007      1367 Tea For One
00001071 *** End of Data ***

```

Figure 27. SELCPYi - SDE ONLY 3.

Searching for INVALID Data

- The keyword **INVALID** may also be specified to search for fields containing data that is invalid according to its defined data-type. e.g. X'ABCD' in a **packed-decimal** field.
- Type the following commands to produce the results displayed below.
 - ◆ **SEL #11,#13 H,***
 - ◆ **HEX ON**
 - ◆ **ONLY INVALID #11,#13**

```

-SELCOPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
SAMPLE-RATE NORMALIZATION PERSISTENT-ID TRACK-NUM TRACK-ID
#11 #13 #2 #3 #4
PD 294:3 PD 301:3 AN 1:16 ZD 17:3 ZD 20:4
<---+> <---+> <---+---1---+> <---> <--->
00000208 ***** 0 BCE177B1DB2B983A 016 1383
400 000 CCCFFCFCFCFFFC FFC FFFC
800 00C 2351772142229831 016 1383

00000551 44100 ***** 58CF2C29F7A472F0 003 3147
410 139 FFCCFCFFCFCFFFC FFC FFFC
40C 0EC 5836232967147260 003 3147

00000703 ***** 0 67BCBC8407B6204C 018 3441
410 000 FFCCFCFFCFCFFFC FFC FFFC
400 00C 6723238407262043 018 3441

00000769 44100 ***** 43444409245FB890 003 4069
410 076 FFFFFFFFCCFF FFC FFFC
40C A0C 4344440924562890 003 4069

00000966 ***** 0 99D68F50F8BC243F 023 3821
410 000 FFCFFCFCFCFFFC FFC FFFC
400 00C 9946865068232436 023 3821

00001007 44100 4923 43EED60467C11B25 003 4479
410 093 FFCCFCFFCFCFF FFC FFFC
40C 42C 4355460467311225 003 4479
Se Line=208 Col=1 Alt=0,0;0 Size=1070 Recl=407 Fmt=F Files=1 Vi

```

Figure 28. SELCOPYi - SDE ONLY 4.

Using CHANGE commands

- Type the following commands to produce the results displayed below.
 - ◆ **SEL TRACK-NUM,NAME HOLD,ALBUM,ARTIST,***
 - ◆ **;C'&','&'**
- Note:** Semi-colon (;) is the default command-separator character. In order to use the separator character as a legitimate part of a command string we must suspend its normal handling. This can be done by either
 - Updating the separator character in the Settings panel, issuing the command, then resetting the separator character. This is cumbersome and upsetting!
 - As in the above example, let **SELCOPYi** automatically suspend separator handling for the duration of a single command, simply by prefixing that command with semi-colon (i.e. the prevailing separator character).
- Press **PF5** (RFIND) to search for the next occurrence.
- Press **PF6** (RCHANGE) to change it.
- Or add the **ALL** parameter to the CHANGE command to change all occurrences.
- Type **Help Change** for full information.

```

SELCOPYi - Edit USER123.SELCTR.N.ZZST1DAT using USER123.SELCTR.N.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
Record type: TRACK Fixed(407) Offset=0 Data elements=18
TRACK-NUM NAME ALBUM ARTIST
#3 #5 #7 #6
ZD 17:3 AN 24:120 AN 214:70 AN 144:70
<--> <---+---1---+---> <---+---1---+---> <---+---1---+--->
00000001 001 Rolling In the Deep 21 Adele
00000002 002 Rumour Has It 21 Adele
00000003 003 Turning Tables 21 Adele
00000004 004 Don't You Remember 21 Adele
00000005 005 Set Fire to the Rain 21 Adele
00000006 006 He Won't Go 21 Adele
00000007 007 Take It All 21 Adele
00000008 008 I'll Be Waiting 21 Adele
00000009 009 One and Only 21 Adele
00000010 010 Lovesong 21 Adele
00000011 011 Someone Like You 21 Adele
00000012 012 I Found a Boy (Bonus 21 Adele
00000013 013 Adele 21 - A Track B 21 Adele
==CHG> 001 Hold On Boys & Girls Alabama Shakes
==CHG> 002 I Found You Boys & Girls Alabama Shakes
==CHG> 003 Hang Loose Boys & Girls Alabama Shakes
==CHG> 004 Rise to the Sun Boys & Girls Alabama Shakes
00000018 005 You Ain't Alone Boys & Girls Alabama Shakes
00000019 006 Goin' to the Party Boys & Girls Alabama Shakes
00000020 007 Heartbreaker Boys & Girls Alabama Shakes
00000021 008 Boys & Girls Alabama Shakes
00000022 009 Be Mine Boys & Girls Alabama Shakes
00000023 010 I Ain't the Same Boys & Girls Alabama Shakes
Se | Line=1 | Col=1 | Alt=4,4;4 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View
  
```

Figure 29. SELCOPYi - SDE CHANGE 1.

UNDO / REDO

Note that all modifications may be individually undone/redone using **PF22** / **PF23** (normally Shift-PF10 / PF11) which are set to execute the **UNDO/REDO** primary commands.

- Consecutive modifications may be undone by pressing **PF22** repeatedly.
- Consecutive modifications may be redone by pressing **PF23** repeatedly.
- The **UNDOING** primary command controls the following aspects:
 - Whether the UNDO/REDO facility is activated.
 - The number of modification levels maintained.
 - The maximum amount of storage allocated.
- Type **Query UNDOING** to determine your current settings.

Selecting only records affected by CHANGE

After applying the above **CHANGE** to all records, you may wish to display only the changed records. To do this type

- **ALL Changed**
- Type **Help ALL** for full information.

```

SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
ZZSD178I 158 lines of record type TRACK selected by all c.
      TRACK-NUM NAME                ALBUM                ARTIST
      #3 #5                #7                #6
      ZD 17:3 AN 24:120      AN 214:70      AN 144:70
      <--> <---+---1-----+---> <---+---1-----+---> <---+---1-----+--->
==CHG>      001 Hold On                Boys & Girls          Alabama Shakes
==CHG>      002 I Found You            Boys & Girls          Alabama Shakes
==CHG>      003 Hang Loose              Boys & Girls          Alabama Shakes
==CHG>      004 Rise to the Sun          Boys & Girls          Alabama Shakes
==CHG>      005 You Ain't Alone          Boys & Girls          Alabama Shakes
==CHG>      006 Goin' to the Party        Boys & Girls          Alabama Shakes
==CHG>      007 Heartbreaker              Boys & Girls          Alabama Shakes
==CHG>      008 Boys & Girls              Boys & Girls          Alabama Shakes
==CHG>      009 Be Mine                  Boys & Girls          Alabama Shakes
==CHG>      010 I Ain't the Same          Boys & Girls          Alabama Shakes
==CHG>      011 On Your Way              Boys & Girls          Alabama Shakes
==CHG>      012 Heavy Chevy              Boys & Girls          Alabama Shakes
==CHG>      013 Rainy Day Women #12      The Essential Bob Dy Bob Dylan
==CHG>      013 The Rising                Bruce Springsteen & Bruce Springsteen
==CHG>      001 Devils & Dust              Devils & Dust          Bruce Springsteen
==CHG>      005 Black Cowboys              Devils & Dust          Bruce Springsteen
==CHG>      001 Long Time Comin'          Live In Dublin         Bruce Springsteen
==CHG>      001 Atlantic City              Live In Dublin         Bruce Springsteen
==CHG>      002 Old Dan Tucker              Live In Dublin         Bruce Springsteen
==CHG>      002 Open All Night              Live In Dublin         Bruce Springsteen
==CHG>      003 Pay Me My Money Down      Live In Dublin         Bruce Springsteen
==CHG>      003 Eyes On the Prize          Live In Dublin         Bruce Springsteen
==CHG>      004 Growin' Up                Live In Dublin         Bruce Springsteen
Se | Line=14 | Col=1 | Alt=5,5;5 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 30. SELCPYi - SDE ALL CHANGED.

Restricting the CHANGE to Specific Fields

Just like FIND, EXCLUDE and ONLY, the **CHANGE** command may be restricted to one or more specific fields. e.g.

• C ALL '21' 'Twenty-One' (NAME)

```

SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR
Command> c all '21' 'Twenty-One' (Name) Scroll> Csr
00000000 *** Top of Data ***
Record type: TRACK Fixed(407) Offset=0 Data elements=18
      TRACK-NUM NAME ALBUM ARTIST
      #3 #5 #7 #6
      ZD 17:3 AN 24:120 AN 214:70 AN 144:70
      <--> <--+---1---+---> <--+---1---+---> <--+---1---+--->
00000001 001 Rolling In the Deep 21 Adele
00000002 002 Rumour Has It 21 Adele
00000003 003 Turning Tables 21 Adele
00000004 004 Don't You Remember 21 Adele
00000005 005 Set Fire to the Rain 21 Adele
00000006 006 He Won't Go 21 Adele
00000007 007 Take It All 21 Adele
00000008 008 I'll Be Waiting 21 Adele
00000009 009 One and Only 21 Adele
00000010 010 Lovesong 21 Adele
00000011 011 Someone Like You 21 Adele
00000012 012 I Found a Boy (Bonus 21 Adele
==CHG> 013 Adele Twenty-One - A 21 Adele
00000014 001 Hold On Boys & Girls Alabama Shakes
00000015 002 I Found You Boys & Girls Alabama Shakes
00000016 003 Hang Loose Boys & Girls Alabama Shakes
00000017 004 Rise to the Sun Boys & Girls Alabama Shakes
00000018 005 You Ain't Alone Boys & Girls Alabama Shakes
00000019 006 Goin' to the Party Boys & Girls Alabama Shakes
00000020 007 Heartbreaker Boys & Girls Alabama Shakes
00000021 008 Boys & Girls Boys & Girls Alabama Shakes
00000022 009 Be Mine Boys & Girls Alabama Shakes
Se | Line=0 | Col=1 | Alt=6,6;6 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 31. SELCPYi - SDE CHANGE 2.

CHANGEing Numeric Data-Type Fields

Next we'll demonstrate **CHANGE** of a numeric data-type field, using a relational operator.

Type the following command to change all values greater than or equal to 10, in the TRACK-NUM field only, to 999.

• C ALL GE 10 999 #3

```

SELCOPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST1C
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
ZZSD212I 310 (out of 310) occurrences were changed in 310 (out of 1070)
records of type TRACK.
TRACK-NUM NAME ALBUM ARTIST
#3 #5 #7 #6
ZD 17:3 AN 24:120 AN 214:70 AN 144:70
<--> <--+---1-----> <--+---1-----> <--+---1----->
00000001 001 Rolling In the Deep 21 Adele
00000002 002 Rumour Has It 21 Adele
00000003 003 Turning Tables 21 Adele
00000004 004 Don't You Remember 21 Adele
00000005 005 Set Fire to the Rain 21 Adele
00000006 006 He Won't Go 21 Adele
00000007 007 Take It All 21 Adele
00000008 008 I'll Be Waiting 21 Adele
00000009 009 One and Only 21 Adele
==CHG> 999 Lovesong 21 Adele
==CHG> 999 Someone Like You 21 Adele
==CHG> 999 I Found a Boy (Bonus 21 Adele
==CHG> 999 Adele Twenty-One - A 21 Adele
00000014 001 Hold On Boys & Girls Alabama Shakes
00000015 002 I Found You Boys & Girls Alabama Shakes
00000016 003 Hang Loose Boys & Girls Alabama Shakes
00000017 004 Rise to the Sun Boys & Girls Alabama Shakes
00000018 005 You Ain't Alone Boys & Girls Alabama Shakes
00000019 006 Goin' to the Party Boys & Girls Alabama Shakes
00000020 007 Heartbreaker Boys & Girls Alabama Shakes
00000021 008 Boys & Girls Boys & Girls Alabama Shakes
00000022 009 Be Mine Boys & Girls Alabama Shakes
Se | Line=0 | Col=1 | Alt=7,7;7 | Size=1070 | Recl=407 | Fmt=F | Files=1 | View

```

Figure 32. SELCOPYi - SDE CHANGE 3.

Filtering records using ALL(WHERE)/MORE/LESS commands

As an alternative to using the ONLY, FIND and EXCLUDE commands, records may be 'filtered' by (a potentially complex) **SQL-style expression** using the **ALL**, **MORE** and **LESS** commands.

- **ALL** excludes all records except those that match the selection criteria.
- **MORE** adds to the included records any excluded records that match the selection criteria.
- **LESS** excludes any included records that match the selection criteria.
- **Where** is a synonym for **ALL**.

Type the following commands to produce the results below.

- **SELECT #10,#3,#5 H,#7,#6,***
- **ALL BIT-RATE > 300**

```

SELCOPY/i - Edit  USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST10)
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command> all bit-rate > 300
Record type: TRACK  Fixed(407) Offset=0 Data elements=18
BIT-RATE TRACK-NUM NAME ALBUM ARTIST
#10 #3 #5 #7 #6
FB 292:2 ZD 17:3 AN 24:120 AN 214:70 AN 144:70
<---+> <--> <---+-----1-----+> <---+-----1-----+> <---+-----
00000091 320 006 There's Gonna Be Som Dirty Deeds Done Dir AC/DC
00000099 320 004 Live Wire High Voltage AC/DC
00000597 320 002 Babe I'm Gonna Leave Led Zeppelin I Led Zeppe
00000600 320 001 Black Dog Led Zeppelin IV Led Zeppe
00000605 320 007 Tea For One Presence Led Zeppe
00001071 *** End of Data ***
Se | Line=91 | Col=1 | Alt=7,7;7 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 33. SELCOPY/i - SDE ALL 1.

Using Multiple Selection Criteria

Selection criteria expressions may specify multiple conditions.

- ALL BIT-RATE > 300 OR #10 < 100

```

SELCPY/i - Edit USER123.SELCTRN.ZZST1DAT using USER123.SELCTRN.SAM1(ZZST10
File Edit Actions Options Utilities Window SwapList Help wS wR
Command> all bit-rate > 300 or #10 < 128 Scroll> Csr
Record type: TRACK Fixed(407) Offset=0 Data elements=18
BIT-RATE TRACK-NUM NAME ALBUM ARTIST
#10 #3 #5 #7 #6
FB 292:2 ZD 17:3 AN 24:120 AN 214:70 AN 144:70
<---+> <--> <---+---1---+---> <---+---1---+---> <---+---
00000091 320 006 There's Gonna Be Som Dirty Deeds Done Dir AC/DC
00000099 320 004 Live Wire High Voltage AC/DC
00000597 320 002 Babe I'm Gonna Leave Led Zeppelin I Led Zeppe
00000600 320 001 Black Dog Led Zeppelin IV Led Zeppe
00000605 320 007 Tea For One Presence Led Zeppe
00000708 96 004 Wish You Were Here Wish You Were Here Pink Floy
00000795 125 001 You Are the Best Thi Gossip In the Grain Ray LaMon
00000796 125 002 Let It Be Me Gossip In the Grain Ray LaMon
00000797 125 003 Sarah Gossip In the Grain Ray LaMon
00000798 125 004 I Still Care for You Gossip In the Grain Ray LaMon
00000799 125 005 Winter Birds Gossip In the Grain Ray LaMon
00000800 125 006 Meg White Gossip In the Grain Ray LaMon
00000801 125 007 Hey Me, Hey Mama Gossip In the Grain Ray LaMon
00000802 125 008 Henry Nearly Killed Gossip In the Grain Ray LaMon
00000803 125 009 A Falling Through Gossip In the Grain Ray LaMon
==CHG> 125 999 Gossip In the Grain Gossip In the Grain Ray LaMon
00001071 *** End of Data ***

Se | Line=91 | Col=1 | Alt=7,7;7 | Size=1070 | Recl=407 | Fmt=F | Files=1 | Vie

```

Figure 34. SELCPYi - SDE ALL 2.

Increasing the size of the Command Input Area

Complex expressions may require more space to type than is available on a single command line.

Type **CLN** to show an options dialog, allowing you increase the number of command lines visible for the current display window.

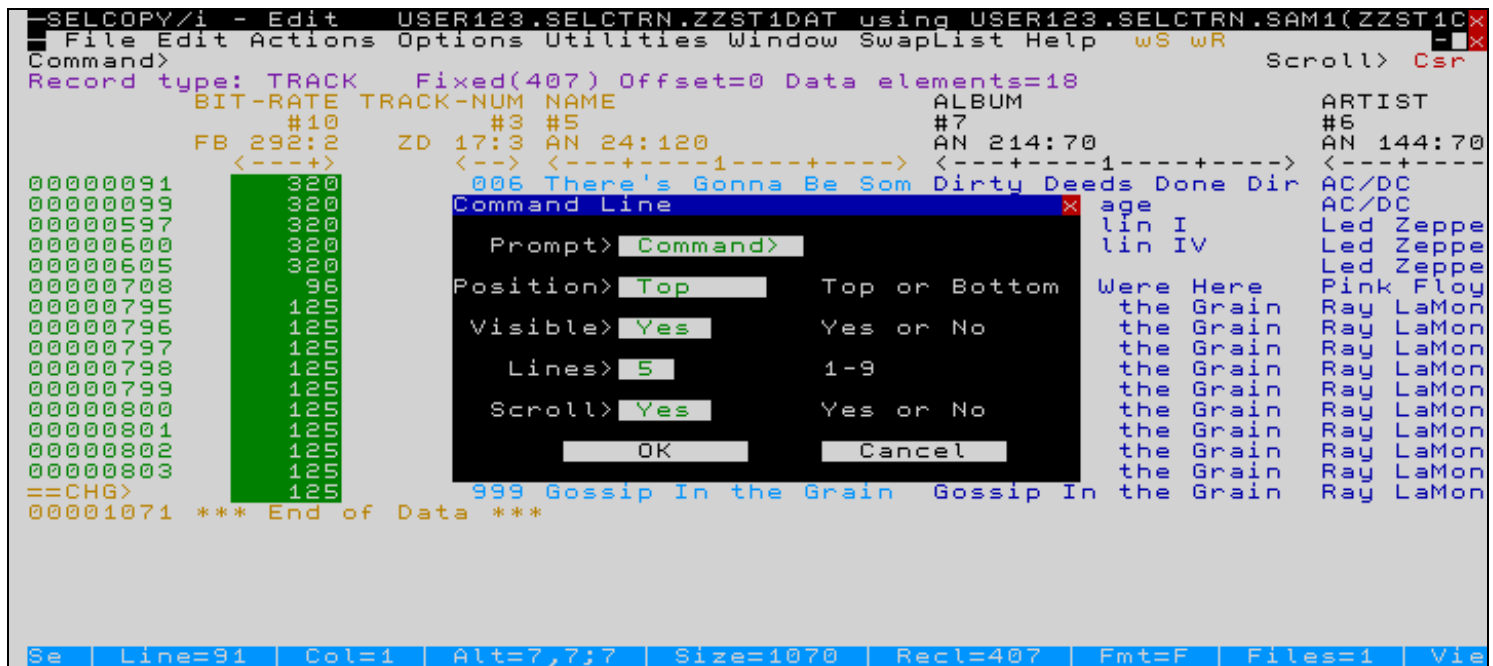


Figure 35. SELCOPYi - SDE Command Line Options.

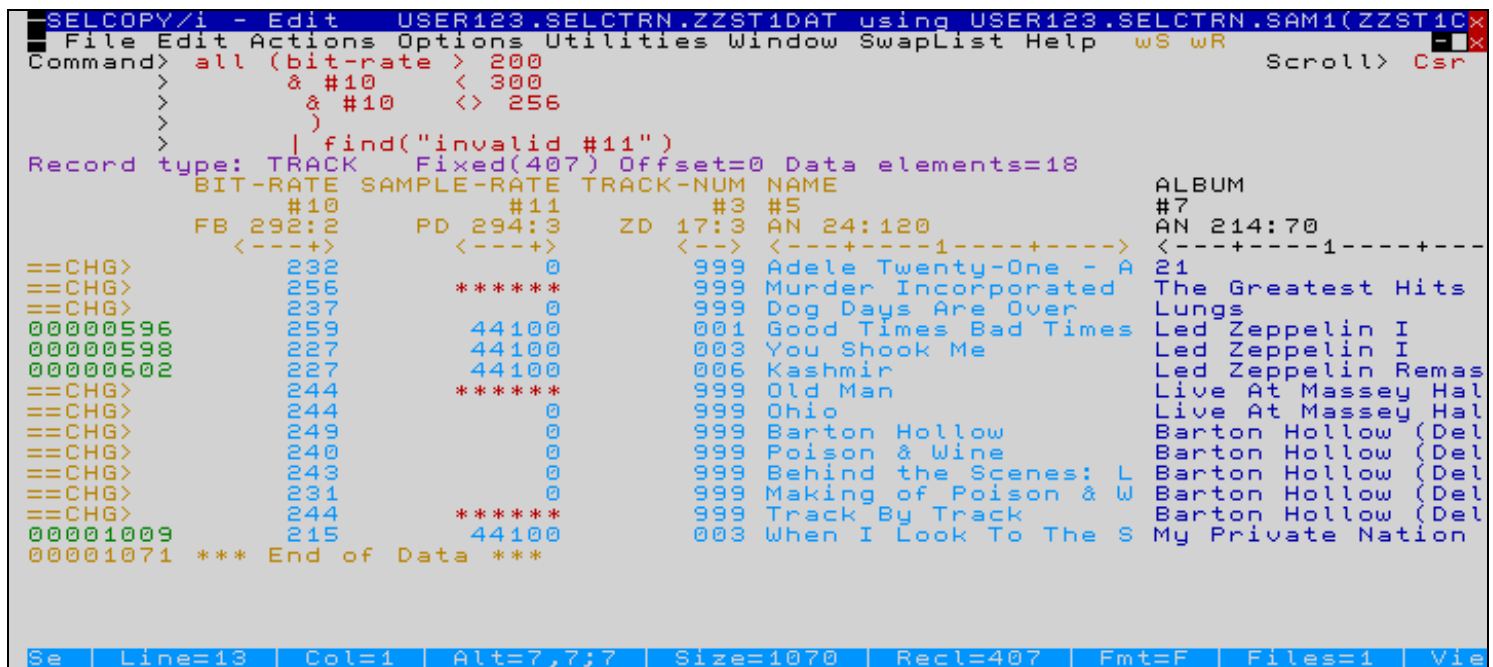


Figure 36. SELCOPYi - SDE ALL 3.

Using a FILTER to Select Records on Load

You may wish to select records based on specific criteria during initial load of the file into the **SELCOPYi** Structured Data Editor.

For example, to load only the first 20 records that contain a value in **position 348** (the year component of RELEASE-DATE)

- that is **greater than '0000'**
- but **less than '1980'**

Choose the **Quick Filter** feature from the SDE Edit / Browse Entry Panel (=2).

- Activate the *Filter* option by entering a / in the left margin field.
- Enter **Q** to select *Quick* filter.
- Press **PF6** to define or modify the filter selection-criteria.

```

SELCOPY/i - Structured Data Browse/Edit
File Command Structure Replace Help
Command>
ZZSGSDE0
PDS/PDSE member, Sequential, VSAM or HFS path:
  Name> USER123.SELCTR.N.ZZST1DAT
  Volume> If dataset is uncataloged.
+ Member>
Action:
  Browse Data.
  Edit Full. (Insert/Update/Delete) - Edit Full Auxiliary. (AUX File)
  Edit In-Place. (Update only) - Edit Full Read-Only. (DISP=SHR)
  - Edit Full Read-Only & Auxiliary.
Structure/Copybook overlay:
  Dsn> USER123.SELCTR.N.SAM1
  Type: - SDO - AData / Cobol - PL1
  Member> ZZST1CPC
Record Selection:
  Start>
  For> @ # records
  Filter> Q Filter selected records. (F=File; Q=Quick) (PF6=Edit Filter)
  File>
Additional Options: - (Enter "/" to display HFS and Profile options.)
  
```

Figure 37. SELCOPYi - SDE Quick Filter 1.

Specifying Simple FILTER Selection Criteria

- Enter **20** in the *Limit*> field to restrict the number of records selected.
- Enter **I** in the *Type*> field to specify that selected records should be **included** in the load.
- Enter **348** into the *Position* column of table row 1.
- Enter **4** into the *Length* column.
- Enter **>** (greater-than) into the *ROp* (Relational Operator) column.
Alternatively enter blank to get a list of available operators from which you may make your selection (by placing the cursor and pressing ENTER).
- Enter **'0000'** into the *Value* column.
 - ♦ For simple case-insensitive character strings there is no need to add quotes (this will be done automatically).
 - ♦ You may specify the string using **C'ABCD'** notation if case-sensitivity is required.
 - ♦ Hex strings may be specified using **X'1234'** notation.
- Replicate table entry line 1 by typing **R** into the table prefix area (000001).
The **AND/OR** column will automatically set to **AND**.
- Enter **<** (less-than) into the *ROp* (Relational Operator) column of inserted table row 2.
- Enter **'1980'** into the *Value* column.

```

SELCOPY/i - Quick Filter - Selection Criteria
File Help
Command>
ZZSGFLTQ
Limit> 20 (0=No limit) Type> I (I=INCLUDE, X=EXCLUDE) PF1=Help
Quick FILTER - Selection Criteria. 2 Rows
AND/OR Position Length ROp Value (Character strings must be quoted)
<.> <...+> <...+> <.> <...+...1...+...2...+...3...+...4...+>
000001 348 4 > '0000'
000002 AND 348 4 < '1980'
000003 *** End of Data ***

```

Figure 38. SELCOPYi - SDE Quick Filter 2.

Activating/Deactivating a FILTER

- Press *PF3* to return to the SDE Edit/Browse Entry Panel.
- Press *ENTER* to edit the sample file using the active filter.
- To **activate/deactivate** the filter simply check/uncheck the *Filter* option.
- A **saved filter** may be activated by specifying filter type **F** and entering the saved filter dataset / member name.
- To define a **saved filter** either:
 1. Select the *Filter* option (=10) from the **SELCOPYi** Primary Option Menu.
 2. At the SDE Edit / Browse Entry Panel, specifying filter type **F**, enter the saved filter dataset/member name then press **PF6**.
- A **saved filter** may define selection criteria referring to the values of named (formatted) fields.
- Formatted selection criteria are individually specified for each defined record-type.

```

SELCOPY/i - Edit(UP) USER123.SELCTRN.ZZ9T1DAT using USER123.SELCTRN.SAM1(ZZST
File Edit Actions Options Utilities Window SwapList Help  WS WR  Scroll> Csr
Command>
00000000 *** Top of Data ***
Record type: TRACK Fixed(407) Offset=0 Data elements=18
      RELEASE-DATE      PERSISTENT-ID      TRACK-NUM      TRACK-ID      NAME
      #16      #2      #3      #4      #5
      AN 348:20      AN 1:16      ZD 17:3      ZD 20:4      AN 24:120
      <---+---1---+--->      <---+---1---+>      <-->      <--->      <---+---1---
00000001 1974-02-01T00:00:00Z AD104CAC30071918      001      2841      Burn
00000002 1974-02-01T00:00:00Z E19E07D591BCB755      007      2843      Mistreated
00000003 1974-02-01T00:00:00Z B64042E3A5647B38      011      2845      Mistreated (2
00000004 1976-01-01T00:00:00Z 8827C471776C1CB8      003      3205      Dreamer Decei
00000005 1978-04-01T00:00:00Z 632197A321A2F00F      008      3207      Beyond the Re
00000006 1979-01-01T00:00:00Z 341F3309D106AA63      001      3209      Exciter
00000007 1979-01-01T00:00:00Z 9362F8D807CB9B07      002      3211      Running Wild
00000008 1979-01-01T00:00:00Z 97BE40132BEC0CC5      003      3213      Sinner
00000009 1979-01-01T00:00:00Z 8A60E8F214166BAF      004      3215      The Ripper
00000010 1979-01-01T00:00:00Z 2DFD45B36EEBACB7      005      3217      The Green Man
00000011 1979-01-01T00:00:00Z C820742072BD797C      006      3219      Diamonds and
00000012 1979-01-01T00:00:00Z 709AD86814498F84      007      3221      Victim of Cha
00000013 1979-01-01T00:00:00Z 75A1373877232049      008      3223      Genocide
00000014 1979-01-01T00:00:00Z CB175572940D4828      009      3225      Tyrant
00000015 1979-01-01T00:00:00Z 3B1A38FDD8E68DA4      010      3227      Rock Forever
00000016 1979-01-01T00:00:00Z 9185DB3E305E92F8      011      3229      Delivering th
00000017 1979-01-01T00:00:00Z 5EA55ECF45E8F83C      012      3231      Hell Bent for
00000018 1979-01-01T00:00:00Z AC886839D38851E7      013      3233      Starbreaker
00000019 1970-10-05T07:00:00Z 50151071B945EA89      004      3239      Since I've Be
00000020 1971-11-08T08:00:00Z 89D1B798019008B1      004      3241      Stairway to H
00000021 *** End of Data ***

Se | Line=0 | Col=1 | Alt=0,0;0 | Size=20 | Recl=407 | Fmt=F | Files=1 | Views=

```

Figure 39. SELCOPYi - SDE Quick Filter 3.

Working with Multiple Record-Types

Files with multiple record-types may be mapped by:

1. Multiple (COBOL or PL1) copybooks.
2. A single copybook with multiple **01-LEVEL** entries, each defining a separate record-type.
3. A **SELCOPYi Structured Data Object (SDO)** which may be generated from one or more copybooks, using the **Structure** option from the Primary Option Menu (=9).

The second sample dataset contains the same information as the first, but is comprised of three distinct record-types:

1. ARTIST
2. ALBUM
3. TRACK

To reproduce the following screen-shot browse the sample dataset in its raw state, i.e. without applying a copybook / structure overlay.

Use the Data Edit (=2) panel to:

- Specify the *Data File*:
 - ◆ Type **userpfx.SELCTRN.ZZST2DAT** in the *Name* field, where *userpfx* is your own user prefix. If wildcards are specified then a dataset list will be displayed from which you can make a selection.
- Specify the *Action*:
 - ◆ Activate option *Browse Data* by entering a **/**.
- Deactivate the *Structure/Copybook overlay*:
 - ◆ Uncheck the option by removing the **a /**. This option is provided so that you may deactivate / reactivate structure formatting without needing to remove / retype the dataset / member name.
- Press **ENTER** to edit the sample dataset.
- Type **RECLen** to switch on/off the display of record length column, which displays each individual record's length in front of the data.

You will notice that:

- Record 1 is **length=71** and contains **'1'** in position 1 indicating it is an **ARTIST** record.
- Record 2 is also **length=71** but contains **'2'** in position 1 indicating it is an **ALBUM** record.
- Records 3 - 15 are **length=268** and contain **'3'** in position 1 indicating they are **TRACK** records.

```

SELCOPYi - Browse USER123.SELCTRN.ZZST2DAT 268 V SEQ
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Record type: UnMapped Variable(0,268) Offset=0 Data elements=1
Length UnMapped
<---+---1---+---2---+---3---+---4---+---5---+---6---
00000001 71 1Adele
00000002 71 221
00000003 268 3CB12DD714D51828C00A208CRolling In the Deep
00000004 268 32648A25633D1540400B208ERumour Has It
00000005 268 39815923C6D2E683000C208GTurning Tables
00000006 268 37D003FF752074C1800D208IDon't You Remember
00000007 268 3AED739D8574AA4C500E209ASet Fire to the Rain
00000008 268 3E755BCE1CF5CDEA700F209CHe Won't Go
00000009 268 36798C2AB0AFB257100G209ETake It All
00000010 268 3962B35D1647DE75E00H209GI'll Be Waiting
00000011 268 3D8A6C8FDC280217700I209IOne and Only
00000012 268 32502515DEB53501001{210ALovesong
00000013 268 3E374BE6EE7C86B1D01A210CSomeone Like You
00000014 268 3D4EB4EBF4651EF2001B210EI Found a Boy (Bonus Track)
00000015 268 3CEC92B1BA3204A0A01C210GAdele 21 - A Track By Track Interview
00000016 71 1Alabama Shakes
00000017 71 2Boys &#38; Girls
00000018 268 36D4C2C7BA7E0159300A416IHold On
00000019 268 3E241B09CC251C38600B417AI Found You
00000020 268 3E74C16BCB319870C00C417CHang Loose
00000021 268 3214ED5D95B84533C00D417ERise to the Sun
00000022 268 30E421AFCD141D22D00E417GYou Ain't Alone
00000023 268 3FF47FB9E05DE896700F417IGoin' to the Party
00000024 268 35D46C681552440BF00G418AHeartbreaker
00000025 268 3C54FE7792248562400H418CBoys &#38; Girls
Se | Line=1 | Col=1 | Alt=0,0;0 | Size>228 | Recl=268 | Fmt=V | Files=1 | Views
  
```

Figure 40. SELCOPYi - SDE Sample Dataset 2.

Automatic Record-Type Association (for Direct Copybook Overlay)

Exit unformatted browse of Sample Dataset 2, then re-edit specifying Structure / Copybook overlay using sample copybook #2, which contains **01-LEVEL** entries for each of the 3 record-types.

- Specify the *Structure/Copybook overlay*:
 - Activate the option by entering a / in the left margin field.
 - Type **userpfx.SELCTRN.SAM1** in the *Dsn* field, to specify the PDS library containing the supplied COBOL / PL1 copybook. This dataset name should already be in place (same as previous sample).
 - Type **ZZST2CPC** in the *Member* field (for COBOL installations).
Type **ZZST2CPP** in the *Member* field (for PL1 installations).
 - Check the *Type* option for *Cobol* or *PL1* as appropriate for your installation.
- Press **ENTER** to edit the sample dataset.

Unlike some other products, **SELCOPYi** is able to display files with multiple record-types in Formatted Multi-Record (VFMT) Display Mode with all record-types simultaneously visible, a set of record-type column headings being displayed for each new group of one or more consecutive records of the same type.

You will notice that **SELCOPYi** has attempted to automatically assign record-types, by matching between the individual record-length to the length defined by the copybook for each record-type. Where this process is unable to uniquely identify a record-types, the first matching record-type is assigned.

The initial view of the sample dataset shows that:

- ARTIST** record #1 has been assigned the correct record-type.
(unique match on fixed record length=268).
- ALBUM** record #2 has automatically been assigned the **incorrect** record-type (ARTIST).
(first match on fixed record length=71).
- TRACK** record #3 has been assigned the correct record-type.
(first match on fixed record length=71).

```
SELCOPY/i - Browse USER123.SELCTRN.ZZST2DAT using USER123.SELCTRN.SAM1(ZZST2CPC)
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
00000000      *** Top of Data ***
Record type: ARTIST      Fixed(71) Offset=0 Data elements=3
      Length RT      ARTIST
      #2      #3
      AN 1:1 AN 2:70
      >      <---+---1---+---2---+---3---+---4---+---5---+---
00000001      71 1      Adele
00000002      71 2      21

Record type: TRACK      Fixed(268) Offset=0 Data elements=53
      Length RT      PERSISTENT-ID      TRACK-NUM TRACK-ID NAME
      #2      #3      #4      #5 #6
      AN 1:1 AN 2:16      ZD 18:3      ZD 21:4 AN 25:120
      >      <---+---1---+--->      <--->      <--->      <---+---1---+---2---
00000003      268 3      CB12DD714D51828C      001      2083 Rolling In the Deep
00000004      268 3      2648A25633D15404      002      2085 Rumour Has It
00000005      268 3      9815923C6D2E6830      003      2087 Turning Tables
00000006      268 3      7D003FF752074C18      004      2089 Don't You Remember
00000007      268 3      AED739D8574AA4C5      005      2091 Set Fire to the Rain
00000008      268 3      E755BCE1CF5CDEA7      006      2093 He Won't Go
00000009      268 3      6798C2A80AFB2571      007      2095 Take It All
00000010      268 3      962B35D1647DE75E      008      2097 I'll Be Waiting
00000011      268 3      D8A6C8FDC2802177      009      2099 One and Only
00000012      268 3      2502515DEB535010      010      2101 Lovesong
00000013      268 3      E374BE6EE7C86B1D      011      2103 Someone Like You
00000014      268 3      D4EB4EBF4651EF20      012      2105 I Found a Boy (Bonus
00000015      268 3      CEC92B1BA3204A0A      013      2107 Adele 21 - A Track B

Se | Line=0 | Col=1 | Alt=0,0;0 | Size>228 | Recl=268 | Fmt=V | Files=1 | Views
```

Figure 41. SELCOPYi - SDE Automatic Record-Type Id.

Record-Identification Criteria (for Direct Copybook Overlay)

Where it is not possible to automatically infer the correct record-type association from the record-length, record-identification must be explicitly specified.

As formatting is provided directly by our sample COBOL or PL1 copybook, then in order to specify record-identification we must use **either** of the following methods.

- Press **PF4** to display the **Utilities Menu** then:
 1. Select option **6** - *Modify record-type Identification criteria.*
 2. In the **Use When** column for the ALBUM table entry, type any of following equally valid expressions:
 - ◊ **RT='2'**
 - ◊ **substr(record,1,1)='2'**
 - ◊ **left(record,1)='2'**
 3. Press **ENTER** to register the update..
 4. Press **PF3** repeatedly to return to the browse/edit view..
- Type any of the following primary commands:
 1. **USE ALBUM WHEN RT='2'**
 2. **USE ALBUM SUBSTR(RECORD,1,1)='2'**
 3. **USE ALBUM LEFT(RECORD,1)='2'**

```

--SELCPY/i - Browse USER123.SELCTR.N.ZZST2DAT using USER123.SELCTR.N.SAM1(ZZST2C
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Record type: ARTIST      Fixed(71) Offset=0 Data elements=3
Length RT              ARTIST
#2          #3
AN 1:1 AN 2:70
>          <---+---1---+---2---+---3---+---4---+---5---+
00000001 71 1 Adele

Record type: ALBUM      Fixed(71) Offset=0 Data elements=3
Length RT              ALBUM
#2          #3
AN 1:1 AN 2:70
>          <---+---1---+---2---+---3---+---4---+---5---+
00000002 71 2 21

Record type: TRACK      Fixed(268) Offset=0 Data elements=53
Length RT              PERSISTENT-ID TRACK-NUM TRACK-ID NAME
#2          #3          #4          #5 #6
--SDEUTUS - CBL Structured Browse/Edit Utilities menu
Modify record-type identification criteria

Record      Use      Use      Use
Type        Always  Never  When
ARTIST      --      --      RT='2'
ALBUM       --      --
TRACK       --      --

00000011 268 3 D8A6C8FDC2802177 009 2099 One and Only
Te | Line=0 | Col=1 | Alt=0,0;1 | Size=0 | Recl=0 | Fmt= | Files=1 | Views=1

```

Figure 42. SELCOPYi - SDE Explicit Record-Identification.

Record-Identification criteria defined for direct copybook overlay will persist throughout the **SELCOPYi** session, but will need to be reestablished beyond that.

A **SELCOPYi Structured Data Object (SDO)** permanently consolidates the information defined by one or more copybooks, potentially defining multiple record-types, along with the Record-Identification criteria for each.

An SDO is stored in a dataset (typically a library member), and provides significant performance improvement over direct copybook overlay for all **SELCOPYi** Structured Data components that are capable of record formatting e.g. Browse / Edit, File-Search, File-Reformat, File-Compare.

Locating NEXT/PREV record by Record-Type

- In both formatted multiple-record (VFMT) and formatted single-record (FMT / MAP) display modes, the **NEXT (N)** and **PREV (P)** primary commands may be used to navigate to records, based on their record-type.
 - Type **NEXT ARTIST** to scroll to the next record of the type ARTIST.
 - Type **N /** to scroll to the next record of the same type as the focus record.
 - Type **N ?** to scroll to the next record of a different type from focus record.
 - Type **Help NEXT** for full information.
- It's often handy to set a **PF key** temporarily for the browse/edit session.

e.g. to set **PF5 / PF6** to jump to the previous/next ARTIST record, type the following primary commands.

- **PF 5 PREV ARTIST**
- **PF 6 NEXT ARTIST**

Selecting Visible Record-Types

Since **SELCOPYi** is capable of displaying multiple record-types simultaneously in Formatted Multi-Record (VFMT) Display Mode, it is handy to be able to select precisely which record-types are visible at any given time.

Records of any unselected record-type are represented by "shadow" lines (just like excluded records). This feature is controlled by the **SHADOW** primary command.

Record-types may be selected / deselected using either:

1. The **VIEW (V/V+/V-)** primary command. e.g.
 - ◆ To select only **TRACK** records type:
 ◇ **V TRACK**
 - ◆ To reselect **all** record-types type:
 ◇ **V ***
 - ◆ To select only **ARTIST** and **ALBUM** records type:
 ◇ **V ARTIST,ALBUM**
 - ◆ To deselect **ARTIST** and **ALBUM** records type:
 ◇ **V- ARTIST,ALBUM**
 - ◆ To additionally select **ALBUM** and **TRACK** records type:
 ◇ **V+ ALBUM,TRACK**
2. The **V, V+ or V-** line-commands.
 - ◆ Use **V** to select only records of the focus record-type.
 - ◆ Use **V+** to additionally select records of the focus (shadow line) record-type.
 - ◆ Use **V-** to deselect records of the focus record-type.

Figure 43. SELCOPYi - SDE Select Visible Record-Types.

Note: In Formatted (VFMT/FMT) Display Modes, some primary commands are record-type specific (i.e. they act on records of one type only), and are sensitive to the **focus record-type** i.e. the record-type of the record at the cursor (or at the top of screen if the cursor is on the command line).

e.g. the following commands are **record-type sensitive**:

- FIND, CHANGE, EXCLUDE and ONLY
- LOCATE, ALL(WHERE), MORE and LESS

To avoid ambiguity when issuing any of these commands you may wish to either:

1. Select a single record-type using the **VIEW** command.
2. Temporarily suspend record-type formatting using the **CHAR** command.

Creating a Structured Data Object (SDO)

An **SDO** may be generated from COBOL/PL1 copybooks using any of the following methods:

- Select option **9 - Structure** from the **SELCOPYi** Primary Option Menu, then select option **1 - Copybook**.
- At any primary command prompt type **=9.1**.
- At any primary command prompt type **SDO**.

The following example will use the panel to generate an SDO from the **ZZST2CPC** (sample #2) COBOL copybook, containing three record-types along with their respective record-identification criteria.

- Specify the *Structure File to Create*:
 - ♦ Type **userpfx.SELCTRN.SDO** in the *Dsn* field, where *userpfx* is your own user prefix.
 - ♦ Type **ZZST2** in the *Member* field.
- Optionally Specify a *Title*:
 - ♦ Activate the option by entering a / in the left margin field.
 - ♦ Type a short (up to 30 characters) title e.g.
SELCOPYi Training - Sample 2
- Optionally Specify a *Description*:
 - ♦ Activate the option by entering a / in the left margin field.
 - ♦ Type a longer (up to 124 characters) description e.g.
**Training Material: Sample Record Collection Structure
Multiple Record-Types (ARTIST,ALBUM,TRACK)**

```

SELCOPY/i - Create STRUCTURE from COBOL/PL1 copybook(s)
File Help                                     wS wR
Command>                                     Scroll> Csr
ZZSGSD01                                     Lines 1-20 of 20
                                           PF1=Help

1 Library          Specify source copybook libraries
2 Record-type      Add/Delete record-types from COBOL/PL1 copybooks
3 Replace          COBOL Replacing options
4 Create           Create Structure (SDO) in the foreground
5 Batch            Create Batch Job

Structure File to Create/Edit:                PDS/PDSE member
  Dsn> USER123.SELCTRN.SDO
  Member> ZZST2

/ Title      > SELCOPY/i Training - Sampe 2
/ Description> Training Material: Sample Record Collection Structure
               Multiple Record-Types (ARTIST,ALBUM,TRACK)
  
```

Figure 44. SELCOPYi - SDE Main Panel 1.

Specifying Copybook Libraries

Select option 1 to specify the dataset name(s) of the libraries containing your COBOL / PL1 copybooks using an editable table.

- Insert a new line into the Copybook Library table by typing **I** into the table prefix area (000001).
- Type **userpfx.SELCTRN.SAM1** into inserted table row 1.
- Press **PF3** to return to the SDO main panel.

```

SELCOPYi - Create STRUCTURE from COBOL/PL1 copybook(s)
File Help
Command>
ZZSGSD0L

Ceeate Structure - Copybook Library List.
Copybook Library Dataset name

<...+...1...+...2...+...3...+...4...>
000001 USER123.SELCTRN.SAM1
000002 *** End of Data ***
  
```

Figure 45. SELCOPYi - SDE Copybook Libraries Panel.

Specifying Record-Type Details

Select option 2 to specify the source (copybook member name), identification criteria and other optional details for each **record-type**.

- Define the **ARTIST** record-type as follows:
 1. Insert a new line into the table by typing **I** into the table prefix area (000001).
 2. Type **ZZST2CPC** (ZZST2CPP for PL1 installations) into the *Copybook Library Member* field of inserted table row 1.
 3. The *Type* field will automatically be set to **PRI** indicating a **primary** record-type (requiring explicit record-type identification criteria). You may accept this default.
Press **PF1** with cursor in this field for additional information.
 4. The *Start Level* field will automatically be set to **1** indicating the record-type is defined at **LEVEL 01**.
You may accept this default also.
Press **PF1** with cursor in this field for additional information.
 5. Type **ARTIST** into the *Record-Type Name* field of inserted table row 1.
 6. The *Record Offset* field will automatically be set to **0** indicating the layout describes data from the beginning of the record. You may accept this default also.
Press **PF1** with cursor in this field for additional information.
 7. The *Lang* field will automatically be set to **COBOL**. Update this to **PL1** if necessary.

```

SELCOPYi - Create STRUCTURE from COBOL/PL1 copybook(s)
File Help                                     wS wR
Command>                                     Scroll> Csr
ZZSGSDOR
Add a table row then press PF2 to specify its record identification-criteria
Create Structure - Define Record-Types.
Copybook Type Start Record-Type Name (01-Lev) Record Lang
Library Level Offset Offset
Member
000001 <...+...> <.> <...> <...+...1....+...2....+...3....+...> <...+> <...>
000001 ZZST2CPC PRI 1 ARTIST 0 COBOL
000002 *** End of Data ***
  
```

Figure 46. SELCOPYi - SDE Define Record-Types 1.

Specifying Record-Type Identification Criteria

- Define the **identification criteria** for the **ARTIST** record-type as follows:
 1. With the cursor anywhere on inserted table row 1, press **PF2** to access a screen where details may be added / updated using a form.
 2. In the **Id** field, type any of following equally valid expressions:
 - ◊ **RT='1'**
 - ◊ **substr(record,1,1)='1'**
 - ◊ **left(record,1)='1'**
 Longer expressions may be entered via a text-edit window by pressing **PF2**.
 3. Press **PF3** to return to the record-types definition table panel.

SELCOPY/1 - Create STRUCTURE: Define record-type

File Help wS wR Scroll> Csr

Command> ZZSGSDOR Lines 1-18 of 18

Member	>	<u>ZZST2CPC</u>	Copybook Member Name
Level	>	<u>1</u>	Starting Level Number (e.g. 01,05)
Name	>	<u>ARTIST</u>	+ Record-Type Name Normally defined by 01-Level Name
Type	>	<u>PRI</u>	Default, Primary or Secondary
Language	>	<u>COBOL</u>	Compiler Language
Offset	>	<u>0</u>	Offset within record at which to start mapping
Id	>	<u>RT='1'</u>	+ Use PF2 to expand Record identification criteria

Press PF3 to return to the record-types list table.

Figure 47. SELCOPY/1 - SDE Define Record-Type Identification Criteria.

Specifying Additional Record-Types

- Define the **ALBUM** record-type as follows:
 1. Replicate table entry line 1 by typing **R** into the table prefix area (000001).
 2. The *Copybook Library Member* field will already be correct as all of our sample record-types are defined by the same copybook.
 3. The *Type* field will already be correct.
 4. The *Start Level* field will already be correct.
 5. Type **ALBUM** into the *Record-Type Name* field table row 2.
 6. The *Record Offset* field will already be correct.
 7. The *Lang* field will already be correct.
 8. Press **PF2** to access the form screen.
 9. In the **Id** field, type any of following equally valid expressions:
 - ◊ **RT='2'**
 - ◊ **substr(record,1,1)='2'**
 - ◊ **left(record,1)='2'**
 10. Press **PF3** to return to the record-types definition table panel.
- Define the **TRACK** record-type as follows:
 1. Replicate table entry line 2 by typing **R** into the table prefix area (000002).
 2. Type **TRACK** into the *Record-Type Name* field table row 2.
 3. Press **PF2** to access the form screen.
 4. In the **Id** field, type any of following equally valid expressions:
 - ◊ **RT='3'**
 - ◊ **substr(record,1,1)='3'**
 - ◊ **left(record,1)='3'**

```

SELCOPYi - Create STRUCTURE from COBOL/PL1 copybook(s)
File Help
Command>
ZZSGSDOR
Add a table row then press PF2 to specify its record identification-criteria
Create Structure - Define Record-Types.
Copybook Type Start Record-Type Name (01-Lev) Record Lang
Library Level Offset
Member
000001 <...+..> <..> <...> <...+...1...+...2...+...3...+...> <...+> <...>
000002 ZZST2CPC PRI 1 ARTIST 0 COBOL
000003 ZZST2CPC PRI 1 ALBUM 0 COBOL
000004 ZZST2CPC PRI 1 TRACK 0 COBOL
000004 *** End of Data ***
  
```

Figure 48. SELCOPYi - SDO Define Record-Types 2.

Generating the SDO

- Press **PF3** to return to the record-types definition table panel.
- Press **PF3** again to return to SDO main panel.
- Select option **3** should you wish to supply any **COBOL Replacing Options** (not necessary for our sample).
- Select either:
 - ♦ Option **4** to **Create the SDO in the foreground**.
 - ♦ Option **5** to **Create a Batch Job** to generate your SDO.

Note: To specify a **//JOB** statement that will be automatically inserted at the start of any z/OS batch job generated using **SELCOPYi**, select option **6 Batch** from the **Settings** panel (=0.6).

- If created in the foreground, a message similar to the following should appear on completion:

```
ZZSD145I Structure USER123.SELCTRN.SDO(ZZST2) created with 3 record type(s).
Maximum record length 268, minimum record length 71.
```

```
SELCOPY/i - USER123.SELCOPY1.SDL.D2012325.T1119177.JCL      80 F SEQ      Size=43x
File Edit Actions Options Utilities Window SwapList Help  wS wR      Scroll> Csr
Command>
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7---
00001 //USER123S JOB , ,CLASS=A,MSGCLASS=X,MSGLEVEL=(1,1),NOTIFY=&SYSUID
00002 //*
00003 //* SELCOPY/i 3.2B (C)2012 Compute(Bridgend) Ltd UK +44(1656)652222
00004 //* JCL for: ZZSGSD01 SDE Create Structure.
00005 //* Created by: USER123 2012/11/20 11:19:17
00006 //*
00007 //SELC0001 EXEC PGM=SDEAMAIN,REGION=0M
00008 //STEPLIB DD DISP=SHR,DSN=CB.L.CBLI320.EXE
00009 // DD DISP=SHR,DSN=CB.L.CBLI310.EXE
00010 //ZZSUSERI DD DISP=SHR,DSN=USER123.CBLI.INI
00011 //SDEPRINT DD SYSOUT=*
00012 //SDEIN DD *
00013 create structure USER123.SELCTRN.SDO(ZZST2) replace
00014 title " SELCOPY/i Training - Sampe 2 "
00015 descr " Training Material: Sample Record Collection Structure
00016 Multiple Record-Types (ARTIST,ALBUM,TRACK) "
00017 lib(
00018 )
00019 rec(
00020 primary
00021 name ARTIST
00022 level 1
00023 source cobol ZZST2CPC
00024 offset 0
00025 use if RT='1'
00026 )
00027 rec(
Te | Line=1 | Col=1 | Alt=0,0;0 | Size=43 | Recl=80 | Fmt=F | Files=2 | Views=2
```

Figure 49. SELCOPYi - SDO Generated Batch Job.

Browse/Edit using a generated SDO

- Specify the *Data File*:
 - ◆ Type **userpfx.SELCTRN.ZZST2DAT** in the *Name* field, where *userpfx* is your own user prefix.
- Specify the *Structure/Copybook overlay*:
 - ◆ Activate the option by entering a / in the left margin field.
 - ◆ Type **userpfx.SELCTRN.SDO** in the *Dsn* field, to specify the PDS library containing the generated Structured Data Object (SDO).
 - ◆ Type **ZZST2** in the *Member* field.
 - ◆ Check the *Type* option for *SDO*.
- Press **ENTER** to edit the sample dataset.

```
SELCOPY/1 - Structured Data Browse/Edit
File Command Structure Replace Help
wS wR
Command> ZZSGSDE0
Lines 1-21 of 21
PDS/PDSE member, Sequential, VSAM or HFS path:
Name> USER123.SELCTRN.ZZST2DAT + Member>
Volume> If dataset is uncataloged.

Action:
 / Browse Data.
- Edit Full. (Insert/Update/Delete) - Edit Full Auxiliary. (AUX File)
- Edit In-Place. (Update only) - Edit Full Read-Only. (DISP=SHR)
- Edit Full Read-Only & Auxiliary.

Structure/Copybook overlay:
 / Dsn> USER123.SELCTRN.SDO Member> ZZST2
Type: / SDO - AData - Cobol - PL1

Record Selection:
- Start> + / Record - Key - RBA
- For> @ # records
- Filter> F Filter selected records. (F=File; Q=Quick) (PF6=Edit Filter)
File> USER123.SELCOPYI.FLT Member> TRACKA

Additional Options: - (Enter "/" to display HFS and Profile options.)
```

Figure 50. SELCOPYi - SDO Browse/Edit using an SDO.

Modifying Data

- In **Edit** mode individual record data may be modified by
 - ◆ Overtyping, inserting or deleting data in character or hex.
 - ◆ Executing a **CHANGE** command.
- In **Full Edit** mode, records may be inserted and deleted by
 - ◆ Typing the **INSERT** primary-command.
e.g. to insert a new **ALBUM** record:
 - ◇ Type **I ALBUM**
 - ◇ The new record will be inserted following the focus record.
In multi-record (VFMT / CHAR) display modes focus is defined by the cursor position.
 - ◆ Using the **DELETE** primary-command.
- Additionally, in formatted (VFMT) or unformatted (CHAR) multi-record display modes, records may be inserted and deleted using the **standard line-commands**
 - ◆ **Inn** to **insert** records.
 - ◆ **Dnn, DD-DD** to **delete** records.
 - ◆ **Mnn, MM-MM** to **move** records.
- Modifications may be individually undone/redone using **PF22 / PF23** (normally Shift-PF10 / PF11) which are set to execute the **UNDO/REDO** primary commands.
 - ◆ Consecutive modifications may be undone by pressing PF22 repeatedly.
 - ◆ Consecutive modifications may be redone by pressing PF23 repeatedly.
 - ◆ The **UNDOING** primary command controls the following aspects:
 1. Whether the UNDO/REDO facility is activated.
 2. The number of modification levels maintained.
 3. The maximum amount of storage allocated.
 - ◆ Type **Query UNDOING** to determine your current settings.
 - ◆ Type **Help UNDOING** for full information.

Modifying Record Lengths

- In **Full Edit** mode, the length of a variable length record may be altered in the following ways:
 - ◆ In multi-record (VFMT / CHAR) modes,
 1. Type **RECLEN ON** to display the *Length* record prefix column.
 2. Overtyping the current *Length* value for any individual record.
 - ◆ In single-record (FMT / MAP / UNFMT / HEXD) modes,
 - ◇ Overtyping the current *Length* value.
 - ◆ Using the shift-left / right line-commands:
 - ◇ **(nn** or **((nn-((** to shift-left.
 - ◇ **)nn** or **)nn-))** to shift-right.

Note: Record-length modification may occur only where the right **BOUNDS** setting is higher than the individual record's length.
 - ◆ Using the **SHIFT** primary-command.
Type **Help SHifT** for full information.
 - ◆ Using the **CHANGE** primary-command, in particular when the **DATA** parameter is specified with different length search and replace values.
Type **Help Change** for full information.

Working with Segmented Records

Records may be organised in such a way that they are split into a number of logical segments, each segment being mapped by a unique structure (COBOL group or PL1 major/minor structure).

Segmented records begin with a single primary (base) segment immediately followed by any number of non-overlapping, secondary segments. A secondary segment may have the same or different segment record-type (RTO) mapping as other secondary segments in the record. e.g.

```
Record: 1
+-----+-----+-----+-----+-----+
| Primary_1 | Secondary_1 | Secondary_1 | Secondary_1 | Secondary_1 |
+-----+-----+-----+-----+-----+

Record: 2
+-----+-----+-----+-----+
| Primary_1 | Secondary_1 | Secondary_2 | Secondary_2 |
+-----+-----+-----+-----+

Record: 3
+-----+-----+-----+-----+
| Primary_2 | Secondary_1 | Secondary_4 |
+-----+-----+-----+-----+

Record: 4
+-----+-----+-----+-----+
| Primary_1 | Secondary_1 | Secondary_2 | Secondary_3 |
+-----+-----+-----+-----+
```

The record data must contain ID fields that identify which segment mapping is to be used to format individual segments of the record.

ID fields that identify a primary segment mapping must exist within the primary segment data. ID fields that identify a secondary segment mapping may exist within the secondary segment data, within the data of any previously mapped segment belonging to the same record, or, specifically, within the primary segment data.

The third sample dataset contains the same information as the second, but each physical record is comprised of three distinct segment-types:

- A single PRIMARY (BASE) (**ARTIST**) segment followed by....
- a number of SECONDARY (**ALBUM**) segments, each one followed by...
- a number of SECONDARY (**TRACK**) segments

To reproduce the following screen-shot browse the sample dataset in its raw state,

Use the Data Edit (=2) panel to:

- Specify the *Data File*:
 - ◆ Type **userpfx.SELCTRN.ZZST3DAT** in the *Name* field, where *userpfx* is your own user prefix.
- Deactivate the *Structure/Copybook overlay*:
 - ◆ Uncheck the option by removing the */*.

```
SELCOPY/1 - Browse USER123.SELCTRN.ZZST3DAT 32752 V SEQ
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Record type: UnMapped Variable(0,32752) Offset=0 Data elements=1
Length UnMapped
00000001 3626 1Adele
00000002 3358 1Alabama Shakes
00000003 3358 1Alabama 3
00000004 3965 1Alanis Morissette
00000005 2554 1Alex Harvey
00000006 21007 1AC/DC
00000007 3790 1Bob Dylan
00000008 25453 1Bruce Springsteen
00000009 6306 1Bruce Springsteen &#38; The Sessions Band
00000010 3090 1Burt Bacharach &#38; Elvis Costello
00000011 6109 1Christina Aguilera
00000012 410 1Christina Aguilera &#38; Dave Navarro
00000013 3090 1Coldplay
00000014 3358 1Crash Test Dummies
00000015 1750 1Damien Rice
00000016 10003 1David Gray
00000017 946 1Deep Purple
00000018 6787 1Del Amitri
00000019 2822 1Duffy
00000020 1482 1DJ Fresh
00000021 4233 1Embrace
00000022 4162 1Florence + The Machine
00000023 3090 1Gretchen Wilson
00000024 3894 1Guns N' Roses
00000025 946 1Jennifer Hudson
Se | Line=1 | Col=1 | Alt=0,0;0 | Size>26 | Recl=32752 | Fmt=V | Files=1 | View
```

Figure 51. SELCOPYi - SDE Sample Dataset 3.

Creating an SDO defining Segmented Record-Types

Files with segmented record-types should be mapped by a **SELCOPYi Structured Data Object (SDO)** generated from one or more copybooks.

The sample #3 segmented SDO (member name ZZST3) should be created using the (=9.1) panel in exactly the same way as for (non-segmented) sample #2, except that:

1. The **ARTIST** record-type is defined as *Type DEF*.
DEF record-types **must** be specified **without** identification criteria.
2. The **ALBUM** record-type is defined as *Type SEC*.
Identification criteria is required.
3. The **TRACK** record-type is defined as *Type SEC*.
Identification criteria is required.

```

SELCOPY/i - Create STRUCTURE from COBOL/PL1 copybook(s)
File Help
Command>
ZZSGSDOR
Add a table row then press PF2 to specify its record identification-criteria
Create Structure - Define Record-Types.
Copybook Type Start Record-Type Name (01-Lev) Record Lang
Library Level Offset
Member
+
000001 ZZST2CPC DEF 1 ARTIST 0 COBOL
000002 ZZST2CPC SEC 1 ALBUM 0 COBOL
000003 ZZST2CPC SEC 1 TRACK 0 COBOL
000004 *** End of Data ***
  
```

Figure 52. SELCOPYi - SDO Create Segmented Structure.

If created in the foreground, a message similar to the following should appear on completion:

```

ZZSD403I Segmented Structure USER123.SELCTRN.SDO(ZZST3) created with 1 primary
(base) segment type(s) and 2 secondary type(s). Maximum segment length 268,
minimum segment length 71.
  
```

Browse/Edit using a Segmented SDO

At the SDE Browse / Edit panel:

- Specify the *Data File*:
 - Type **userpfx.SELCTRN.ZZST3DAT** in the *Name* field, where *userpfx* is your own user prefix.
- Specify the *Structure/Copybook overlay*:
 - Activate the option by entering a / in the left margin field.
 - Type **userpfx.SELCTRN.SDO** in the *Dsn* field, to specify the PDS library containing the generated Structured Data Object (SDO).
 - Type **ZZST3** in the *Member* field.
 - Check the *Type* option for *SDO*.
- Press **ENTER** to edit the sample dataset.

```

SELCOPY/i - Browse USER123.SELCTRN.ZZST3DAT using USER123.SELCTRN.SDO(ZZST3)
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Base(D): ARTIST      Fixed(71) Offset=0 Data elements=3
      Length RT      ARTIST
      #2      #3
      AN 1:1  AN 2:70
      >      <---+---1---+---2---+---3---+---4---+---5---+
00000001  71 1      Adele

Segment: ALBUM      Fixed(71) Offset=0 Data elements=3
      Length RT      ALBUM
      #2      #3
      AN 1:1  AN 2:70
      >      <---+---1---+---2---+---3---+---4---+---5---+
00000001  71 2      21

Segment: TRACK      Fixed(268) Offset=0 Data elements=53
      Length RT      PERSISTENT-ID      TRACK-#4 TRACK-#5 TRACK-#6
      #2      #3      #4      #5      #6
      AN 1:1  AN 2:16      ZD 18:3      ZD 21:4 AN 25:120
      >      <---+---1---+--->      <->      <->      <---+---1---+---2
00000001  268 3      CB12DD714D51828C      001      2083 Rolling In the Deep
00000001  268 3      2648A25633D15404      002      2085 Rumour Has It
00000001  268 3      9815923C6D2E6830      003      2087 Turning Tables
00000001  268 3      7D003FF752074C18      004      2089 Don't You Remember
00000001  268 3      AED739D8574AA4C5      005      2091 Set Fire to the Rain
00000001  268 3      E755BCE1CF5CDEA7      006      2093 He Won't Go
00000001  268 3      6798C2AB0AFB2571      007      2095 Take It All
00000001  268 3      962B35D1647DE75E      008      2097 I'll Be Waiting
00000001  268 3      D8A6C8FDC2802177      009      2099 One and Only
Se | Line=1 | Col=1 | Alt=0,0;0 | Size>7(P) | Recl=32752 | Fmt=V | Files=1 | Vi
  
```

Figure 53. SELCOPY/i - SDO Browse/Edit using a Segmented SDO.

Notes:

- By default, the prefix area indicates the **physical record number** to which each segment is attached.
- Type **PREFix LOGical** to display individual segment numbers in the prefix area.
- Type **PREFix Physical** to reset the prefix to display physical record numbers.
- Type **Help PREFix** for full information.
- The **LOCATE** command is sensitive to the **PREFIX** setting (PHYSICAL|LOGICAL) when used to locate an absolute record / segment number.

Navigating Segmented Datasets

- Whether in formatted (VFMT / FMT) or unformatted (CHAR / UNFMT / HEXD) display modes, all logical segments are displayed individually. To display the data in its raw state you must edit / browse the dataset with the structure (SDO) deactivated.
- For efficiency reasons the process of separating each physical record into its logical segment is performed once only, at initial load.
- In single-record modes, display is sensitive to the PREFIX setting (PHYSICAL|LOGICAL).

PREFIX Mode	Display
PHYSICAL	Segment> pppppppp / llllll ♦ "pppppppp" denotes the physical record number. ♦ "llllll" denotes the logical segment number within that physical record.
LOGICAL	Segment> ssssssss ♦ "sssssss" indicates the logical segment number within the whole file.

```

SELCPY/i - Browse USER123.SELCTRN.ZZST3DAT using USER123.SELCTRN.SDO(ZZST3)
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command>
Segment: TRACK    Fixed(268) Offset=0 Data elements=53
Scroll> Csr

Segment> 00000025 / 000004    Flags: f          Length:    268

Ref  Field          Type          <---+---1---+---2---+---3---+---4
#1   1 TRACK          AN 1:268
#2   5 RT             AN 1:1      3
#3   5 PERSISTENT-ID  AN 2:16     EF4AB531C8FBF021
#4   5 TRACK-NUM      ZD 18:3     007
#5   5 TRACK-ID       ZD 21:4     4203
#6   5 NAME           AN 25:120    You Pulled Me Through
          41 -      80
          81 -     120

#7   5 TOTAL-TIME     FB 145:4     219133
#8   5 FILE-SIZE      FB 149:4     7763606
#9   5 BIT-RATE       FB 153:2     256
#10  5 SAMPLE-RATE    PD 155:3     44100
#11  5 YEAR           ZD 158:4     2008
#12  5 NORMALIZATION  PD 162:3     4645
#13  5 DISC-NUMBER    ZD 165:3     001
#14  5 ALBUM-ARTIST   AN 168:41    Jennifer Hudson
          41 -      41

#15  5 RELEASE-DATE   AN 209:20
#16  7 RELEASE-YYYY   AN 209:4     2008
#18  7 RELEASE-MM     AN 214:2     09
#20  7 RELEASE-DD     AN 217:2     29
#22  7 RELEASE-HH     AN 220:2     07
#24  7 RELEASE-MN     AN 223:2     00

Se  Line=563  Col=1  Alt=0,0;0  Size>26(P)  Recl=32752  Fmt=V  Files=1

```

Figure 54. SELCPYi - SDE Formatted Single-Segment Display Mode (FMT/MAP).

- In formatted (FMT / MAP) or unformatted (UNFMT / HEXD) single-record modes, the scrolling keys **PF10** / **PF11** will navigate to the next/prev **visible segment**, regardless of its type (PRIMARY/SECONDARY).
- In both formatted multiple- (VFMT) and single-record (FMT / MAP) display, the **NEXT (N)** and **PREV (P)** primary commands may be used to navigate more specifically to segments, based on their segment-type.
 - ♦ Type **N B** to scroll to the next base (primary) segment.
 - ♦ Type **N ALBUM** to scroll to the next segment of the type ALBUM.
 - ♦ Type **N /** to scroll to the next segment of the same type as the focus segment.
 - ♦ Type **N ?** to scroll to the next segment of a different type from focus segment.
 - ♦ Type **Help NEXT** for full information.

Modifying Segmented Datasets

- Individual segment data may be modified by
 - ◆ Overtyping, inserting or deleting data in character or hex.
 - ◆ Executing a **CHANGE** command.
- Segments may be inserted and deleted by
 - ◆ Typing the **INSERT** primary-command. e.g. to insert a new **ALBUM** segment:
 - ◇ Type **I ALBUM**
 - ◇ The new segment will be inserted following the focus segment.
 - In multi-segment (VFMT / CHAR) display modes focus is defined by the cursor position.
 - ◆ Using the **DELETE** primary-command.
- Additionally, in formatted (VFMT) or unformatted (CHAR) multi-segment display modes, both **PRIMARY** and **SECONDARY** segments may be inserted, deleted and moved using the **standard line-commands**
 - ◆ **Inn** to **insert** segments.
 - ◆ **Dnn, DD-DD** to **delete** segments.
 - ◆ **Mnn, MM-MM** to **move** segments.

Note that secondary segments may be **detached** and **reattached** to different primary segments using **move operations**.

- Modifications may be individually undone/redone using **PF22 / PF23** (normally Shift-PF10 / PF11) which are set to execute the **UNDO/REDO** primary commands.
 - ◆ Consecutive modifications may be undone by pressing PF22 repeatedly.
 - ◆ Consecutive modifications may be redone by pressing PF23 repeatedly.
 - ◆ The **UNDOING** primary command controls the following aspects:
 1. Whether the UNDO/REDO facility is activated.
 2. The number of modification levels maintained.
 3. The maximum amount of storage allocated.
 - ◆ Type **Query UNDOING** to determine your current settings.
- Modifications to fields referenced by **segment identification criteria** will result in the segment prefix area being flagged with **==ID>**.

This indicates that the modification will potentially cause the segment-type to re-assigned. Immediate re-assignment does not take place automatically. This is deliberate, since the user may be in the midst of several changes.

Re-assignment of segment-type may be explicitly requested using:

 - ◆ The **ID** line-command.
 - ◆ The **IDentify** primary-command.
 - Type **Help IDentify** for full information.
- The status of a segment being either **PRIMARY** or **SECONDARY** will not be altered by an **IDENTIFY** process. To alter an individual segment's **PRIMARY / SECONDARY** status use:
 - ◆ The **STP** line-command to make the selected record a **PRIMARY** segment.
 - ◆ The **STS** line-command to make the selected record a **SECONDARY** segment.

Inserting/Deleting Primary (Base) Segments

- **Insert** of a primary (base) segment will cause a new physical record to be created in the file.
- **Delete** of a primary (base) segment will cause all its secondary segments to become attached to the **previous primary segment**. Beware that this may result in the creation of a physical record that exceeds the file's defined maximum

Modifying Segment Lengths

- The length of a segment may be altered in the following ways:
 - ◆ In multi-segment (VFMT / CHAR) modes,
 1. Type **RECLEN ON** to display the *Length* segment prefix column.
 2. Overtyping the current *Length* value for any individual segment.
 - ◆ In single-segment (FMT / MAP / UNFMT / HEXD) modes,
 - ◇ Overtyping the current *Length* value.
 - ◆ Using the shift-left / right line-commands:
 - ◇ **(nn** or **((nn-((** to shift-left.
 - ◇ **)nn** or **)nn-))** to shift-right.
 - ◆ Using the **SHIFT** primary-command.
 - ◆ Using the **CHANGE** primary-command.

Option 5 - File Copy/Reformat (FCOPY)

The SELCOPY/i File Copy/Reformat utility (FCOPY) copies records from one or more input file to a single output file, or to one or more members of a (PDS/PDSE) library. Input and output access methods, record-format and geometry may be mixed without restriction, and the copy process may be executed either online or in batch.

The output may be specified as:

- a single PDS/PDSE library member
- a PDS/PDSE library DSN (multiple member names implied by the input)
- a flat sequential dataset
- a VSAM KSDS, ESDS, RRDS/VRDS HFS files.

The input may similarly be specified, with multiple input files defined using wildcards within each of the following file name components:

- Dataset name
- HFS path file-name (not directory)
- PDS/PDSE Member name
- Volume name

Access method, record-format and geometry for multiple input file may also be mixed without restriction.

Records may be selectively copied by specifying any combination of the following, which are applied to each input file:

- Start record number
- Start record key, or partial key (VSAM KSDS files only)
- Start relative-byte address (RBA) (VSAM KSDS files)
- Number of records to process
- Record selection criteria (FILTER)

Records may be reformatted as they are copied by specifying an input and output structure/copybook. Specification of an input structure also enables record selection based on record-type and/or the content of fields defined by the structure.

Additionally, although not recommended for high volume output, copy to a VSAM KSDS may optionally be performed for records out of key sequence.

A handy aspect of the File Copy/Reformat utility is the ability to peek at the relevant files directly from the panel.

- PF10 to browse the Input Data file
- PF11 to browse the Output Data file
- PF22 to browse the Input Copybook
- PF23 to browse the Output Copybook

The File Copy/Reformat (FCOPY) Panel

The FCOPY panel may be started using any of the following methods:

- Select option **5** from the **SELCOPYi** Primary Option Menu (=).
- At any primary command prompt type **=5**.
- At any primary command prompt type **FCOPY** (FC).
- From any dataset, library or HFS path list window, use the **C** line-command.

Copying a Standard Sequential Dataset

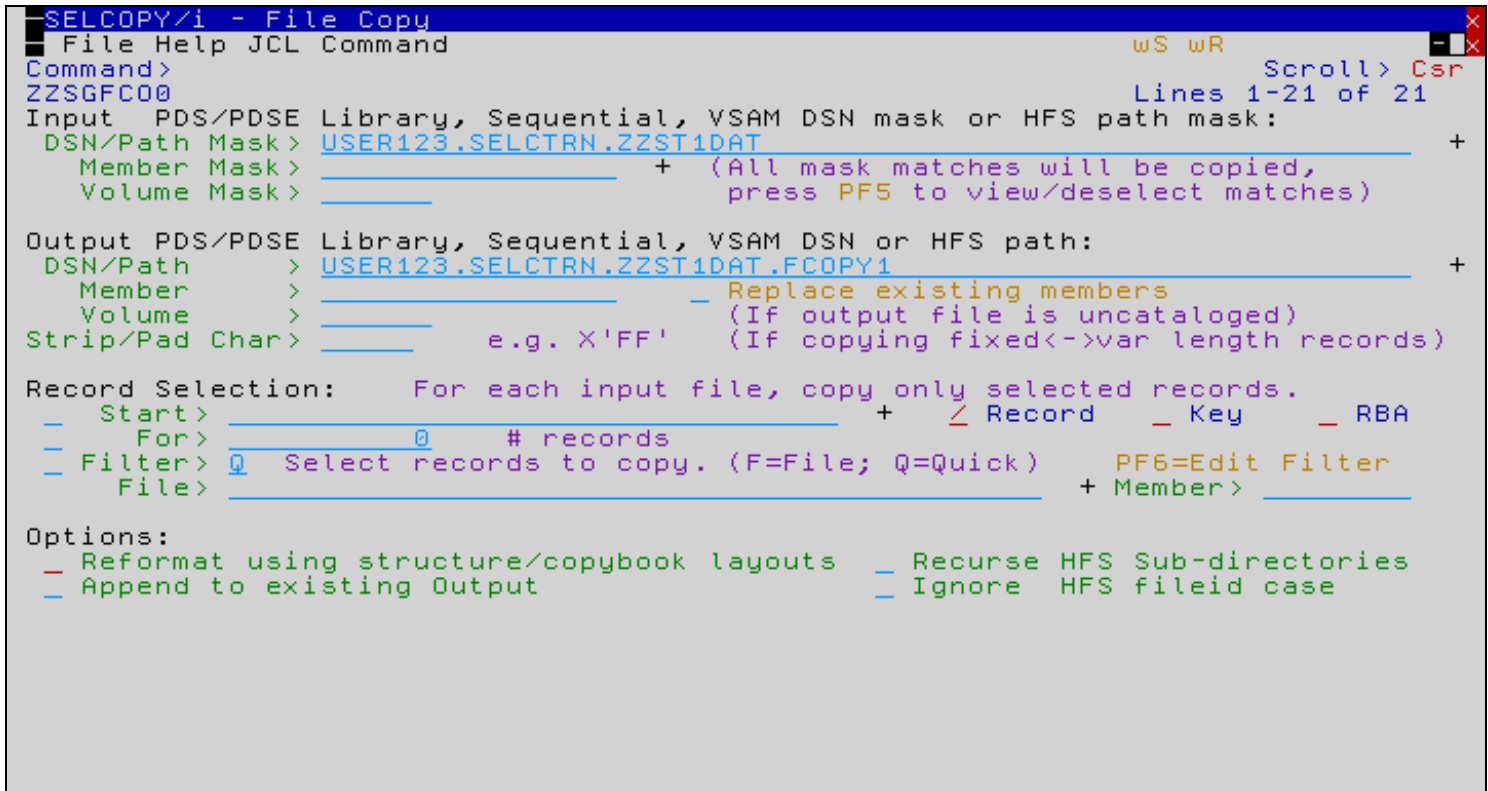


Figure 55. SELCOPYi - File Copy/Reformat (FCOPY) Panel (=5).

To follow the demonstration use the panel to make a complete copy of supplied sample dataset 1.

- Specify the *Input File*:
 - ◆ Type **userpfx.SELCTRN.ZZST1DAT** in the *DSN/Path Mask* field, where *userpfx* is your own user prefix.

If wildcards are specified then a dataset list will be displayed from which you can select one or more files for processing. Initially **ALL** files are selected, but you may use **PF6** to toggle back and forth between all files being selected or deselected. Further selection/deselection may be made by manually overtyping the *Sel* column for each individual entry.

Where PDS/PDSE datasets are to be processed a further member selection list may be accessed by placing the cursor on the library name and pressing **ENTER**. Within the dataset list, the member mask field may be overtyped to refine member selection individually for each library.

Press **PF3** to return to the FCOPY panel once all input selections have been confirmed.
- ◆ The *Member Mask* field should be left blank in this case, otherwise the dataset list will be restricted to PDS/PDSE libraries only.
- ◆ The *Volume Mask* field should be left blank in this case, otherwise the dataset list will be restricted to files residing on matching volumes only.
- Specify the *Output File*:
 - ◆ Type **userpfx.SELCTRN.ZZST1DAT.FCOPY1** in the *DSN/Path* field. If wildcards are specified then a dataset list will be displayed from which you can make a selection.
 - ◆ If the name entered is for a dataset that does not yet exist, then you will be prompted to create it.
 - ◆ The *Member* field should be left blank. otherwise the dataset list will be restricted to PDS/PDSE libraries only.
 - ◆ The *Volume* field should be left blank.
- Press **ENTER** to continue.

Choose New Output File Access Method

- If the output file does not yet exist, you will be prompted to create it and given the choice of the access method to be used.
- The *Dataset Organisation* input field will automatically be primed to match the input file, **N** for a **Non-VSAM** standard sequential file in this case.
- Permitted options are:

Option	Description
L	To allocate a new PDS/PDSE library.
N	To allocate a new standard sequential (Non-VSAM) file.
K	To define a new VSAM KSDS.
E	To define a new VSAM ESDS.
R	To define a new VSAM RRDS.

- Press **ENTER** or select the **OK** button to continue.

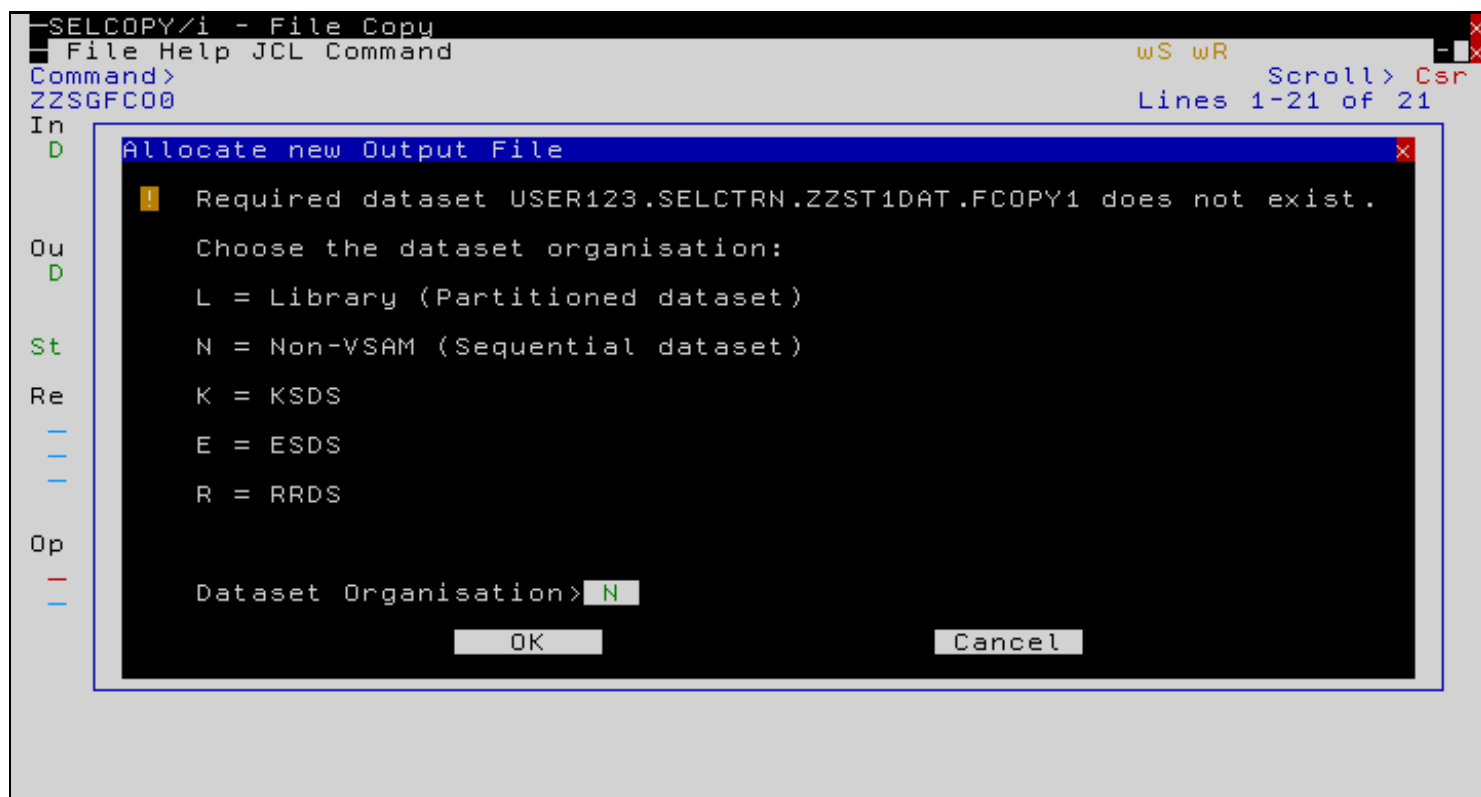


Figure 56. SELCOPYi - Choose new Output file Access Method.

Allocate New Output File

- The allocation dialog will be displayed next allowing you to enter various details for your new file.
- Initial values will be primed using the input file as a model, provided it is of a compatible type.
- You may overwrite any of the values displayed in green, and/or enter an alternative model dataset then press ENTER to call up its details.
- Select the **Allocate** button to create the file (note that pressing ENTER will place the cursor on the **Allocate** button).
- A message box will appear confirming the new file has been created.
- Press **PF3** to continue with the copy process.
- For large file copies a progress window will be displayed, indicating how many records have so far been read, selected etc.
- You may use the **3270 Attention key** to interrupt the copy process. But remember to first unlock the keyboard by pressing the **3270 Reset key**. Please consult your 3270 emulator's keyboard settings/help if you're unsure of which physical keys are mapped to these 3270 functions.
- A summary message (detailing the number of records copied etc), will be displayed once the copy process has completed.

```

SELCOPY/i - Allocate new Output File
Define Help
Dataset> USER123.SELCTRN.ZZST1DAT.FCOPY1
Model> USER123.SELCTRN.ZZST1DAT
Volume> CBLM15
MaxVol> 1
Unit> 3390
Type> SEQ (SEQ|PDS|PDSE)
Retention period> 0 (0-9999)
Expiry date> (yyyyddd)

Space Allocation      DCB Information      SMS Classes
Allocation Unit> TRACKS
Primary> 2
Secondary> 2
Directory Blocks> 0
Organisation: PS
Record Format> FB
Record Length> 407
Blocksize> 27676
Data>
Storage> CBLDFLT
Management> CBLDFLT

Allocate      Cancel      Help
  
```

Figure 57. SELCOPYi - Allocate new Non-VSAM file.

Copying PDS/PDSE Library members

- Specify the *Input File*:
 - Type **userpfx.SELCTRN.ZZST5DAT** in the *DSN/Path Mask* field, where *userpfx* is your own user prefix.
 - Type **TRACK02*** in the *Member Mask* field.
- Specify the *Output File*:
 - Type **userpfx.SELCTRN.ZZST5DAT.FCOPY1** in the *DSN/Path* field.
- Press **ENTER** to continue.

```

SELCOPY/i - File Copy
File Help JCL Command
Command>
ZZSGFC00
Input PDS/PDSE Library, Sequential, VSAM DSN mask or HFS path mask:
  DSN/Path Mask> USER123.SELCTRN.ZZST5DAT
  Member Mask> TRACK02*
  Volume Mask>
Output PDS/PDSE Library, Sequential, VSAM DSN or HFS path:
  DSN/Path> USER123.SELCTRN.ZZST5DAT.FCOPY1
  Member>
  Volume>
Strip/Pad Char> e.g. X'FF'
Record Selection: For each input file, copy only selected records.
  Start>
  For> @ # records
  Filter> Q Select records to copy. (F=File; Q=Quick)
  File>
Options:
  Reformat using structure/copybook layouts
  Append to existing Output
  Recurse HFS Sub-directories
  Ignore HFS fileid case
  
```

Figure 58. SELCOPYi - COPY Library Members.

Select Input Datasets List

- If the input file mask matches more than one dataset, or matches a PDS/PDSE library then a file selection list will be displayed.
- Within the dataset list, the member mask field may be overtyped to refine member selection individually for each selected library.
- Place your cursor on the library dataset then press **ENTER** to access the member selection panel if required. If the member selection panel is not accessed then all members matching the mask will be included in the copy process.

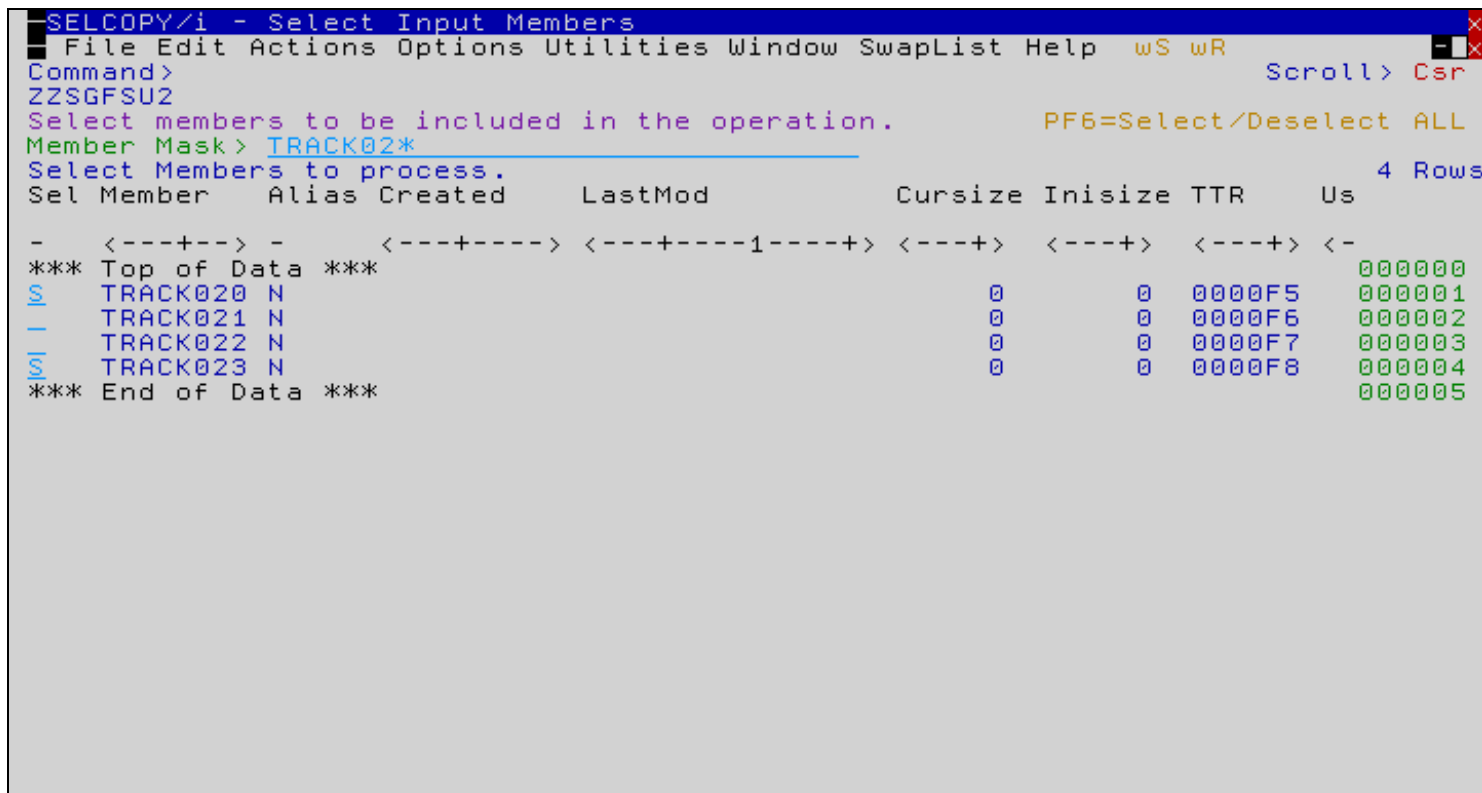
```

SELCOPY/i - Select Files to Process
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
ZZSGFSU1
Select files to be included in the operation.          PF6=Select/Deselect ALL
File Mask> USER123.SELCTRN.ZZST5DAT(TRACK02*)      +
To (de)select members place cursor on each lib name and press ENTER.          1 Row
Sel File Name          Member      Volume Org VSAM GDG RecFm Lrecl
Mask
+
+
- <---+-----1-----+-----2---> <---+---> <---+> <-> <--> - <---> <--->
*** Top of Data ***
S  USER123.SELCTRN.ZZST5DAT TRACK02*          PO          N    FB          407  000001
*** End of Data ***
  
```

Figure 59. SELCOPYi - Select Input Library.

Select input Members

- Individual members may be selected/deselected for copy from this screen.
- Initially **ALL** members are selected, but you may use **PF6** to toggle back and forth between all files being selected or deselected.
- Further selection/deselection may be made by manually overtyping the *Se/* column for each individual entry.
- The sample screen shot below shows members **TRACK020** and **TRACK023** only selected for copy.



```

SELCOPY/i - Select Input Members
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
ZZSGFSU2
Select members to be included in the operation.          PF6=Select/Deselect ALL
Member Mask> TRACK02*
Select Members to process.
Sel Member      Alias Created      LastMod      Cursize Inisize TTR      Us      4 Rows
-  <---+---> -  <---+---> <---+---1---+> <---+> <---+> <---+> <-
*** Top of Data ***
S  TRACK020 N                0          0  0000F5  000001
-  TRACK021 N                0          0  0000F6  000002
-  TRACK022 N                0          0  0000F7  000003
S  TRACK023 N                0          0  0000F8  000004
*** End of Data ***
000005

```

Figure 60. SELCOPYi - Select Input Members.

Allocate New Output Library

- Press **PF3** to return to the File Copy panel once all selections have been made, then press **ENTER** to continue with the copy.
- You will then be prompted to allocate your new output library.

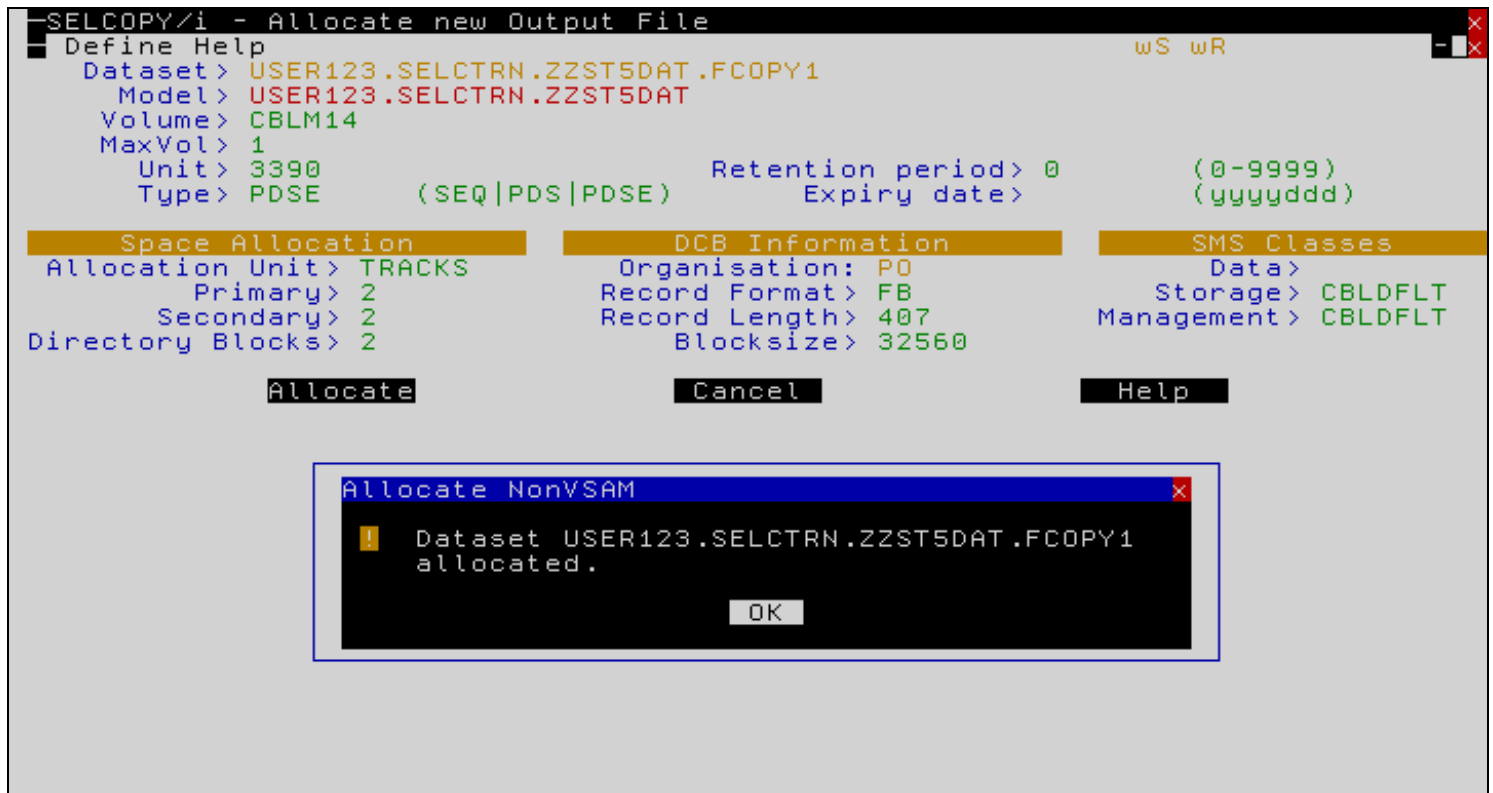


Figure 61. SELCOPYi - Allocate New Output Library.

PDS Copy Statistics

- A summary message and the PDS Copy Statistics list are displayed once the copy process has completed.
- For each member processed the **Action** column will contain one of the following:

Action	Meaning
Copied	The member was copied to the output library.
Replaced	The member replaced an existing version in the output library.
*NoRepl	The member already existed in the output library, and the <i>Replace existing members</i> option was not selected.

- You may type the **TEXT** primary command or select the "Text" menu bar item to create a temporary text-edit document containing the statistics information.

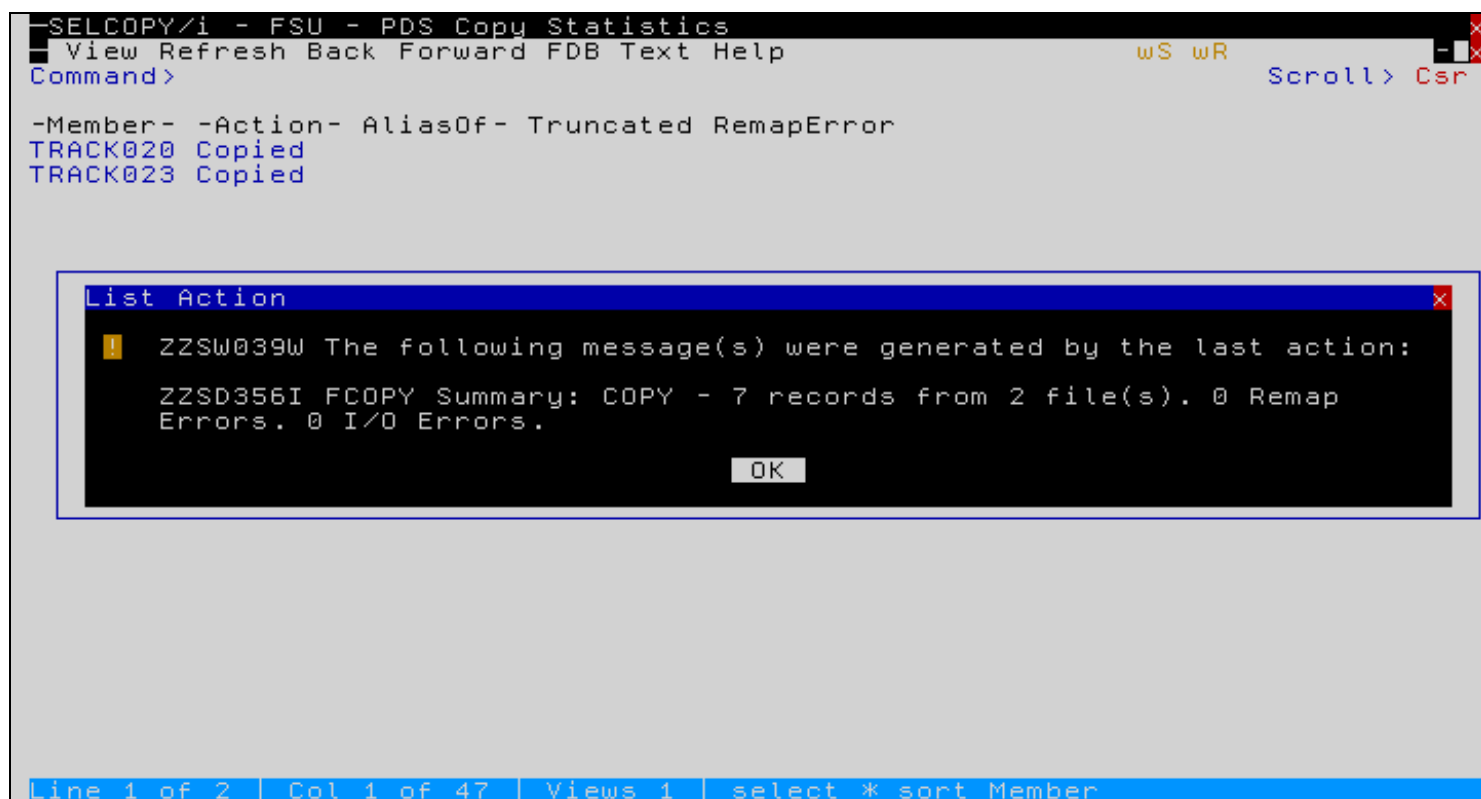


Figure 62. SELCOPYi - PDS Copy Statistics.

Record Selection

- Specify the *Input File*:
 - Type **userpfx.SELCTRN.ZZST2DAT** in the *DSN/Path Mask* field, where *userpfx* is your own user prefix.
- Specify the *Output File*:
 - Type **userpfx.SELCTRN.ZZST2DAT.ESDS1** in the *DSN/Path* field.

```

SELCOPY/i - File Copy
File Help JCL Command
Command>
ZZSGFC00
Input PDS/PDSE Library, Sequential, VSAM DSN mask or HFS path mask:
  DSN/Path Mask> USER123.SELCTRN.ZZST2DAT
  Member Mask>
  Volume Mask>
Output PDS/PDSE Library, Sequential, VSAM DSN or HFS path:
  DSN/Path> USER123.SELCTRN.ZZST2DAT.ESDS1
  Member>
  Volume>
Strip/Pad Char> e.g. X'FF'
Record Selection: For each input file, copy only selected records.
  Start>
  For> @ # records
  Filter> Q Select records to copy. (F=File; Q=Quick)
  File>
Options:
  Reformat using structure/copybook layouts
  Append to existing Output
  Recurse HFS Sub-directories
  Ignore HFS fileid case
  
```

Figure 63. SELCOPYi - Record Selection Intro.

Browse Input File

- In order to assist with record selection its very helpful to peek at the file you wish to select from.
- From the File Copy panel press **PF10** to **browse** the input file.
- We will initially select to copy records 16 to 20.

```

SELCOPY/i - Browse USER123.SELCTRN.ZZST2DAT      268 V SEQ
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command>
Press PF4 for Utilities menu including point/shoot options
Record type: UnMapped      Variable(0,268) Offset=0 Data elements=1
      Length UnMapped
      <---+---1---+---2---+---3---+---4---+---5---+---6---
00000001      71 1Adele
00000002      71 221
00000003     268 3CB12DD714D51828C00A208CRolling In the Deep
00000004     268 32648A25633D1540400B208ERumour Has It
00000005     268 39815923C6D2E683000C208GTurning Tables
00000006     268 37D003FF752074C1800D208IDon't You Remember
00000007     268 3AED739D8574AA4C500E209ASet Fire to the Rain
00000008     268 3E755BCE1CF5CDEA700F209CHe Won't Go
00000009     268 36798C2AB0AFB257100G209ETake It All
00000010     268 3962B35D1647DE75E00H209GI'll Be Waiting
00000011     268 3D8A6C8FDC280217700I209IOne and Only
00000012     268 32502515DEB53501001{210ALovesong
00000013     268 3E374BE6EE7C86B1D01A210CSomeone Like You
00000014     268 3D4EB4EBF4651EF2001B210EI Found a Boy (Bonus Track)
00000015     268 3CEC92B1BA3204A0A01C210GAdele 21 - A Track By Track Interview
00000016      71 1AAlabama Shakes
00000017      71 2Boys &#38; Girls
00000018     268 36D4C2C7BA7E0159300A416IHold On
00000019     268 3E241B09CC251C38600B417AI Found You
00000020     268 3E74C16BCB319870C00C417CHang Loose
00000021     268 3214ED5D95B84533C00D417ERise to the Sun
00000022     268 30E421AFCD141D22D00E417GYou Ain't Alone
00000023     268 3FF47FB9E05DE896700F417IGoin' to the Party
00000024     268 35D46C681552440BF00G418AHeartbreaker
Se | Line=0 | Col=1 | Alt=0,0;0 | Size>228 | Recl=268 | Fmt=V | Files=1 | Views

```

Figure 64. SELCOPYi - Browse Input File.

Specifying Start Record / Number of Records to Copy

- Press **PF3** to return to the File Copy panel.
- In the **Record Selection** section, activate the *Start* option by entering a / in the left margin field.
- Enter the start record number **16** in the *Start* field.
- Ensure that the *Record/Key/RBA* selectable option to the right is set to **Record**. This switch indicates the type of *Start* value provided.

Option	Meaning
Record	Start value is a record number. Value may be specified using 1234 or X'1234' notation.
Key	Start value is a VSAM KSDS key or partial key. Value may be specified using xxxx, 'xxxx', C'xxx' or X'1234' notation.
RBA	Start value is a VSAM ESDS/KSDS relative byte address (RBA). Value may be specified using 1234 or X'1234' notation.

- Activate the *For* option by entering a / in the left margin field.
- Enter the number of records to copy **5** in the *For* field.
- Press **ENTER** to continue.

```

SELCPY/i - File Copy
File Help JCL Command
Command>
ZZSGFC00
Input PDS/PDSE Library, Sequential, VSAM DSN mask or HFS path mask:
  DSN/Path Mask> USER123.SELCTR.N.ZZST2DAT
  Member Mask>
  Volume Mask>
Output PDS/PDSE Library, Sequential, VSAM DSN or HFS path:
  DSN/Path> USER123.SELCTR.N.ZZST2DAT.ESDS1
  Member>
  Volume>
Strip/Pad Char> e.g. X'FF'
Record Selection: For each input file, copy only selected records.
  / Start> 16 + / Record _ Key _ RBA
  / For> 5 # records
  - Filter> Q Select records to copy. (F=File; Q=Quick) PF6=Edit Filter
  File> + Member>
Options:
  _ Reformat using structure/copybook layouts _ Recurse HFS Sub-directories
  _ Append to existing Output _ Ignore HFS fileid case

```

Figure 65. SELCPYi - Start Record/For.

Choose New Output File Access Method

- The *Dataset Organisation* input field will automatically be primed to match the input file, **N** for a **Non-VSAM** standard sequential file in this case.
- But we wish to create a VSAM ESDS, so enter **E** instead.
- Press **ENTER** to continue.

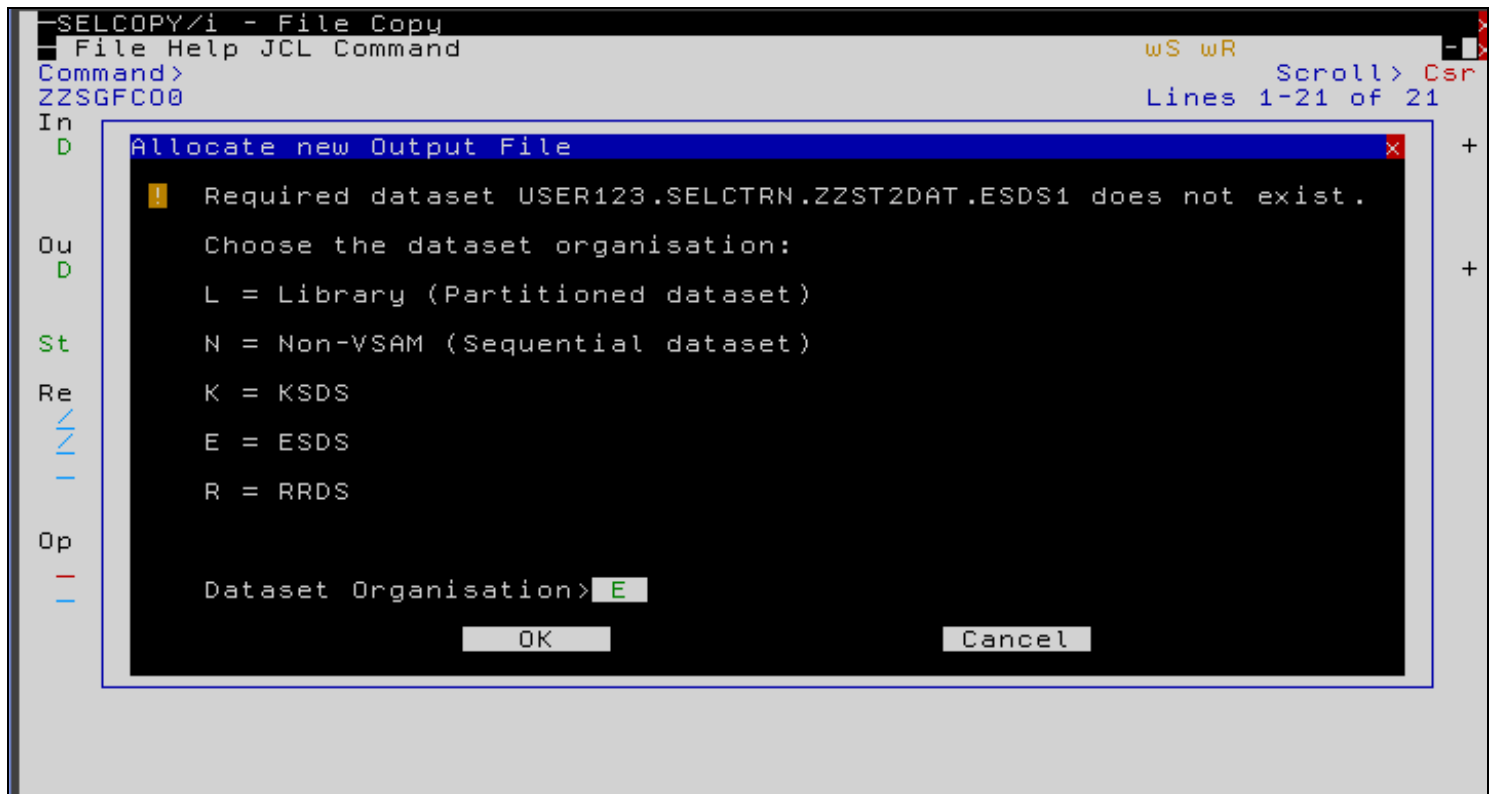


Figure 66. SELCOPYi - SDE LOCATE field.

Define New VSAM Output File

- The Define ESDS dialog will be displayed next allowing you to enter various details for your new file.
- Initial values will NOT be primed using the input file as a model since, in this case, it is not of a compatible type.
- You may overwrite any of the values displayed in green, and/or enter an alternative model dataset then press ENTER to call up its details.
- Enter the value **268** in the *Avg rec len* field.
- Enter the value **268** in the *Max rec len* field.
- Select the **Define** button to create the file (note that pressing ENTER will place the cursor on the **Define** button).
- A message box will appear confirming the new file has been created.

SELCOPY/i - Allocate new Output File

File Edit Actions Options Utilities Window SwapList Help wS wR

Cluster Name> USER123.SELCTRN.ZZST2DAT.ESDS1 Type> ESDS

Model> Reuse> N

Catalog> Span> N

Avg rec len> 268 Speed> N

Max rec len> 268 Writecheck> N

Buffer size> Erase> N

Expiry> Owner>

Region share option> 1 SMS Data Class>

System share option> 3 SMS Stor Class>

SMS Mgmt Class>

Data name> USER123.SELCTRN.ZZST2DAT.ESDS1.DATA

Volumes>

Space type> TRACKS Primary> 1 Secondary> 1

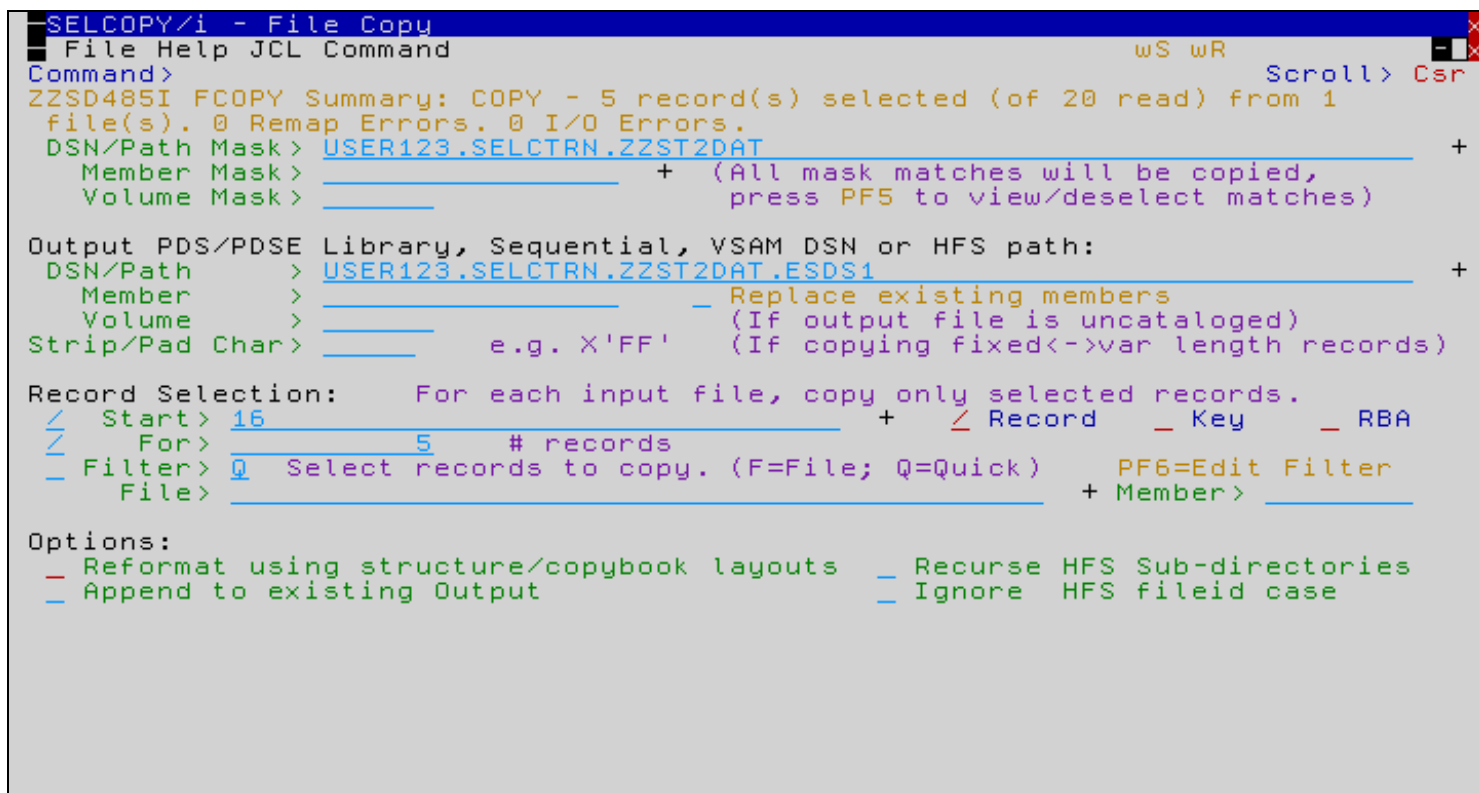
CI Size> 4096

Define Cancel Help

Figure 67. SELCOPYi - Define ESDS.

Copy Summary Message

- Press **PF3** to return to the File Copy dialog.
- Press **ENTER** to continue with the copy process.
- For large file copies a progress window will be displayed, indicating how many records have so far been read, selected etc.
- You may use the **3270 Attention key** to interrupt the copy process. But remember to first unlock the keyboard by pressing the **3270 Reset key**. Please consult your 3270 emulator's keyboard settings/help if you're unsure of which physical keys are mapped to these 3270 functions.
- A summary message (detailing the number of records copied etc), will be displayed once the copy process has completed.



```

SELCOPY/i - File Copy
File Help JCL Command wS wR Scroll> Csr
Command>
ZZSD48SI FCOPY Summary: COPY - 5 record(s) selected (of 20 read) from 1
file(s). 0 Remap Errors. 0 I/O Errors.
DSN/Path Mask> USER123.SELCTRN.ZZST2DAT +
Member Mask> + (All mask matches will be copied,
Volume Mask> + press PF5 to view/deselect matches)

Output PDS/PDSE Library, Sequential, VSAM DSN or HFS path:
DSN/Path > USER123.SELCTRN.ZZST2DAT.ESDS1 +
Member > - Replace existing members
Volume > (If output file is uncataloged)
Strip/Pad Char> e.g. X'FF' (If copying fixed->var length records)

Record Selection: For each input file, copy only selected records.
/ Start> 16 + / Record _ Key _ RBA
/ For> 5 # records
- Filter> Q Select records to copy. (F=File; Q=Quick) PF6=Edit Filter
File> + Member>

Options:
- Reformat using structure/copybook layouts _ Recurse HFS Sub-directories
- Append to existing Output _ Ignore HFS fileid case
  
```

Figure 68. SELCOPY/i - Summary message.

Browse the Output File (PF11)

- From the File Copy panel you may press **PF11** to **browse** the output file.

```

SELCOPY/i - Browse USER123.SELCTRN.ZZST2DAT.ESDS1 407 V ESDS
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
Press PF4 for Utilities menu including point/shoot options
Record type: UnMapped Variable(0,407) Offset=0 Data elements=1
Length UnMapped
<---+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----
00000001 71 1Alabama Shakes
00000002 71 2Boys &#38; Girls
00000003 268 36D4C2C7BA7E0159300A416IHold On
00000004 268 3E241B09CC251C38600B417AI Found You
00000005 268 3E74C16BCB319870C00C417CHang Loose
00000006 *** End of Data ***

Se | Line=0 | Col=1 | Alt=0,0;0 | Size=5 | Recl=407 | Fmt=V | Files=1 | Views=0

```

Figure 69. SELCOPYi - Browse Output File (PF11).

Using a FILTER to Select Records for Copy

You may wish to select records for copy based on specific selection criteria.

For example, to copy only the first 7 records that contain '3' in record position 1, and the string 'BLUES' anywhere in the record,

- Update the *Output File*:
 - ◆ Type **userpfx.SELCTRN.ZZST2DAT.ESDS2** in the *DSN/Path* field.
- In the **Record Selection** section, activate the *Filter* option by entering a / in the left margin field.
- Enter **Q** (Quick Filter) in the *Filter* field.
- The *Start* and *For* fields may be used to restrict records eligible for selection by the filter, but for our example these options should be deactivated.

```

SELCOPY/i - File Copy
File Help JCL Command
Command>
ZZSGFC00
Input PDS/PDSE Library, Sequential, VSAM DSN mask or HFS path mask:
  DSN/Path Mask> USER123.SELCTRN.ZZST2DAT
  Member Mask>
  Volume Mask>
Output PDS/PDSE Library, Sequential, VSAM DSN or HFS path:
  DSN/Path> USER123.SELCTRN.ZZST2DAT.ESDS2
  Member>
  Volume>
Strip/Pad Char> e.g. X'FF'
Record Selection: For each input file, copy only selected records.
  Start>
  For> @ # records
  Filter> / Select records to copy. (F=File; Q=Quick)
  File>
Options:
  Reformat using structure/copybook layouts
  Append to existing Output
  Recurse HFS Sub-directories
  Ignore HFS fileid case
  
```

Figure 70. SELCOPYi - Specify Quick Filter.

Specifying Simple FILTER Selection Criteria

- Enter **7** in the *Limit* field to restrict the number of records selected.
- Enter **I** in the *Type* field to specify that selected records should be **included** in the copy process.
- Enter **1** into the *Position* column of table row 1 (this is the default).
- Enter **1** into the *Length* column.
- Enter **=** (equals) into the *ROp* (Relational Operator) column (this is the default).
Alternatively enter blank to get a list of available operators from which you may make your selection (by placing the cursor and pressing ENTER).
- Enter **3** into the *Value* column.
- Replicate table entry line 1 by typing **R** into the table prefix area (000001).
The *AND/OR* column will automatically set to **AND**.
- Enter **1** into the *Position* column of inserted table row 2 (this is the default).
- Enter **0** into the *Length* column of inserted table row 2 (this is the default). A length value of zero has a special meaning indicating the length of data from the start position to end of the record.
- Enter **<<** (contains) into the *ROp* (Relational Operator) column of inserted table row 2.
- Enter **blues** into the *Value* column.
 - ♦ For simple case-insensitive character strings there is no need to add quotes (this will be done automatically).
 - ♦ You may specify the string using **C'ABCD'** notation if case-sensitivity is required.
 - ♦ Hex strings may be specified using **X'1234'** notation.

```

SELCOPY/i - Quick Filter - Selection Criteria
File Help                                wS wR
Command>                                Scroll> Csr
ZZSGFLTQ

Limit> 7 (0=No limit)  Type> I (I=INCLUDE, X=EXCLUDE)
PF1=Help  PF3=Continue  PF22/23=UNDO/REDO

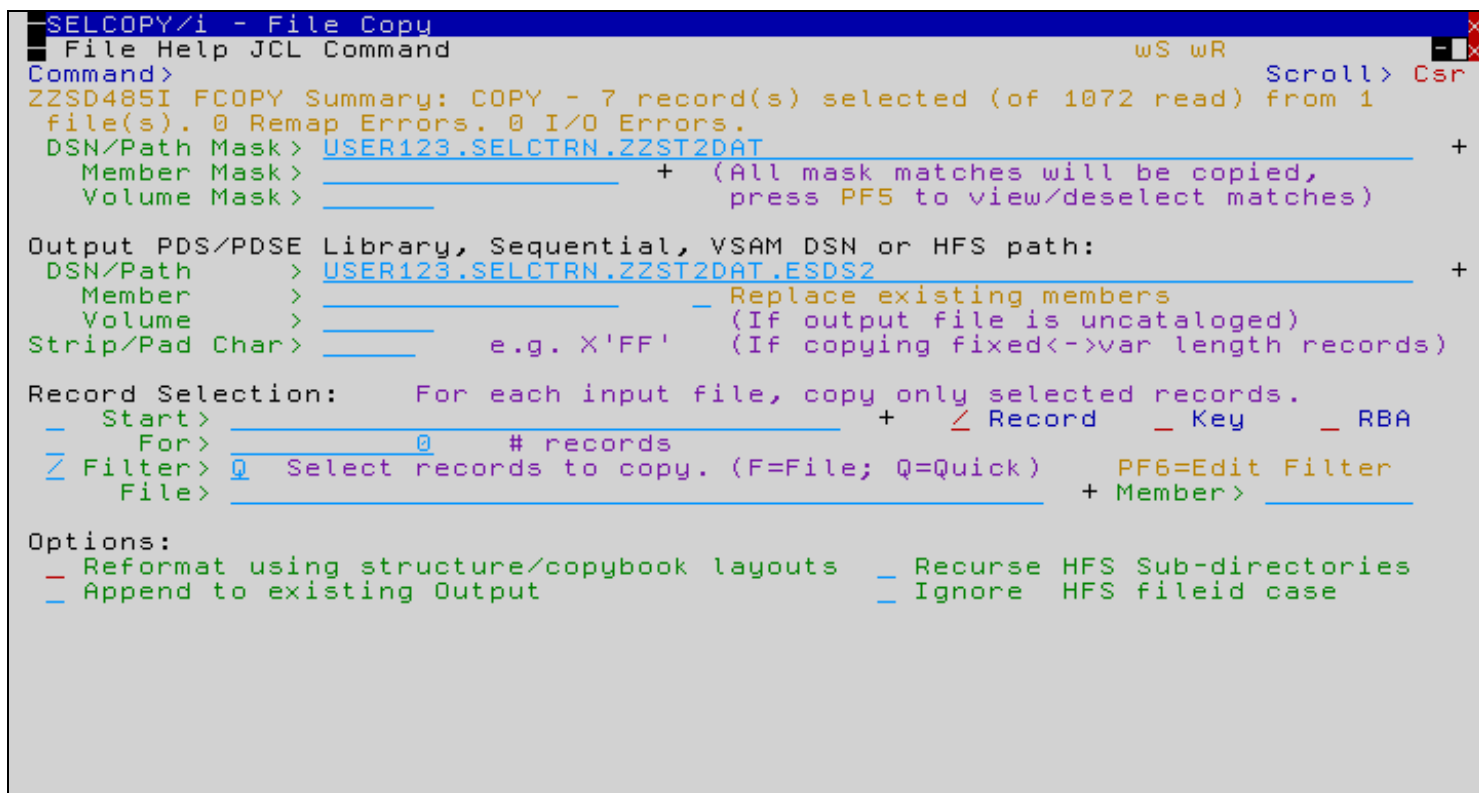
Quick FILTER - Selection Criteria.                2 Rows
AND Position Length ROp Value
/OR
<-> <---+> <---+> <-> <---+---1---+---2---+---3---+---4---+>
000001      1      1  =   3
000002 AND      1      0 << 'blues'
000003 *** End of Data ***

```

Figure 71. SELCOPYi - Quick Filter.

Filtered Copy Summary Message

- Press **PF3** to return to the File Copy dialog.
- Press **PF6** should you wish to review/modify your filter selection criteria.
- Press **ENTER** to continue with the copy process. You will be prompted to create your new output file once again. You should choose to create another ESDS, entering the name of the ESDS created in the **previous example** as a model.
- Press **PF3** to return to the File Copy dialog again, then press **ENTER** to continue with the copy process.
- A summary message (detailing the number of records selected etc), will be displayed once the copy process has completed.



```

SELCOPY/i - File Copy
File Help JCL Command          wS wR
Command>                      Scroll> Csr
ZZSD485I FCOPY Summary: COPY - 7 record(s) selected (of 1072 read) from 1
file(s). 0 Remap Errors. 0 I/O Errors.
DSN/Path Mask> USER123.SELCTRN.ZZST2DAT
Member Mask> _____ + (All mask matches will be copied,
Volume Mask> _____ press PF5 to view/deselect matches)

Output PDS/PDSE Library, Sequential, VSAM DSN or HFS path:
DSN/Path      > USER123.SELCTRN.ZZST2DAT.ESDS2
Member        > _____ - Replace existing members
Volume        > _____ (If output file is uncataloged)
Strip/Pad Char> _____ e.g. X'FF' (If copying fixed->var length records)

Record Selection: For each input file, copy only selected records.
- Start> _____ + / Record - Key - RBA
  For> _____ @ # records
  Filter> @ Select records to copy. (F=File; Q=Quick) PF6=Edit Filter
  File> _____ + Member> _____

Options:
- Reformat using structure/copybook layouts - Recurse HFS Sub-directories
- Append to existing Output - Ignore HFS fileid case
  
```

Figure 72. SELCOPYi - Filtered Copy Summary Message.

Browse Output File

When you press **PF11** to browse the output file you should expect to see the following.

```

SELCOPY/i - Browse USER123.SELCTRN.ZZST2DAT.ESDS2      268 V ESDS
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command>
Press PF4 for Utilities menu including point/shoot options
Record type: UnMapped   Variable(0,268) Offset=0 Data elements=1
Length UnMapped
<---+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----
00000001      268 37CB7FD20ADBE19AD00E211GBourgeoisie Blues
00000002      268 3079FF06C1501FB9600D797IRoman Wall Blues
00000003      268 30EED324BEE2DD30100B438ADown Payment Blues
00000004      268 3924DD5148CDEF39F00H421ESubterranean Homesick Blues
00000005      268 32AF08B93888AEE8700F303AEveryday I Have the Blues (Live)
00000006      268 3FD4B86E2C95D53CF00H369AGus's Blues (Intro)
00000007      268 30C9E4EB0FF13BF8800B370CKilling the Blues
00000008      *** End of Data ***

Se | Line=0 | Col=1 | Alt=0,0;0 | Size=7 | Recl=268 | Fmt=V | Files=1 | Views=0

```

Figure 73. SELCOPYi - Browse Output File.

Specifying brackets in the FILTER expression.

Multiple **AND/OR** conditions may be defined through the filter definition panel, but complex bracketed expressions may only be specified by manually modifying the FCOPY command generated by the panel.

For example, to select records based on the following complex filter criteria:

```
where position 1 = '3'
and
(   record contains "BLUES"           anywhere
  or record contains "ROCK 'N' ROLL" anywhere
  or record contains "SOUL"           anywhere
)
```

- Update the *Output File*:
 - ◆ Type **userpfx.SELCTRN.ZZST2DAT.ESDS3** in the *DSN/Path* field.
- Press **PF6** to enter the filter definition panel.
- Type in the conditions as depicted in the following screen shot.

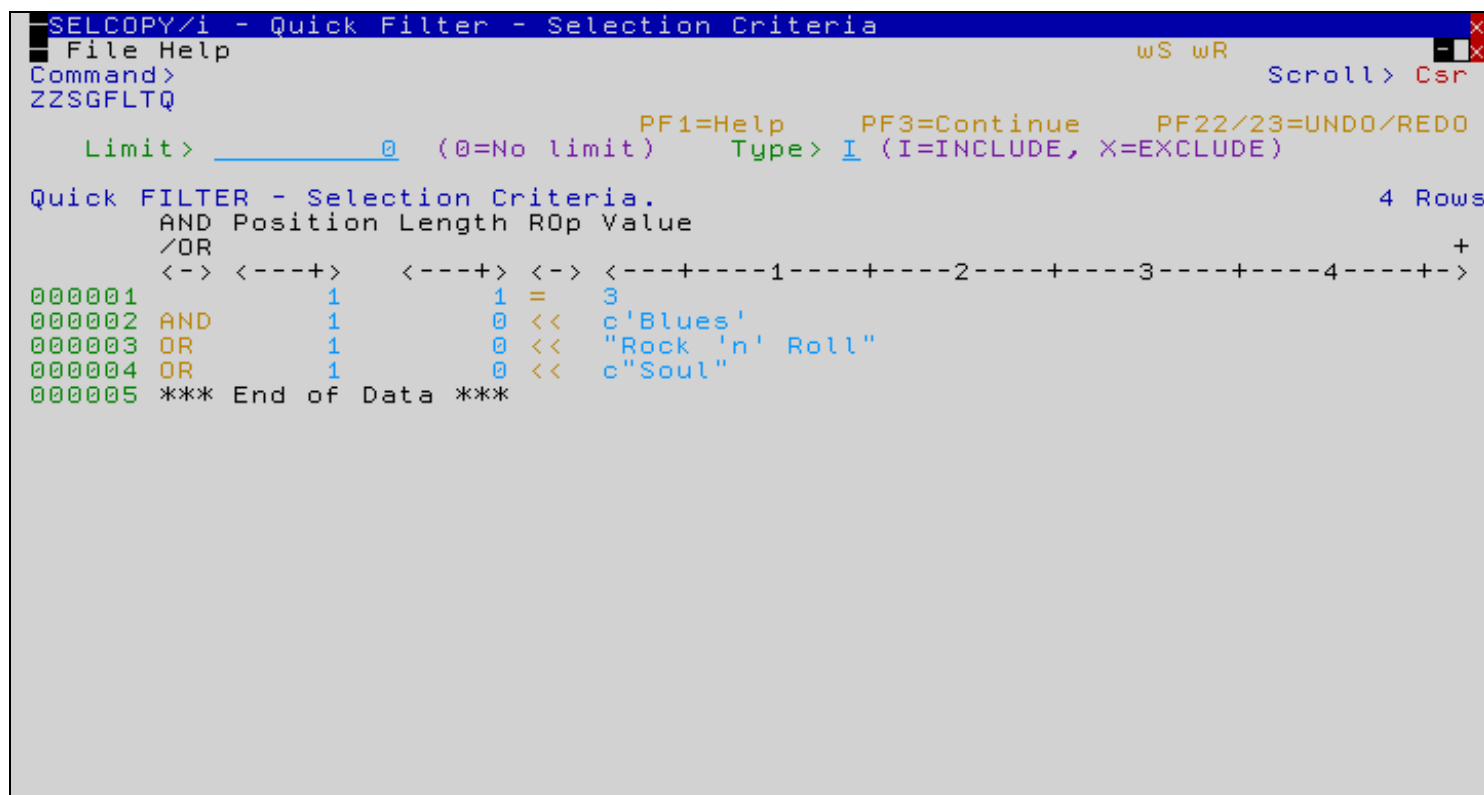


Figure 74. SELCOPYi - Filter: Multiple Selection Criteria.

Generate FCOPY primary command

Press **PF3** to return to the File Copy panel, then select item **Command** from the top menu bar.

You will be prompted once again to define your new output file (you should use the **previous sample** as the model dataset), following which the generated FCOPY primary command will be displayed in a text edit window (in a format suitable for point-and-shoot execution using **PF4**).

```
SELCOPY/i - USER123.SELCOPYI.SQL.D2013023.T1509371.CMX 80 F SEQ Size=17
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7---
000001 < sd FCOPY
000002 (
000003 'USER123.SELCTRN.ZZST2DAT '
000004 )
000005 USER123.SELCTRN.ZZST2DAT.ESDS3
000006 filter
000007 (
000008 include record
000009 where (
000010 substr(record, 1, 1) = 3
000011 and substr(record, 1) << c'Blues'
000012 or substr(record, 1) << "Rock 'n' Roll"
000013 or substr(record, 1) << c"Soul"
000014 )
000015 )
000016 )
000017 *** End of File ***
000018
Te Line=1 Col=1 Alt=0,0;0 Size=17 Recl=80 Fmt=F Files=2 Views=2
```

Figure 75. SELCOPYi - Generated Command.

Modify/Execute Generated FCOPY primary command

Brackets may now be added to the filter expression as required.

Although the filter expression is fairly free format, care must be taken to maintain a **backslash (\)** character in the right-most position of any newly added lines (the backslash character indicates that the command is continued on the following line). This is typically achieved by replicating, then modifying, existing lines rather than inserting new ones.

The modified FCOPY command may then be executed simply by placing your cursor on the first line of the command (beginning with the **less-than (<)** sign), then pressing **PF4**.

You may also want to consider copying the generated command into your **HOME file**, saving it there for future repeat executions.

```

SELCOPY/i - USER123.SELCOPYI.SQL.D2013023.T1509371.CMX 80 F SEQ Size=19x
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
<----+----1----+----2----+----3----+----4----+----5----+----6----+----7--
000001 < sd FCOPY
000002 (
000003 'USER123.SELCTRN.ZZST2DAT '
000004 )
000005
000006 USER123.SELCTRN.ZZST2DAT.ESDS3
000007
000008 filter
000009 (
000010 include record
000011 where ( substr(record, 1 , 1 ) = 3
000012 and
000013 ( substr(record, 1 ) << c'Blues'
000014 or substr(record, 1 ) << "Rock 'n' Roll"
000015 or substr(record, 1 ) << c"Soul"
000016 )
000017 )
000018 )
000019 |||||
000020 * * * End of File * * *

```

Te | Line=1 | Col=1 | Alt=4,4;4 | Size=19 | Recl=80 | Fmt=F | Files=2 | Views=2

Figure 76. SELCOPYi - Modified Command.

Browse Output from Generated Command Window

You may wish to browse your output file before exiting (and discarding precious changes to) your generated FCOPY command. One handy way to do this is to:

1. Type the command **DSN B** on the command line (but do not press ENTER).
2. Place your cursor on the name of the dataset that you wish to browse, within the generated FCOPY command.
3. Press **ENTER**.

Alternatively, type the command **DSN** (without the **B**rowse option) to get a drop-down list of available utility functions including edit, delete and rename.

```

SELCOPY/i - Browse USER123.SELCTRN.ZZST2DAT.ESDS3      268 V ESDS
File Edit Actions Options Utilities Window SwapList Help  wS wR      Scroll> Csr
Command>
00000000      *** Top of Data ***
Record type: UnMapped      Variable(0,268) Offset=0 Data elements=1
      Length UnMapped
<---+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----
00000001      268 37CB7FD20ADBE19AD00E211GBourgeoisie Blues
00000002      268 3079FF06C1501FB9600D797IRoman Wall Blues
00000003      268 31ED550900D5C62FD00A433GIt's A Long Way To The Top (If You Wann
00000004      268 306A9FB72A6AE79C100B433IRock 'n' Roll Singer
00000005      268 35524E0900D7B3C7900E143GSoul Stripper
00000006      268 33A2C9735E5A7641800A437IRock 'N' Roll Damnation
00000007      268 30EED324BEE2DD30100B438ADown Payment Blues
00000008      268 3924DD5148CDEF39F00H421ESubterranean Homesick Blues
00000009      268 32AF08B93888AEE8700F303AEeveryday I Have the Blues (Live)
00000010      268 3DE36E78FD678857800C340ASoulmate
00000011      268 347E5BE872D4779C900D175ESoulmate
00000012      268 3FD4B86E2C95D53CF00H369AGus's Blues (Intro)
00000013      268 30C9E4EB0FF13BF8800B370CKilling the Blues
00000014      268 39D4FF395C75680EA00C189ARunaway Train
00000015      268 3988EE8137A14CDE000C382ILife and Soul
00000016      268 3A02159C78BD2DB0800A428IHey, Soul Sister
00000017      268 3EF3024088704CFF500C405GWalking In the Shadow of the Blues
00000018      *** End of Data ***

Se | Line=0 | Col=1 | Alt=0,0;0 | Size=17 | Recl=268 | Fmt=V | Files=1 | Views=

```

Figure 77. SELCOPYi - Browse Filtered Output File.

Reformat

The **FCOPY** utility may also be used to reformat records as they are copied to the output file.

Reformat requires use of two, similar but not identical, structures that define the layout of the input and output records, with each output field being sourced from the corresponding input field of the same name (within the same record-type).

Input and output fields for any given record-type may (but need not necessarily) be:

- in a different order
- a different length
- a different data-type

Additionally fields may exist in either input or output without existing in the other.

- Specify the *Input File*:
 - ♦ Type **userpfx.SELCTRN.ZZST1DAT** in the *DSN/Path Mask* field, where *userpfx* is your own user prefix.
- Specify the *Output File*:
 - ♦ Type **userpfx.SELCTRN.ZZST1DAT.FCOPY2** in the *DSN/Path* field.
- Select *Reformat using structure/copybook layouts* from the **Options** section of the FCOPY panel.

```

SELCOPY/i - File Copy
File Help JCL Command
Command>
ZZSGFC00
Input PDS/PDSE Library, Sequential, VSAM DSN mask or HFS path mask:
  DSN/Path Mask> USER123.SELCTRN.ZZST1DAT
  Member Mask>
  Volume Mask>
Output PDS/PDSE Library, Sequential, VSAM DSN or HFS path:
  DSN/Path> USER123.SELCTRN.ZZST1DAT.FCOPY2
  Member>
  Volume>
Strip/Pad Char> e.g. X'FF'
Record Selection: For each input file, copy only selected records.
  Start>
  For> @ # records
  Filter> Q Select records to copy. (F=File; Q=Quick)
  File>
Options:
  / Reformat using structure/copybook layouts
  _ Append to existing Output
  _ Recurse HFS Sub-directories
  _ Ignore HFS fileid case
  
```

Figure 78. SELCOPYi - Reformat 1.

Specify Input Copybook

- Press **ENTER** to proceed to the **File Reformat** panel.
- Specify the *Input Structure/Copybook File*:
 - ◆ Type **userpfx.SELCTR.N.SAM1** in the *Dsn* field, to specify the PDS library containing the supplied COBOL/PL1 copybook. If wildcards are specified then a dataset list will be displayed from which you can make a selection.
 - ◆ Type **ZZST1CPC** in the *Member* field (for COBOL installations).
Type **ZZST1CPP** in the *Member* field (for PL1 installations).
If wildcards are specified then a member list will be displayed from which you can make a selection.
 - ◆ Check the *Type* option for *Cobol* or *PL1* as appropriate for your installation.

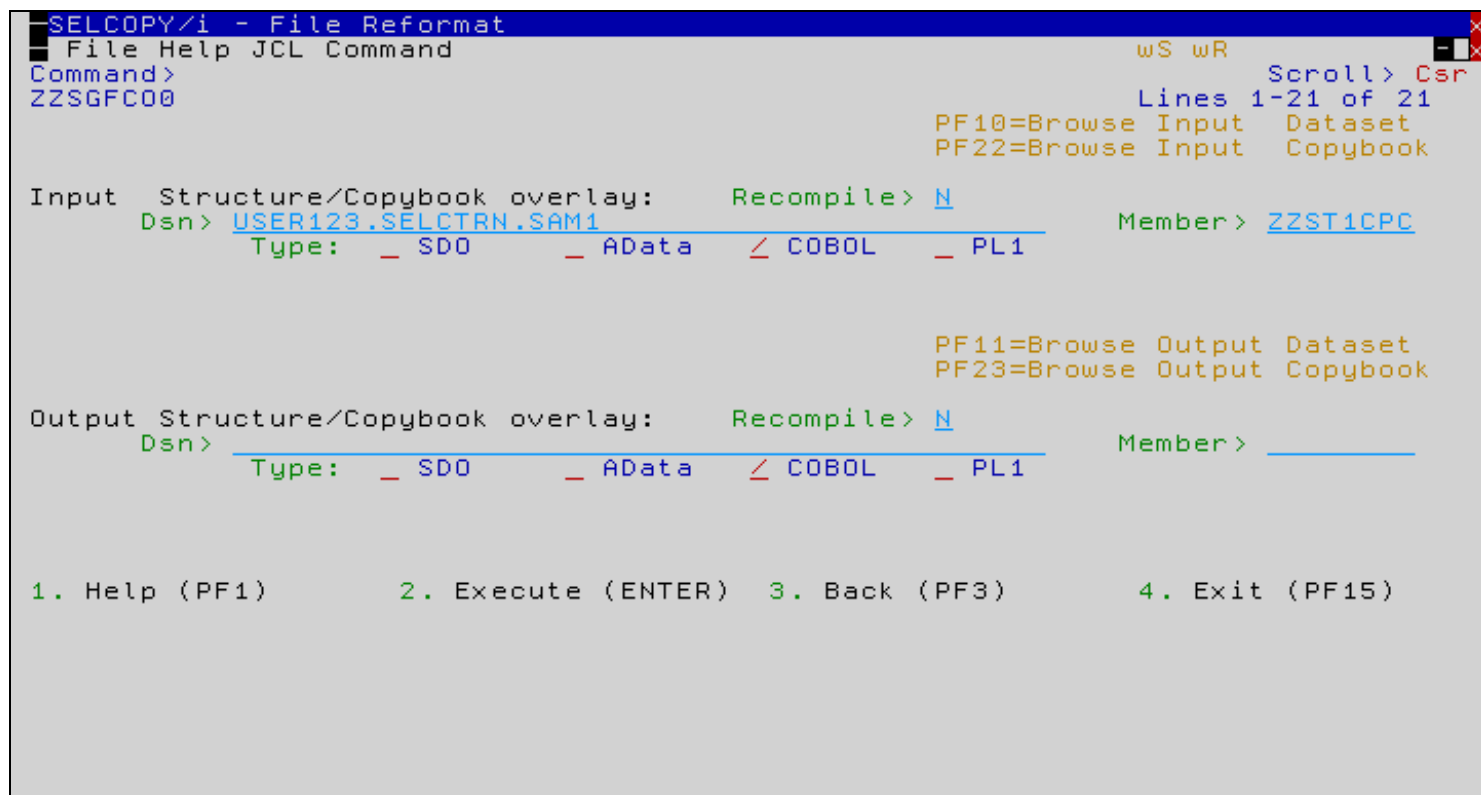


Figure 79. SELCOPYi - Input Copybook.

Use Input Copybook as Model

We'll now create an output copybook using a selection of the fields from the input copybook, but in a different order, and with some of the fields shortened.

- Press **PF22** to browse the input copybook. You should see that it has 18 records as below (assuming COBOL installation).
- Type **GO E** to switch from browse mode to text-edit.

```

SELCOPY/i - Browse USER123.SELCTRN.SAM1(ZZST1CPC)      80 F PDS
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command>
Press PF4 for Utilities menu including point/shoot options
Record type: UnMapped      Fixed(80) Offset=0 Data elements=1
UnMapped
<---+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7
00000001      01 TRACK
00000002      05 PERSISTENT-ID          PIC X(016).
00000003      05 TRACK-NUM             PIC 9(003).
00000004      05 TRACK-ID              PIC 9(004).
00000005      05 NAME                   PIC X(120).
00000006      05 ARTIST                  PIC X(070).
00000007      05 ALBUM                   PIC X(070).
00000008      05 TOTAL-TIME              PIC 9(007) BINARY.
00000009      05 FILE-SIZE               PIC 9(009) BINARY.
00000010      05 BIT-RATE                PIC 9(004) BINARY.
00000011      05 SAMPLE-RATE             PIC 9(005) PACKED-DECIMAL.
00000012      05 YEAR                    PIC 9(004).
00000013      05 NORMALIZATION           PIC S9(005) PACKED-DECIMAL.
00000014      05 DISC-NUMBER             PIC 9(003).
00000015      05 ALBUM-ARTIST            PIC X(041).
00000016      05 RELEASE-DATE            PIC X(020).
00000017      05 DATE-ADDED              PIC X(020).
00000018      05 DATE-MODIFIED           PIC X(020).
00000019 *** End of Data ***
Se Line=0 Col=1 Alt=0,0;0 Size=18 Recl=80 Fmt=F Files=1 Views=0

```

Figure 80. SELCOPYi - Browse Input Copybook.

Create Output Copybook

- Move **05** field **ARTIST** following **01 TRACK**, and change **PIC X(070)** to **PIC X(020)**.
- Move **05** field **ALBUM** following **05 ARTIST**, and change **PIC X(070)** to **PIC X(024)**.
- Move **05** field **TRACK-NUM** following **05 ALBUM**.
- Move **05** field **NAME** following **05 TRACK-NUM**.
- Delete all other lines following **05 NAME**.
- Type **CREATE ZZSP1CPC** on the command line, but do NOT press ENTER.
- Make a mental note that total record length defined by the copybook is **167** (i.e. the sum of all the field lengths 20+24+3+120).
- Type **C*** in the prefix area of line 1 of the file, then press **ENTER**. to create the new member.

```

SELCOPY/i - USER123.SELCTRN.SAM1(ZZST1CPC)      80 F PDS   Size=5   Alt=7,7;7
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command> cre zzsp1cpc
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7---
000000 * * * Top of File * * *
c*      01 TRACK
000002      05 ARTIST                      PIC  X(020).
000003      05 ALBUM                       PIC  X(024).
000004      05 TRACK-NUM                   PIC  9(003).
000005      05 NAME                        PIC  X(120).
000006 * * * End of File * * *
  
```

Te | Line=0 | Col=1 | Alt=7,7;7 | Size=5 | Recl=80 | Fmt=F | Files=2 | Views=2

Figure 81. SELCOPYi - Create Output Copybook.

Specify Output Copybook

- Type **CANCEL** to discard changes to the input copybook and return to the File Reformat panel.
- Specify the *Output Structure/Copybook File*:
 - ◆ Type **userpfx.SELCTRN.SAM1** in the *Dsn* field.
 - ◆ Type **ZZSP1CPC** in the *Member* field (assuming COBOL installation).
 - ◆ Check the *Type* option for *Cobol* or *PL1* as appropriate for your installation.

The screenshot shows the SELCOPY/i - File Reformat interface. The top menu bar includes 'File', 'Help', 'JCL', 'Command', 'wS', 'wR', and 'Scroll> Csr'. The command 'ZZSGFC00' is entered. The screen is divided into two main sections: 'Input Structure/Copybook overlay' and 'Output Structure/Copybook overlay'. Both sections have a 'Recompile>' button with a blue 'N' and a 'Member>' field. The 'Input' section shows 'Dsn> USER123.SELCTRN.SAM1' and 'Type: _ SDO _ AData / COBOL _ PL1'. The 'Output' section shows 'Dsn> USER123.SELCTRN.SAM1' and 'Type: _ SDO _ AData / COBOL _ PL1'. At the bottom, there are four numbered options: '1. Help (PF1)', '2. Execute (ENTER)', '3. Back (PF3)', and '4. Exit (PF15)'. On the right side, there are instructions for function keys: 'PF10=Browse Input Dataset', 'PF22=Browse Input Copybook', 'PF11=Browse Output Dataset', and 'PF23=Browse Output Copybook'.

```

SELCOPY/i - File Reformat
File Help JCL Command wS wR Scroll> Csr
Command>
ZZSGFC00
Lines 1-21 of 21
PF10=Browse Input Dataset
PF22=Browse Input Copybook

Input Structure/Copybook overlay: Recompile> N
Dsn> USER123.SELCTRN.SAM1 Member> ZZST1CPC
Type: _ SDO _ AData / COBOL _ PL1

PF11=Browse Output Dataset
PF23=Browse Output Copybook

Output Structure/Copybook overlay: Recompile> N
Dsn> USER123.SELCTRN.SAM1 Member> ZZSP1CPC
Type: _ SDO _ AData / COBOL _ PL1

1. Help (PF1) 2. Execute (ENTER) 3. Back (PF3) 4. Exit (PF15)
  
```

Figure 82. SELCOPYi - Specify Output Copybook.

Execute Reformat

- Press **ENTER** to execute the reformat.
- You will be prompted to create you new output file, which should be allocated as **record length 167 (fixed)**.
- A summary message will be displayed on completion.
- Press **PF11** to browse the output file in formatted mode.

```

SELCPY/i - Browse USER123.SELCTRN.ZZST1DAT.FCOPY2 using USER123.SELCTRN.SAM1
File Edit Actions Options Utilities Window SwapList Help  WS WR  Scroll> Csr
Command>
Use CHAR/MAP/VFMT/UNFMT to switch view mode.      Press PF4 for Utilities menu.
Record type: TRACK  Fixed(167) Offset=0 Data elements=5

```

ARTIST	ALBUM	TRACK-#	NAME
#2	#3	#4	#5
AN 1:20	AN 21:24	ZD 45:3	AN 48:120
<---+---1---+--->	<---+---1---+---2--->	<->	<---+---1--->
00000001 Adele	21	1	Rolling In the
00000002 Adele	21	2	Rumour Has It
00000003 Adele	21	3	Turning Tables
00000004 Adele	21	4	Don't You Reme
00000005 Adele	21	5	Set Fire to th
00000006 Adele	21	6	He Won't Go
00000007 Adele	21	7	Take It All
00000008 Adele	21	8	I'll Be Waitin
00000009 Adele	21	9	One and Only
00000010 Adele	21	10	Lovesong
00000011 Adele	21	11	Someone Like Y
00000012 Adele	21	12	I Found a Boy
00000013 Adele	21	13	Adele 21 - A T
00000014 Alabama Shakes	Boys & Girls	1	Hold On
00000015 Alabama Shakes	Boys & Girls	2	I Found You
00000016 Alabama Shakes	Boys & Girls	3	Hang Loose
00000017 Alabama Shakes	Boys & Girls	4	Rise to the Su
00000018 Alabama Shakes	Boys & Girls	5	You Ain't Alon
00000019 Alabama Shakes	Boys & Girls	6	Goin' to the P
00000020 Alabama Shakes	Boys & Girls	7	Heartbreaker
00000021 Alabama Shakes	Boys & Girls	8	Boys & Gir
00000022 Alabama Shakes	Boys & Girls	9	Be Mine

```

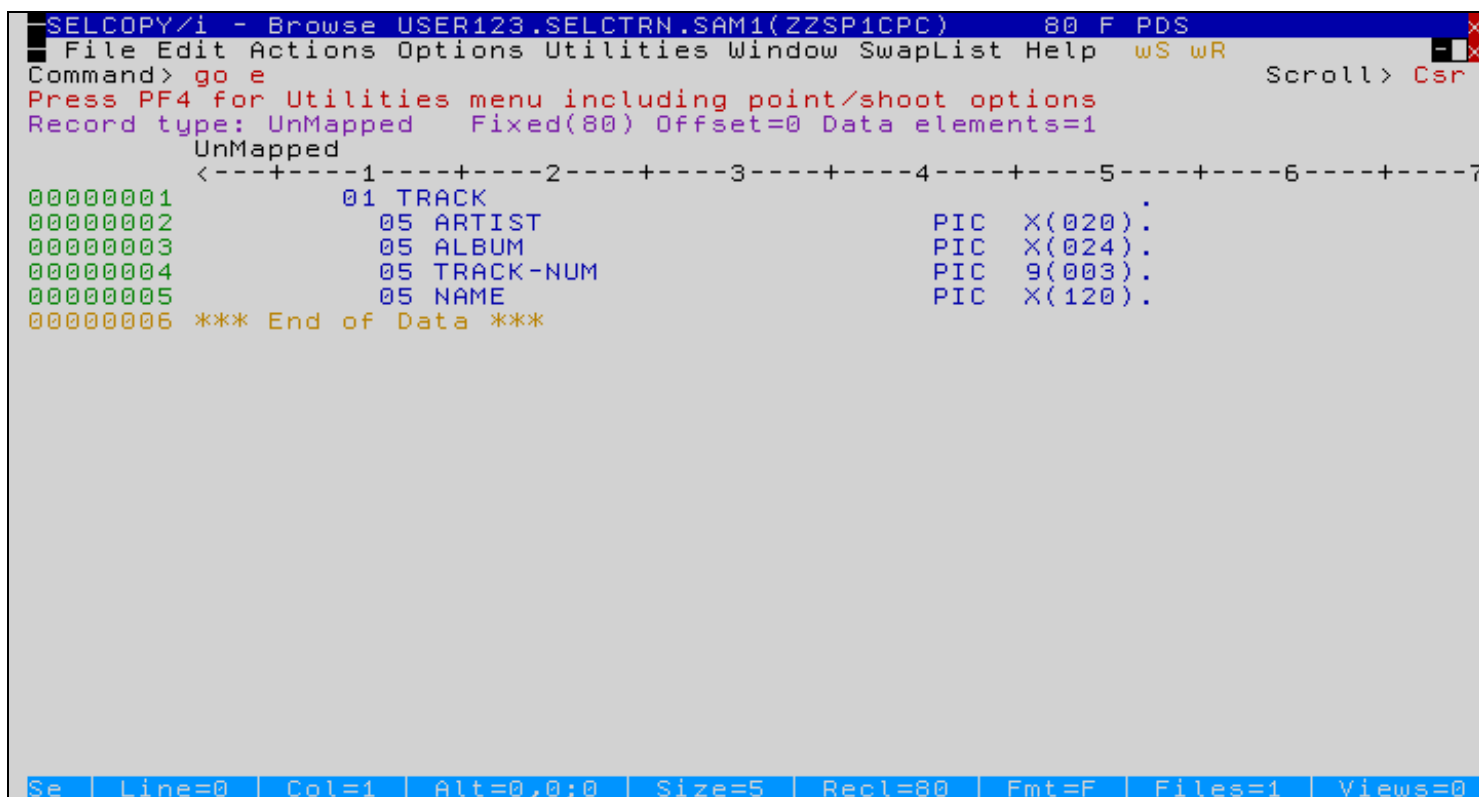
Se | Line=0 | Col=1 | Alt=0,0;0 | Size>334 | Recl=167 | Fmt=F | Files=1 | Views

```

Figure 83. SELCPYi - Browse Formatted Output.

Updating the Output Copybook (1)

- Press **PF3** to return to the File Reformat panel.
- Press **PF23** to browse the output copybook.
- Type **GO E** to switch from browse mode to text-edit.



```

SELCOPY/i - Browse USER123.SELCTRN.SAM1(ZZSP1CPC) 80 F PDS
File Edit Actions Options Utilities Window SwapList Help wS wR
Command> go e
Press PF4 for Utilities menu including point/shoot options
Record type: UnMapped Fixed(80) Offset=0 Data elements=1
UnMapped
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7
00000001 01 TRACK
00000002 05 ARTIST PIC X(020).
00000003 05 ALBUM PIC X(024).
00000004 05 TRACK-NUM PIC 9(003).
00000005 05 NAME PIC X(120).
00000006 *** End of Data ***
Se | Line=0 | Col=1 | Alt=0,0;0 | Size=5 | Recl=80 | Fmt=F | Files=1 | Views=0

```

Figure 84. SELCOPYi - Browse Output Copybook.

Updating the Output Copybook (2)

- Update 05 field **ARTIST** changing **PIC X(020)** to **PIC X(010)**.
- Update 05 field **ALBUM** changing **PIC X(024)** to **PIC X(010)**.
- Update 05 field **NAME** changing **PIC X(120)** to **PIC X(050)**.
- Make a mental note that total record length defined by the copybook is now **73** (i.e. the sum of all the field lengths 10+10+3+50).
- Press **PF3** and save your changes before returning to the File Reformat panel.

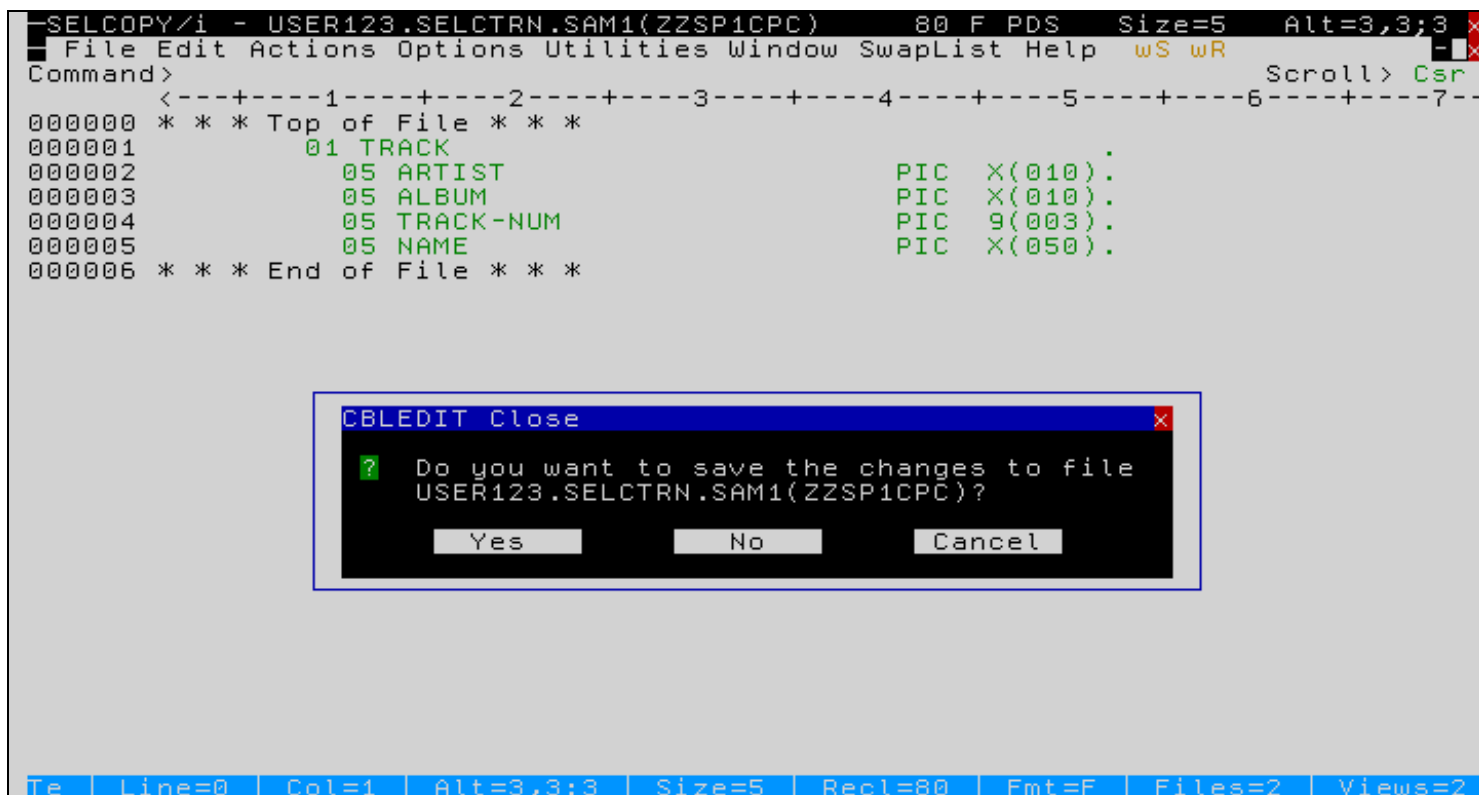


Figure 85. SELCOPYi - Update Output Copybook.

Force Recompile of Updated Output Copybook (1)

If your structure/copybook file-id refers to a COBOL, PL1 or ADATA source file (not an SDO) then a compile step must be performed in order to turn the source copybook into SELCOPYi's own internal structure (SDO) format.

A temporary SDO will be created, lasting the duration of the SELCOPYi session, making subsequent reference to the same copybook during the session much faster by bypassing the compile stage.

If, however as in our case, the output copybook (or any of its included components) should be modified during the session, then a recompile of the source will normally be required.

For performance reasons **Recompile> N** (meaning no recompile should occur) is the default.

Specify **Recompile> Y** to force a copybook recompile each time the reformat process is executed.

Alternatively type the primary command:

```
SD DROP copybook_name
```

- Enter **Y** in the **Recompile** field for the Output Copybook.
- Press **ENTER** to repeat the reformat, using the updated copybook.

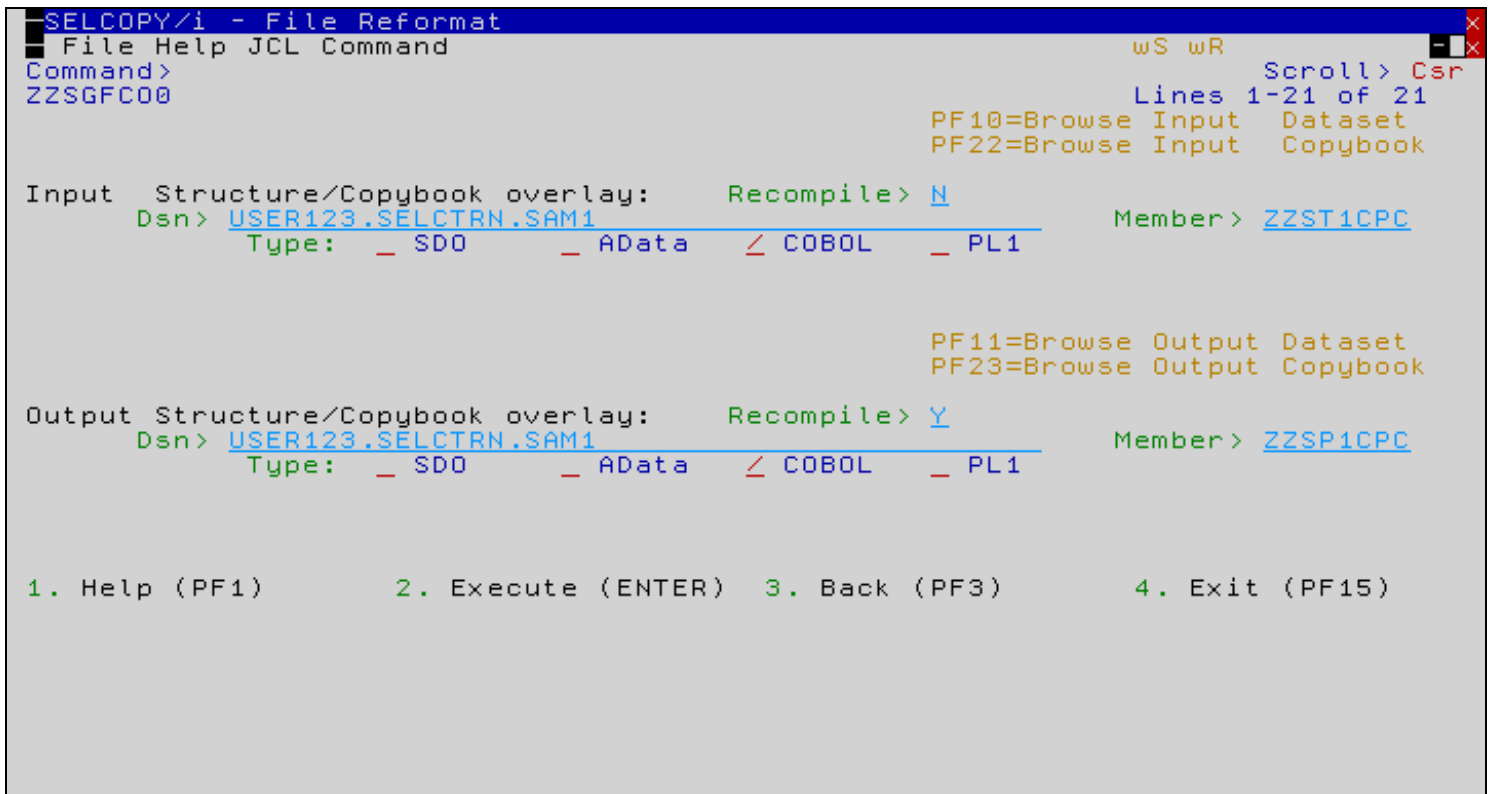


Figure 86. SELCOPYi - Recompile=YES.

Force Recompile of Updated Output Copybook (2)

- Press **PF11** to browse the output file in formatted mode.
- Note that the **=LGTH>** flag appears in the prefix area for each record. This is expected, alerting you that the output record (the original fixed length=167) does not match the new version of the mapped record-type (length=73).

```

SELCOPY/i - Browse USER123.SELCTRN.ZZST1DAT.FCOPY2 using USER123.SELCTRN.SAM1
File Edit Actions Options Utilities Window SwapList Help  WS WR  Scroll> Csr
Command>
Use CHAR/MAP/VFMT/UNFMT to switch view mode.      Press PF4 for Utilities menu.
Record type: TRACK      Fixed(73) Offset=0 Data elements=5
      ARTIST      ALBUM      TRACK-NUM  NAME
      #2          #3          #4 #5
      AN 1:10     AN 11:10     ZD 21:3  AN 24:50
      <---+-----> <---+-----> <-> <---+-----1-----+-----2-----+-----3-----+-----
=LGTH> Adele      21          1 Rolling In the Deep
=LGTH> Adele      21          2 Rumour Has It
=LGTH> Adele      21          3 Turning Tables
=LGTH> Adele      21          4 Don't You Remember
=LGTH> Adele      21          5 Set Fire to the Rain
=LGTH> Adele      21          6 He Won't Go
=LGTH> Adele      21          7 Take It All
=LGTH> Adele      21          8 I'll Be Waiting
=LGTH> Adele      21          9 One and Only
=LGTH> Adele      21          10 Lovesong
=LGTH> Adele      21          11 Someone Like You
=LGTH> Adele      21          12 I Found a Boy (Bonus Track)
=LGTH> Adele      21          13 Adele 21 - A Track By Track Interview
=LGTH> Alabama Sh Boys &#38; 1 Hold On
=LGTH> Alabama Sh Boys &#38; 2 I Found You
=LGTH> Alabama Sh Boys &#38; 3 Hang Loose
=LGTH> Alabama Sh Boys &#38; 4 Rise to the Sun
=LGTH> Alabama Sh Boys &#38; 5 You Ain't Alone
=LGTH> Alabama Sh Boys &#38; 6 Goin' to the Party
=LGTH> Alabama Sh Boys &#38; 7 Heartbreaker
=LGTH> Alabama Sh Boys &#38; 8 Boys &#38; Girls
=LGTH> Alabama Sh Boys &#38; 9 Be Mine
Se | Line=0 | Col=1 | Alt=0,0;0 | Size>334 | Recl=167 | Fmt=F | Files=1 | Views

```

Figure 87. SELCOPYi - Browse Formatted Output 2.

Running File Copy/Reformat in Batch

- The File Copy/Reformat utility may also be run in batch, by selecting JCL from the panel menu bar.
- After typing the **SUB** primary command to submit the generated JCL deck, you will have the option to allow SELCOPYi to automatically guide you into SDSF (starting a new ISPF split screen) in order to view the output.

```

SELCOPY/i - USER123.SELCOPYI.SQL.D2013023.T1615254.JCL      80 F SEQ      Size=22x
File Edit Actions Options Utilities Window SwapList Help  wS wR      Scroll> Csr
Command>
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7---
000001 //USER123S  JOB  ,,CLASS=A,MSGCLASS=X,MSGLEVEL=(1,1),NOTIFY=&SYSUID
000002 /**
000003 /** SELCOPY/i 3.2B (C)2012 Compute(Bridgend) Ltd UK +44(1656)652222
000004 /**      JCL for: ZZSGFC00 SDE FCOPY Basic File Copy.
000005 /** Created by: USER123  2013/01/23 16:15:25
000006 /**
000007 //SEL0001 EXEC PGM=SDEAMAIN,REGION=0M
000008 //STEPLIB DD DISP=SHR,DSN=CBL.CBLI320.EXE
000009 //        DD DISP=SHR,DSN=CBL.CBLI310.EXE
000010 //ZZSUSERI DD DISP=SHR,DSN=USER123.CBLI.INI
000011 //SDEPRINT DD SYSOUT=*
000012 //SDEIN   DD      *
000013 FCOPY
000014 (
000015     'USER123.SELCTRN.ZZST1DAT '
000016 )
000017     using cobol USER123.SELCTRN.SAM1(ZZST1CPC)
000018
000019     USER123.SELCTRN.ZZST1DAT.FCOPY2
000020     using cobol USER123.SELCTRN.SAM1(ZZSP1CPC)
000021
000022 /**
000023 * * * End of File * * *

```

Te | Line=1 | Col=1 | Alt=0,0;0 | Size=22 | Recl=80 | Fmt=F | Files=2 | Views=2

Figure 88. SELCOPYi - Generated Batch Job.

Option 6 - File Search/Update/Copy/Reformat (FSU)

The File Search/Update/Copy/Reformat utility allows you to:

- Globally search and optionally update multiple sequential, PDS/PDSE, GDG, HFS and/or VSAM data sets.
- Restrict PDS/PDSE library search/update/copy:
 - ◆ to members with names that match a member name mask
 - ◆ to members satisfying directory element selection criteria (e.g. select on timestamp, size, userid etc combinations)
 - ◆ to members selected by one or more previous searches.
- Specify an output file to which **all** input records will be copied regardless of whether record data has been changed.
- Apply a filter in order to restrict search/update/copy to records matching specific selection criteria.
- Search and optionally update uncataloged data sets by generic volume id.
- Specify the start record for search/update/copy operations.
- Restrict the number of records read for search/update/copy operations.
- Restrict the search/update operation to specific columns within the file records.
- Apply a **structure** (copybook) overlay to format **input** file records.
- Optionally restrict search/update to records assigned to specific record types, and specific fields within those record-types.
- For **Formatted File Search/Update**, optionally specify an output file **and** output structure (copybook) to reformat input record fields (i.e. alter field data type, re-order and/or delete fields).
- Update character data using different length search and update CHANGE strings.
- Control use of blank padding or blank absorption when character search and update CHANGE strings are of different length. Note that the CHANGE operation will fail if the length of the updated record is greater than the file's maximum record length.

Following File Search/Update/Copy/Remap execution, report output is generated in a structured format suitable for presentation to the user in an SDE window view.

During execution, a progress window is displayed which allows the user to interrupt processing at any point using the **Attention key**.

The File Search/Update (FSU) Panel

The FSU panel may be started using any of the following methods:

- Select option **6** from the **SELCOPYi** Primary Option Menu (=).
- At any primary command prompt type **=6**.
- At any primary command prompt type **FSU**.
- From any dataset, library or HFS path list window, use the **F** line-command.

Searching a PDS/PDSE Library

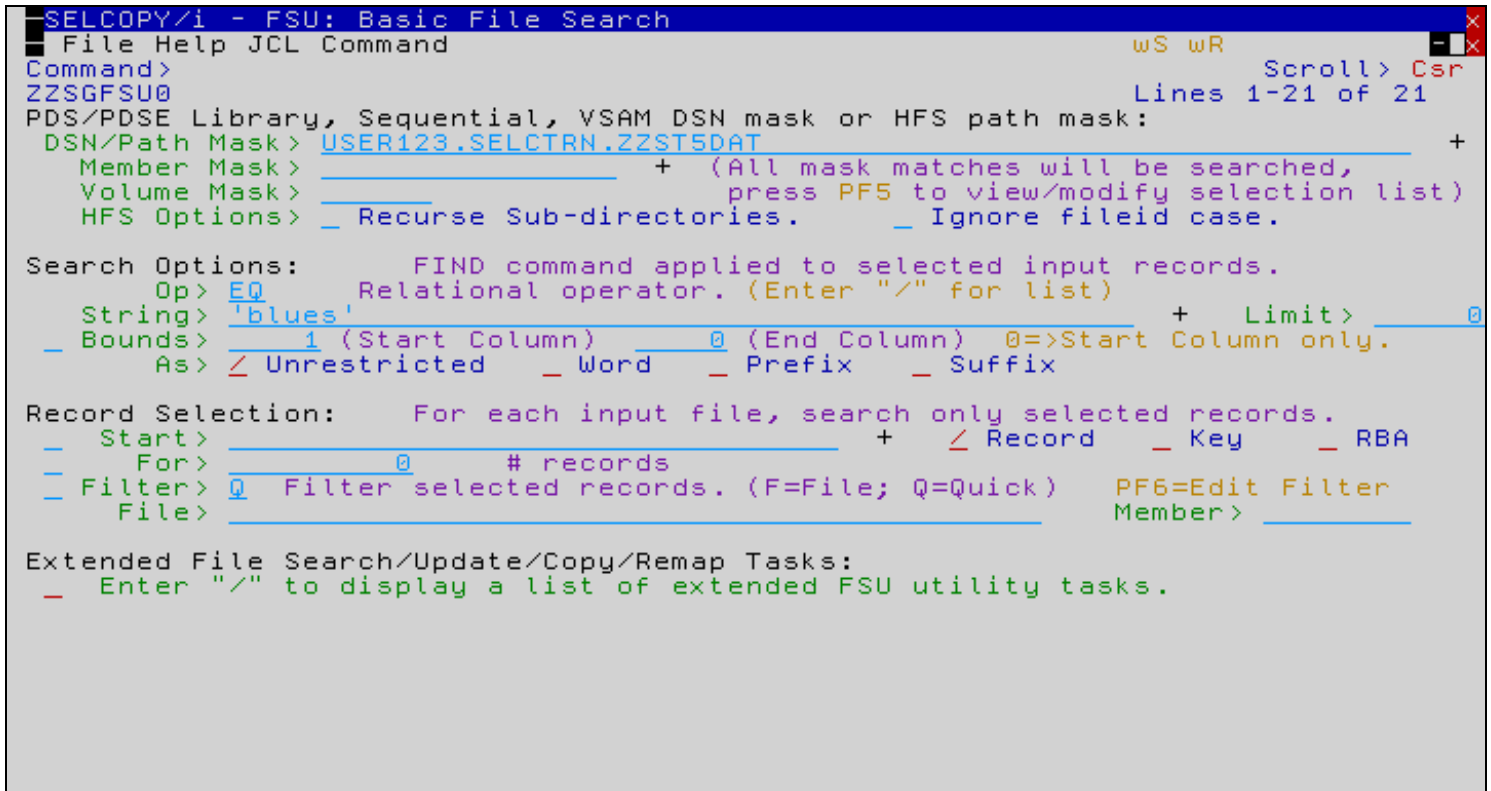


Figure 89. FSU - File Search/Update (FSU) Panel (=5)

To follow the demonstration use the panel to search the supplied sample library for a the character string **"blues"** (case-insensitive).

- Specify the *Input Library*:
 - ◆ Type **userpfx.SELCTRN.ZZST5DAT** in the *DSN/Path Mask* field, where *userpfx* is your own user prefix.
 - ◆ The *Member Mask* field may be left blank in order to search all members of the input library. Alternatively type **"*"** or a member mask of your choice.
 - ◆ The *Volume Mask* should be left blank in this case, otherwise the input dataset list will be restricted to files residing on matching volumes only.
- Specify the *Search Options*:
 - ◆ Enter **EQ** in the *Relational Operator (Op)* field.
 - ◆ Type **blues** in the *String* field.
 - ◇ For simple case-insensitive character strings there is no need to add quotes (this will be done automatically).
 - ◇ You may specify the string using **C'ABCD'** notation if case-sensitivity is required.
 - ◇ Hex strings may be specified using **X'1234'** notation.
 - ◆ Enter **0** in the *Limit* field in order to display **all hits in each member**. Alternatively, enter **1** to display the first hit only.
- Press **ENTER** to run the search. For operations lasting more than a second, a progress window will be displayed with the report in the background, (continually updating at one second intervals).
- Long running processes may interrupted by pressing the **Attention key**.

Search Report Output (Standard 80-column Screen Width)

Following execution, the structured report output file is displayed as a formatted table view, with search matches displayed under the heading:

Record type: Hit

- The first record (**Record type: Command**) displays the following fields:

Field	Description
Timestamp	The date/time of execution.
Command	The FSU primary command generated by the panel.

- The second record (**Record type: Summary**) among other fields displays the following:

Field	Description
RecordsTot	The number of records processed.
FilesTot	The number of files/members processed.
Hits	The number of occurrences of the search value encountered.
RecordsHit	The number of records encountered with at least once occurrence of the search value.
FilesHit	The number of files/members encountered with at least once occurrence of the search value.

- For library searches on standard 80-column screens, view of the **Hit** records is restricted to two columns:

Field	Description
zMember	The name of the hit library member. zMember is a held field , meaning it will remain visible when the display is scrolled right.
zRecord	The contents of the hit record.

```

SELCPY/i - Edit  USER123.SELCFSU.T103716.RPT using USER123.SELCFSU.T103716.
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
Record type: Command  Fixed(315) Offset=0 Data elements=4
Timestamp      Command
<---+---1---+---> <---+---1---+---2---+---3---+---4---+---5---+---
2013/02/25 10:37:16 FSU input ( 'USER123.SELCTR.N.ZZST5DAT ( TRACK001 TRACK002 T

Record type: Summary  Variable(51,52) Offset=0 Data elements=14
RunType  RecordsTot  FilesTot  Hits  RecordsHit  FilesHit  RemapErrs
<---+---> <---+---> <---+---> <---+---> <---+---> <---+---> <---+--->
FIND      1070      25      8      8      6      0

Record type: Hit  Variable(47,454) Offset=0 Data elements=13
zMember  zRecord
<---+---> <---+---1---+---2---+---3---+---4---+---5---+---6---+---7
TRACK002 0EED324BEE2DD30100B438ADown Payment Blues
TRACK002 0C9E4EB0FF13BF8800B370CKilling the Blues
TRACK003 EF3024088704CFF500C405GWalking In the Shadow of the Blues
TRACK004 079FF06C1501FB9600D797IRoman Wall Blues
TRACK005 7CB7FD20ADBE19AD00E211GBourgeoisie Blues
TRACK006 2AF08B93888AEE8700F303AEeveryday I Have the Blues (Live)
TRACK008 924DD5148CDEF39F00H421ESubterranean Homesick Blues
TRACK008 FD4B86E2C95D53CF00H369AGus's Blues (Intro)
*** End of Data ***

---- Press PF1 for Help, PF6 to edit file at cursor line ----
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=10 | Recl=454 | Fmt=V | Files=1 | Views=

```

Figure 90. FSU - Search Report

Displaying Additional Hit Information Fields

To view additional information fields that are normally suppressed from view on a narrow screen, place the cursor on the hit record of interest then press **PF2**.

The chosen hit record will be displayed individually, in a separate **single-record (zoomed) format** window with the following additional fields made visible.

Field	Description
zDsn	The library dataset name.
zRecNo	The hit record number.
zHitNo	The hit record number within the file/member.
zLrecl	The logical record length of the hit record.
zHits	The number search value occurrences within this hit record.

Press **PF3** to return to the table view.

```

SELCPY/i - Edit  USER123.SELCFSU.T103716.RPT:2 using USER123.SELCFSU.T103716
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command>
Record type: Hit  Variable(47,454) Offset=0 Data elements=13
Record> 00000009  Flags: f          Length: 454

Field      <---+---1---+---2---+---3---+---4---+---5---+---6
3 zDsn      USER123.SELCTRN.ZZST5DAT
3 zMember    TRACK008
3 zRecNo      14
3 zHitNo      1
3 zLrecl      407
3 zHits       1
3 zRecord     924DD5148CDEF39F00H421ESubterranean Homesick Blues
61 - 120
121 - 180
181 - 240
241 - 300
301 - 360
361 - 407

          Bob Dylan
          The Essential Bob Dylan
          C b 200f
          A@@@ABob Dylan
          2000-10-31T00
          :00:00Z2012-08-02T14:08:36Z2012-08-02T14:13:20Z

---- Press PF1 for Help, PF6 to edit file at cursor line ----
Se | Line=9 | Col=1 | Alt=0,0;0 | Size=10 | Recl=454 | Fmt=V | Files=1 | Views=

```

Figure 91. FSU - Search Report (Zoomed)

Using PF6 to edit the Hit File/Record

From the report table-view, you may place your cursor on any **Hit** record, then press **PF6** to edit the hit file. The edit view will be automatically scrolled in order to place the hit record at the top of the screen.

This feature may be adjusted using the **Settings->List (=0.5)** panel to select the required action:

Option	Action
Edit	Text Editor (Edit)
View	Text Editor (Read-only)
Browse	Data Editor (read-only)
SDE	Data Editor (Full Edit)
SDEU	Data Editor (Update-in-place)
None	No Action

The screen below shows the display after pressing **PF6** from the table view with the cursor on the first hit from member **TRACK008**

```

SELCPY/i - USER123.SELCTRN.ZZST5DAT(TRACK008) 407 F PDSE Size=76 AltX
File Edit Actions Options Utilities Window SwapList Help wS wR
Command>
<---+---1---+---2---+---3---+---4---+---5---+---6---+---7---
00014 924DD5148CDEF39F00H421ESubterranean Homesick Blues
00015 A5DCEE01334C978100H427ANot Dark Yet
00016 77122BAF414692C100H218EI Wish I Were Blind
00017 581F8F3BFE2255DA00H222EDry Lightning
00018 4BA23CA33D44938000H224IThe Brokenhearted
00019 12B8896F463EF68500H229ELoose Change
00020 021F64833305EB3300H232EMy Oklahoma Home
00021 B7108A3D38675A3600H238IBlinded By the Light
00022 DCE8E9AC177C5D5200H236CIf I Should Fall Behind
00023 705E6B8E80D761F400H240IThe Long Division
00024 10F86F5F12AAF76200H243CLoving Me 4 Me
00025 809FD6E1ECC0AD5F00H247EWarning Sign
00026 1E4259709E7E552400H415EHow Does a Duck Know?
00027 2E37AC8F0FED003200H278ETransformation
00028 0A6FBD6949EB62DF00H280IJanuary Rain
00029 E172577B0D0EF8D400H283ASilver Lining
00030 46CD09047022D8A200H286ACrashing Down
00031 87020728ED2F19BC00H288EEmpty
00032 FC844197CA33747100H291EDelayed Devotion
00033 8232305C8FBBF92700H293GI Want The World
00034 0BA50B44B05165DB00H296GBetween Two Lungs
00035 9F4E3EF9F63B3C5E00H413AOne of the Boys
00036 2AFD30D86BE2862B00H299IScraped
00037 4BC6E5B1677D896600H303EWho Did You Think I Was (Live)
00038 5713F8AAF2422ADB00H307GBetween a Laugh and a Tear
00039 230FFC80DC91F5CA00H310ADead or Alive
00040 254664C17E6213F600H312IBack Talk
Te | Line=14 | Col=1 | Alt=0,0;0 | Size=76 | Recl=407 | Fmt=F | Files=2 | Views

```

Figure 92. FSU - Edit Hit Member

Adjusting Report Table View

If you wish to display suppressed fields while in table view, you may use the **SELECT** primary command as depicted below.

Note that, by default, the **SELECT** command operates on the **focus record-type** (i.e. the record at the top of the screen, or at the cursor if it is placed in the file-area).

To avoid this complication add "**FROM HIT**" to your usual **SELECT** primary command. e.g.

```
select zMember,zRecNo hold, zRecord from Hit
```

```

SELCPY/i - Edit  USER123.SELCFSU.T103716.RPT using USER123.SELCFSU.T103716.x
File Edit Actions Options Utilities Window SwapList Help  wS wR
Command> sel zMember,zRecNo hold, zRecord                               Scroll> Csr
Record type: Command      Fixed(315) Offset=0 Data elements=4
Timestamp      Command
<---+---1---+---> <---+---1---+---2---+---3---+---4---+---5---+---
2013/02/25 10:37:16 FSU input ( 'USER123.SELCTR.N.ZZST5DAT ( TRACK001 TRACK002 T

Record type: Summary      Variable(51,52) Offset=0 Data elements=14
RunType  RecordsTot  FilesTot  Hits  RecordsHit  FilesHit  RemapErrs
<---+---> <---+---> <---+---> <---+---> <---+---> <---+---> <---+--->
FIND      1070      25      8      8      6      0

Record type: Hit          Variable(47,454) Offset=0 Data elements=13
zMember      zRecNo  zRecord
<---+---> <---+---> <---+---1---+---2---+---3---+---4---+---5---+---
TRACK002      12  0EED324BEE2DD30100B438ADown Payment Blues
TRACK002      75  0C9E4EB0FF13BF8800B370CKilling the Blues
TRACK003      90  EF3024088704CFF500C405GWalking In the Shadow of the Blues
TRACK004       5  079FF06C1501FB9600D797IRoman Wall Blues
TRACK005       3  7CB7FD20ADBE19AD00E211GBourgeoisie Blues
TRACK006      39  2AF08B93888AEE8700F303AEveryday I Have the Blues (Live)
TRACK008      14  924DD5148CDEF39F00H421ESubterranean Homesick Blues
TRACK008      65  FD4B86E2C95D53CF00H369AGus's Blues (Intro)
*** End of Data ***

---- Press PF1 for Help, PF6 to edit file at cursor line ----
Se | Line=1 | Col=1 | Alt=0,0;0 | Size=10 | Recl=454 | Fmt=V | Files=1 | Views=

```

Figure 93. FSU - Report with Tailored SELECT

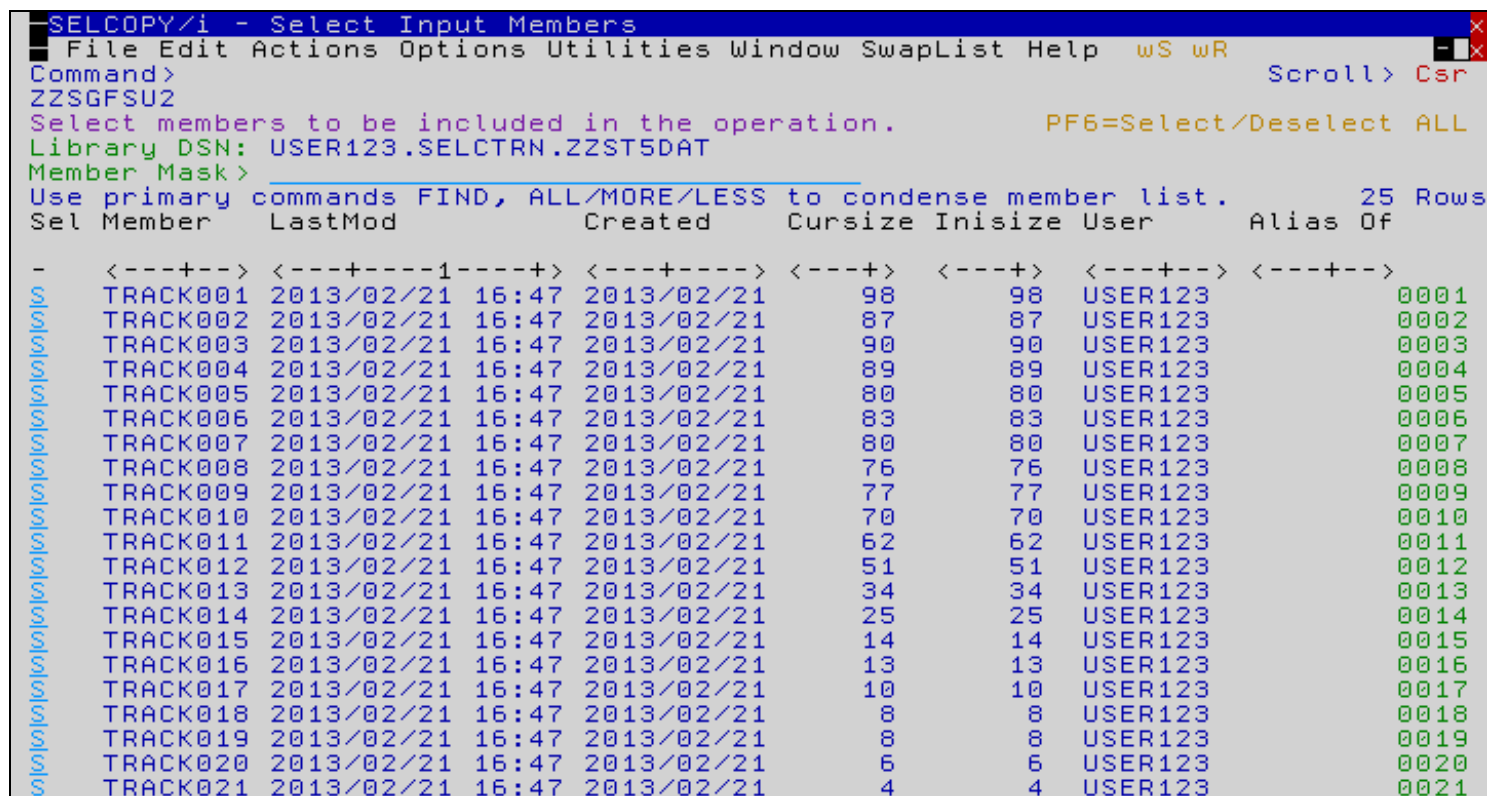
Selecting Library Members for Search/Update

At the Search/Update front panel, if input refers to a library and the **Member Mask** field is either left blank, or includes wildcard characters, then by default **all** member mask matches will be processed, without the need to confirm via a member selection list.

However, you may press **PF5** to access the member selection list, when required.

Initially all members matching the mask will be selected.

Manual selection for individual members is made by removing/adding "S" in the **Sel** column.



Sel	Member	LastMod	Created	Cursize	Inisize	User	Alias	Of
S	TRACK001	2013/02/21 16:47	2013/02/21	98	98	USER123		0001
S	TRACK002	2013/02/21 16:47	2013/02/21	87	87	USER123		0002
S	TRACK003	2013/02/21 16:47	2013/02/21	90	90	USER123		0003
S	TRACK004	2013/02/21 16:47	2013/02/21	89	89	USER123		0004
S	TRACK005	2013/02/21 16:47	2013/02/21	80	80	USER123		0005
S	TRACK006	2013/02/21 16:47	2013/02/21	83	83	USER123		0006
S	TRACK007	2013/02/21 16:47	2013/02/21	80	80	USER123		0007
S	TRACK008	2013/02/21 16:47	2013/02/21	76	76	USER123		0008
S	TRACK009	2013/02/21 16:47	2013/02/21	77	77	USER123		0009
S	TRACK010	2013/02/21 16:47	2013/02/21	70	70	USER123		0010
S	TRACK011	2013/02/21 16:47	2013/02/21	62	62	USER123		0011
S	TRACK012	2013/02/21 16:47	2013/02/21	51	51	USER123		0012
S	TRACK013	2013/02/21 16:47	2013/02/21	34	34	USER123		0013
S	TRACK014	2013/02/21 16:47	2013/02/21	25	25	USER123		0014
S	TRACK015	2013/02/21 16:47	2013/02/21	14	14	USER123		0015
S	TRACK016	2013/02/21 16:47	2013/02/21	13	13	USER123		0016
S	TRACK017	2013/02/21 16:47	2013/02/21	10	10	USER123		0017
S	TRACK018	2013/02/21 16:47	2013/02/21	8	8	USER123		0018
S	TRACK019	2013/02/21 16:47	2013/02/21	8	8	USER123		0019
S	TRACK020	2013/02/21 16:47	2013/02/21	6	6	USER123		0020
S	TRACK021	2013/02/21 16:47	2013/02/21	4	4	USER123		0021

Figure 94. FSU - Member Selection List

Condensing Selected Members by Timestamp/Size/Userid

Listed members will be **active in the Search/Update process** provided **both** of the following are true.

1. The list entry is **selected**.
2. The list entry is **not excluded**.

List entries may be **selected/deselected** as follows:

1. Individually, by entering or removing **"S"** from the **Sel** column.
2. On mass, by pressing **PF6**, which will alternately select, or deselect, all entries.
Note: **Excluded** entries are not affected by pressing PF6.

List entries may be **included/excluded** as follows:

1. By entering **"X"** and other related "line-commands" into the numeric area at the right-hand side, as if working in an edit environment.
2. Using the **ALL**, **MORE** and **LESS** primary commands with an associated selection criteria **expression**.

Option	Action
ALL	Includes only entries satisfying the expression.
MORE	Additionally includes entries satisfying the expression.
LESS	Excludes entries satisfying the expression.

- **ALL** with no parameters will re-include all list entries. **LESS** with no parameters will exclude all list entries.

Excluded entries are represented in the display by **shadow-lines**.

Type primary command **HIDE** to suppress display of shadow-lines, and **RESET HIDE (RES H)** to redisplay them.

Examples:

- To include only members whose last modified date is in the range **2010/05/01** to **2010/12/12**, type:
all LastMod >= 2010/05/01 & LastMod < 2011
- To exclude all members whose current size is zero records, type:
less CurSize=0
- To reinclude all excluded members whose last modified userid is **USER123** or begins with **USER321**, type:
more user=user123 | user >> user321

```

SELCPY/i - Select Input Members
File Edit Actions Options Utilities Window SwapList Help wS wR
Command> less CurSize >= 90 or CurSize < 10 Scroll> Csr
ZZSGFSU2
Select members to be included in the operation. PF6=Select/Deselect ALL
Library DSN: USER123.SELCTR.N.ZZST5DAT
Member Mask>
Use primary commands FIND, ALL/MORE/LESS to condense member list. 25 Rows
Sel Member LastMod Created CurSize Inisize User Alias Of
- <---+---> <---+---1---+> <---+---> <---+> <---+> <---+---> <---+--->
----- 1 row(s) excluded ----- 0001
S TRACK002 2013/02/21 16:47 2013/02/21 87 87 USER123 0002
----- 1 row(s) excluded ----- 0003
S TRACK004 2013/02/21 16:47 2013/02/21 89 89 USER123 0004
S TRACK005 2013/02/21 16:47 2013/02/21 80 80 USER123 0005
S TRACK006 2013/02/21 16:47 2013/02/21 83 83 USER123 0006
S TRACK007 2013/02/21 16:47 2013/02/21 80 80 USER123 0007
S TRACK008 2013/02/21 16:47 2013/02/21 76 76 USER123 0008
S TRACK009 2013/02/21 16:47 2013/02/21 77 77 USER123 0009
S TRACK010 2013/02/21 16:47 2013/02/21 70 70 USER123 0010
S TRACK011 2013/02/21 16:47 2013/02/21 62 62 USER123 0011
S TRACK012 2013/02/21 16:47 2013/02/21 51 51 USER123 0012
S TRACK013 2013/02/21 16:47 2013/02/21 34 34 USER123 0013
S TRACK014 2013/02/21 16:47 2013/02/21 25 25 USER123 0014
S TRACK015 2013/02/21 16:47 2013/02/21 14 14 USER123 0015
S TRACK016 2013/02/21 16:47 2013/02/21 13 13 USER123 0016
S TRACK017 2013/02/21 16:47 2013/02/21 10 10 USER123 0017
----- 8 row(s) excluded ----- 0018
*** End of Data *** 0026

```

Figure 95. FSU - Member Selection (ALL/MORE/LESS)

Condensing Selected Members using FIND

The FIND panel is displayed when primary command **FIND (F)** is executed from a member selection list and may be used to condense the list of selected members. Only those members that contain at least one record which satisfies the find operation are selected for subsequent processing.

Following execution of the find operation, the FIND panel remains open to allow further find/condense operations on the list of remaining members.

To follow the demonstration use the panel to pre-select members containing the string **"soul"** (case-insensitive).

- Type **soul** in the *Find string* field.
 - ♦ For simple case-insensitive character strings there is no need to add quotes (this will be done automatically).
 - ♦ You may specify the string using **C'ABCD'** notation if case-sensitivity is required.
 - ♦ Hex strings may be specified using **X'1234'** notation.
- Enter **1** in the *Limit* field in order to display the first hit only. Since the purpose of running the FIND is only to condense the member selection list for a subsequent search, then establishing the presence of more than one hit would be wasteful.
- Enter **Yes** in the *View report* field in order to display the FIND report. This will allow us to use the **PF6** facility from the report to edit the hit member. Set this option to **No** if you are not interested in the detail.
- Enter **Yes** in the *Condense member list* field so that, for subsequent FSU operations, any member without at least one search match will be deleted from the selection list.

Press **ENTER** to execute the search.

```

SELCOPY/i - Select Input Members - FIND
File Help
Command>
ZZSGFSU9
wS wR
Scroll> Csr
Lines 1-21 of 21

Find string      ==> 'soul'
Limit           ==> 1      Max number of hits per file/member (0=>All)
Scope           ==> CHARS  (CHARS, WORD, PREFIX, SUFFIX)
Start column    ==> 0      (0=>All columns)
End column      ==> 0      (0=>Start column only)
Start record    ==> 1
Number of records ==> 0    (0=>All)
Relational operator ==> EQ   (EQ, NE, GT, GE, LT, LE)
View report     ==> Yes    Display FSU FIND report output
Condense member list ==> Yes  Include only members containing hit(s)
  
```

Figure 96. FSU - Member Selection (FIND)

Condensed Member Selection List

```

SELCPY/i - Edit USER123.SELCFSU.T111618.RPT using USER123.SELCFSU.T111618.x
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
*** Top of Data ***
Record type: Command Fixed(177) Offset=0 Data elements=4
Timestamp Command
<---+---> <---+---> <---+---> <---+---> <---+---> <---+---> <---+--->
2013/02/25 11:16:18 FSU input ( 'USER123.SELCTRN.ZZST5DAT ( TRACK001 TRACK0

Record type: Summary Variable(51,52) Offset=0 Data elements=14
RunType RecordsTot FilesTot Hits RecordsHit FilesHit RemapErrs
<---+---> <---+---> <---+---> <---+---> <---+---> <---+---> <---+--->
FIND 214 4 4 4 4 0

Record type: Hit Variable(47,454) Offset=0 Data elements=13
zMember zRecord
<---+---> <---+---> <---+---> <---+---> <---+---> <---+---> <---+--->
TRACK001 A02159C78BD2DB0800A428IHey, Soul Sister
TRACK003 DE36E78FD678857800C340ASoulmate
TRACK004 47E5BE872D4779C900D175ESoulmate
TRACK005 5524E0900D7B3C7900E143GSoul Stripper
*** End of Data ***

---- Press PF1 for Help, PF6 to edit file at cursor line ----
Se | Line=0 | Col=1 | Alt=0,0;0 | Size=6 | Recl=454 | Fmt=V | Files=1 | Views=0

```

Figure 97. FSU - FIND Report with LIMIT=1

Exit (PF3) from the report (if requested) will return to the **FIND** panel where you may execute further search operations to progressively condense the member list.

Exit (PF3) from the **FIND** panel will return to the condensed member selection list.

Should you wish to **reset** the condensed list, then just overwrite the *Member Mask* input field and press **ENTER**.

```

SELCPY/i - Select Input Members
File Edit Actions Options Utilities Window SwapList Help wS wR Scroll> Csr
Command>
ZZSGFSU2
Select members to be included in the operation. PF6=Select/Deselect ALL
Library DSN: USER123.SELCTRN.ZZST5DAT
Member Mask> *
Use primary commands FIND, ALL/MORE/LESS to condense member list. 4 Rows
Sel Member LastMod Created Cursize Inisize User Alias Of
- <---+---> <---+---> <---+---> <---+---> <---+---> <---+---> <---+--->
S TRACK001 2013/02/21 16:47 2013/02/21 98 98 USER123 0001
S TRACK003 2013/02/21 16:47 2013/02/21 90 90 USER123 0002
S TRACK004 2013/02/21 16:47 2013/02/21 89 89 USER123 0003
S TRACK005 2013/02/21 16:47 2013/02/21 80 80 USER123 0004
*** End of Data ***

```

Figure 98. FSU - Condensed Member Selection List

Condensed Member Search Results

Exit (PF3) will retrain to the main FSU panel, where you can run the original search for the string **"blues"** using your condensed member list.

Expected results are displayed below.

```

SELCPY/i - Edit  USER123.SELCFSU.T112212.RPT using USER123.SELCFSU.T112212.x
File Edit Actions Options Utilities Window SwapList Help  wS wR  Scroll> Csr
Command>
*** Top of Data ***
Record type: Command  Fixed(126) Offset=0 Data elements=4
Timestamp            Command
<---+---1---+---> <---+---1---+---2---+---3---+---4---+---5---+---
2013/02/25 11:22:12 FSU input ( 'USER123.SELCTR.N.ZZST5DAT ( TRACK001 TRACK003 T

Record type: Summary  Variable(51,52) Offset=0 Data elements=14
RunType  RecordsTot  FilesTot  Hits  RecordsHit  FilesHit  RemapErrs
<---+---> <---+---> <---+---> <---+---> <---+---> <---+---> <---+--->
FIND      357          4          3          3          3          0

Record type: Hit  Variable(47,454) Offset=0 Data elements=13
zMember  zRecord
<---+---> <---+---1---+---2---+---3---+---4---+---5---+---6---+---7
TRACK003 EF3024088704CFF500C405GWalking In the Shadow of the Blues
TRACK004 079FF06C1501FB9600D797IRoman Wall Blues
TRACK005 7CB7FD20ADBE19AD00E211GBourgeoisie Blues
*** End of Data ***

---- Press PF1 for Help, PF6 to edit file at cursor line ----
Se | Line=0 | Col=1 | Alt=0,0;0 | Size=5 | Recl=454 | Fmt=V | Files=1 | Views=0

```

Figure 99. FSU - Condensed Member Search Results"