

IN ONE JOB

Prior to having cross reference utilities, programmers had to scan the source code for file or field references. Nowadays, PATHFINDER's object and field. X-ref is a much more efficient way to obtain these references. However, there are always going to be non-object or non-field references that need to be located, such as message ID's, subroutine or procedure names. While IBM's FNDSTRPDM (25=Find string) is a common scan function used by many, PATHFINDER's option "2. Scan source members" (DSPSCNSRC) on the Added Time Savers Menu has features not found in IBM's command that provide additional benefits.

Figure A shows the "Scan Source Member(s)" entry panel. Notice the "Source file" and "Library" parameters allow various values, even "*ALL"! The "Library" parm also allows two PATHFINDER-specific values: "*DOCLIBL", which holds 100 libraries, and "*SRCL", which allows 200 source files/libraries. Imagine searching through two, ten, 200, or ALL source files IN ONE JOB!

Figure A

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DSPSCNSRC                               Scan Source Member(s)

Type choices, press Enter to display.

Source file..... *ALL                   name, generic*, *ALL
Library..... *DOCLIBL                   *LIBL, *DOCLIBL, *ALL, *SRCL...
Source member..... *ALL                  *ALL, generic*, name
Source type..... *ALL                    *ALL, generic*, type

Kind of match..... *IGNORE               *IGNORE, *MATCH

Logic..... *OR                           *OR, *AND

Begin position..... 001                  1 - 80
End position..... 080                    1 - 80

Scan string (F11 for more).....
Scan from date..... *NONE                 *NONE, *CURRENT, date
Scan to date..... *FROM                   *FROM, *CURRENT, date

Command ==> _____
F3=Exit           F4=Prompt           F5=Refresh       F8=Work with
F11=More strings  F13=Submit          F14=Submit panel F24=More keys
  
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The "Scan string" value can be up to 30 characters long, and by pressing F11, up to ten different strings can be entered, IN ONE JOB. The "Scan string" supports the use of wildcards, which are represented by an asterisk (*). If more than one string is entered, and "Logic" is "*OR", the source statement(s) containing ANY true conditions are displayed. If the "Logic" value of "*AND" is used, source statements must contain all strings entered to be displayed. All this, IN ONE JOB. And there is still more ...

The "Scan from date" and "Scan to date" values first check the source member level for a change date meeting your criteria, rather than scanning the contents of all members. Then it will check the source change date field (SRCDAT) in source records for the members that meet the dates entered. This function locates all records in a source member(s) that were changed on a specific date or within a date range. Finding what changes were made during a specific time frame is a cinch! Some sites have implemented this to help track program modifications or use as an audit report.

When run interactively, the source statements containing the requested string(s) are shown for the source file/member being displayed and are highlighted for easy identification. The "Control" value allows windowing and line positioning of the source member being displayed. The "Scan strings" value is input capable so you can change any of the ten strings at any time during the search without having to start over. The "Roll" key displays additional scan strings. "F16=Find forward" locates the next occurrence of the scan string(s) while "F17=Find backward" locates the previous occurrence of the scan string(s). "F19=Start SEU" displays the current source member using SEU in edit mode.

When run in batch (by pressing "F13=Submit" from the entry panel), the default output is a report. The report detail includes the name of the source file, source library, source member and the source statement containing the scan string. The output can also be directed to an outfile by using "F14=Submit panel".

Consider the following scenario: You need to change a user defined code that is hard coded in source and moved to work fields using MOVE, MOVE or EVAL. By outfilting the option you can write a utility to read the outfile and execute the CPYSRCF command to automatically copy all effected source into a development library.

An associated command worth mentioning is the "Work with Scan Source Members" command (WRKSCNSRC), as illustrated in Figure B. The command can be executed from a command line or by pressing "F8=Work with" from the Scan source entry screen. WRKSCNSRC displays a list of source files that meet the selection criteria of the source file, library, source member and source type values. This is an excellent way to locate all occurrences of a source member on the system. We suggest submitting the WRKSCNSRC job when using "*ALL" or a "generic*" in the source file value, along with a library value ranging from a single library up to ALL. Then enter the source member for which you are looking. The source type value is optional. The resulting list will be every source file/library that contains a member with the specified name and type.

Figure B

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Work with Scan Source Members (WRKSCNSRC)                                Level: 2

Type choices, press Enter to display.

Source file..... SRCFILE                > QRPGLSRC
Library.....                               > *ALL
Source member..... SRCMBR                 > AR153R
Source type..... TYPE                     *ALL
Scan strings..... SCAN

                                + for more values

Scan date:                               SCANDATE
  From date.....                          *NONE
  To date.....                             *FROM
Kind of match..... CASE                   *MATCH
Logic..... LOGIC                          *OR
Beginning position..... BEGPOS             001
End position..... ENDPOS                   080
Setup name - DOCLIBL..... DOCL           *DEFAULTS

More...
F3=Exit      F4=Prompt    F5=Refresh    F12=Cancel   F13=How to use this display
F24=More keys

```

"Scan source member(s)" is also available as a user-defined option in both PATHFINDER option files. HAWKEYE/USERPATH is the option file for use in PATHFINDER (see Figure C), and HAWKEYE/USERPDM are options formatted for PDM. The command is "SS" and is very handy in PDM, so just type "SS" instead of 25.

Figure C

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DSPUSROPT                                Work with User-Defined Options

File.....: USERPATH
Library.....: HAWKEYE                      Member.....: USERPATH

Type options, press Enter.
  2=Change    4=Delete    5=Display

Opt Option "Command
SO /* Dsp File Selects/Omits */ HAWKEYE/DSPFILSO FILE (&L/&N)
SS /* Dsp Scan Source Member */ HAWKEYE/DSPSCNSRC SRCFILE (&SL/&SF)
ST /* Dsp File Set */ HAWKEYE/DSPFILSET FILE (&L/&N)
SU /* Dsp File Set Where Used */ HAWKEYE/DSPFILSETU FILE (&L/&N)
U@ /* Dsp Field Where Used */ HAWKEYE/DSPFLDU FIELD (&N)
UA /* Dsp Fld All Files Used */ HAWKEYE/DSPFLDALLU FIELD (&N)
UR /* Dsp REFFLD Where Used */ HAWKEYE/DSPFLDREFU FIELD (&N)
US /* Dsp Field/File Set Used */ HAWKEYE/DSPFLDSETU FIELD (&N)
VI /* ChangeMaster CheckIn */ CHM/CHMHPFCI A('&A') C(&C) F(&F) G(
VL /* ChangeMaster release */ CHM/CHMHPFRL A('&A') C(&C) F(&F) +

Command ==>
F3=Exit      F4=Prompt    F5=Refresh    F6=Create
F9=Retrieve   F12=Cancel   F21=Print list

```

DSPSCNSRC is a very robust option. Statistically it is one of the more popular options in PATHFINDER. It may be the most popular real-time (Non-X-ref) option. Next time you have a need to find a string(s), IN ONE JOB, take a look at "Scan Source". If you would like more detailed information on any area of the package, simply contact us by email at info.hawkinfo.com or call us Monday-Thursday, 7 a.m. to 5 p.m. (MST) and Friday 7 a.m. to 3 p.m., VOICE (970) 498-9000 or FAX (970) 498-9096 at Hawkeye Technical Services.