ONLINE HELP FOR CD-ROM DATABASE SEARCHING

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In December 1986, University of California San Diego's Scripps Institution of Oceanography (SIO) Library began providing the Aquatic Sciences and Fisheries Abstracts compact disk (ASFA CD-ROM) database for public access. Produced by Cambridge Scientific Abstracts, ASFA CD-ROM offers worldwide information on freshwater and marine environments on two disks spanning 1982 to present. With many features familiar to online database searchers, ASFA CD-ROM is similar to Cambridge's other CD-ROM products -- MEDLINE and LIFE SCIENCES COLLECTION. Immediately popular, ASFA CD-ROM imposed a new instructional burden upon the Library's reference staff (1 FTE librarian and 1.5 FTE library assistant). Reduction of this instructional burden through encouragement of unassisted searching was a major goal in the Library's plans for its CD-ROM service.

Point-of-use is the Library's usual mode of instruction. The Library's previous experiences with programmatic instruction have been low response from its busy research clientele of 190 graduate students and 270 academics. Point-of-use instruction for ASFA CD-ROM is time-consuming due to the sophisticated nature of the database and the ASFA CD-ROM search software. With both a menu-driven search mode for beginning searchers and a command-driven search mode for experienced searchers, ASFA CD-ROM represents a considerable body of knowledge to convey to beginning searchers. However, advanced searchers are delighted by the software's sophistication and it rarely fails to impress after the initial learning effort.

Describing ASFA CD-ROM's capabilities is equivalent to listing the library's instructional tasks. In the menu-driven mode, the searcher follows a series of menus to complete a search. In the command-driven mode, the searcher uses a range of commands to complete the search. The usual Boolean search operators "and", "or", and "andnot" are joined by an adjacency operator "within" which distinguishes textual distance between two terms. Sophisticated features like left and right truncation, parentheses-nesting of search terms, and field-specific searching are available. Separate descriptor fields index taxonomy, subject, geographic areas and oceanic regions and search results can be limited by

language and aquatic regimes (marine, freshwater, brackishwater). A search can back-reference previous search results. The output format of the database records can be modified in order to display, print, or download specific fields; for example, the output format can be changed from the full record default to the bibliographic citation, abstract, and language. Search results can be printed or downloaded individually or in their entirety. To avoid rekeyboarding, a complicated search strategy with multiple terms and steps can be saved as a "macro" for subsequent execution against a second ASFA disk. The index of terms in the database can be examined and a history of previous search steps can be reviewed.

The Scripps Library created a detailed printed manual in order to encourage unassisted searching. Covering every facet of both search modes of the ASFA CD-ROM search software, the printed manual is quite long. Cambridge supplied an ASFA CD-ROM manual which suffers from incomplete and inadequate explanation with some of its examples being from the Medline database. The Library created a more explicit manual and it does receive usage. However instructional material in a printed format is of low interest to searchers fascinated with a microcomputer screen.

To stimulate more usage of ASFA CD-ROM instructional material and thus encourage unassisted searching, the Library developed online manuals for both search modes of ASFA CD-ROM. The Library edited its printed manual into separate manuals for each search mode and established them as online manuals resident on the ASFA CD-ROM microcomputer's hard disk. Accessible by a menu selection before the searcher enters the ASFA CD-ROM search software environment, these online manuals receive considerable use -- much more than the printed manual. A "readme" software that SIDEKICK uses for its own online documentation is utilized for browsing of the ASFA CD-ROM manuals line-by-line or page-by-page; in addition, the ASFA CD-ROM online manuals can be printed as individual screens or in their entirety. Cambridge does indeed provide an online manual for its command-driven search mode for experienced searchers but the Library's online manual provides more complete information and explanation. Cambridge does not provide an online manual for its user-friendly menu-driven search mode. However friendly the ASFA CD-ROM menus try to be, inexperienced searchers need assistance. For example, after entry of a search term a window menu queries for the field(s) in which that term is to be searched; a beginning searcher has a limited concept of a

database record field. The Library's and Cambridge's online manuals are long documents and a searcher with specific questions has to scroll through these long documents in order to find and read specific information.

The Library's online manuals, while useful, are external to the ASFA CD-ROM search software environment and cannot be accessed during a CD-ROM search session. The Library quickly determined the desirability of making its online manuals accessible during a CD-ROM search session and making the manuals accessible in small doses. Polaris Rescue software --the focus of this article --provides this capability. Polaris Rescue software is a RAM-resident help file utility that supports the creation and usage of online "help" documentation that pops up and displays at a keystroke. Polaris Rescue supports an online help environment instantly accessible while searching a CD-ROM database or using any application software. Most public or staff microcomputer-based application software have documentation needs either associated with the use of that software or describing local knowledge to be incorporated into the use of that software. Polaris Rescue's help screens can assist in presenting that documentation onscreen in a more palatable form. Microcomputer users do not seem to mind reading small sections of text when displayed onscreen but are oftentimes reluctant to use identical text printed in a little-used and lengthy manual laying alongside the microcomputer.

To access Polaris Rescue's help, the user simultaneously presses a two-key sequence, for example, the ALT key and the H key. Access can be controlled by passwords if desired. Immediately a help screen pops up and displays onscreen. A help screen can comprise textual information, menu selections linked to more text or menus, or a composite of text and menu selections. Help screens can be easily linked to any other help screen. The previous help screen can be displayed by pressing the F9 (function nine) key. Function keys can be assigned to lead directly to specific help screens. A deeply branched system of menus and text screens can be created with virtually no limit on the number of screens. A series of tutorial screens can be created by setting a help screen to display a specified time period before moving on to the next screen. After viewing the help screen(s), the user exits the Polaris Rescue help system by pressing the F10 (function ten) key; the original software's screen display returns.

Polaris Rescue's RAM-resident nature is the key to its ability to pop up and overlay a software that is in use.

Polaris Rescue resides in a dormant state in the microcomputer's temporary working memory --its RAM memory. When Polaris Rescue detects the specified keystrokes (eg ALT and H), it is activated and takes over the screen display. When Polaris Rescue is exited, it relinquishes the screen display to the original software and returns to its dormant state in RAM. Polaris Rescue can be automatically loaded into RAM memory when the microcomputer is switched on or booted by typing a Polaris Rescue command in the microcomputer's AUTOEXEC.BAT file.

Since Polaris Rescue can be used to overlay a software that is in use with a Library-designed system of help screens, CD-ROM database searching is an obvious candidate for Polaris Rescue online help. The body of knowledge for CD-ROM searching is considerable and unwieldy in printed format. Two-page "quickie" guide sheets barely convey sufficient information for basic ASFA CD-ROM searching; a comprehensive manual quickly becomes a magnum opus. The CD-ROM searcher usually wants a small amount of information while in the midst of a search and not information dumped en masse either during or before the search. With Polaris Rescue, an entire document does not have to be scanned to find a small amount of information. Polaris Rescue presents help information by the screenful and menus can be established to quickly access the exact piece of CD-ROM information desired.

The process by which CD-ROM help screens are created with Polaris Rescue is very simple. First, wordprocess the CD-ROM documentation into a series of CD-ROM help screens no longer than 22 lines each. Each CD-ROM help screen is headed with a separate line beginning with two vertical line characters (||) and the screen name. Give each CD-ROM help screen a brief name that is less than or equal to 15 characters in length. Screen names over 15 characters cause Polaris Rescue to crash when screen editing begins! Polaris Rescue's manual does not mention the screen name limit of 15 characters. While Polaris Rescue does have its own bare-bones text editor, write the help screens with wordprocessing software instead of Polaris Rescue. Wordprocessing software has more powerful text-editing features which make screen creation and layout easier, eg right and left justification, line centering, word find-and-replace. When creating the series of CD-ROM help screens, map out on paper how the screens link to each other. Use an an organizational or flow chart approach; for example, start from a main menu screen and branch out from there. Planning ahead for these help screen linkages is extremely important in order to ensure that every

screen is created in advance with easy-to-use wordprocessing software. Leave out a help screen now and it will be extra work to create it with Polaris Rescue's text editor.

Save the wordprocessed CD-ROM help screens as an ASCII text file. An ASCII text file is a plain text file with no specialized wordprocessing coding or extended ASCII characters, eg WordPerfect's DOS Text File. Check the wordprocessing software manual for ASCII or DOS file creation; do not execute a normal file save operation. One exception: normal Wordstar files can be used as is and do not need to be saved in the non-document mode. Use Polaris Rescue to convert (import) the wordprocessed ASCII file into a Polaris Rescue file of help screens. While converting the ASCII file into a Polaris Rescue file, Polaris Rescue looks for the vertical line characters and chops the file at those characters into a series of named CD-ROM help screens. This conversion process expands the ASCII file by about ten times (Polaris Rescue needs a lot of room for subsequent screen editing).

After this conversion (import) into a Polaris Rescue file, use Polaris Rescue's editor for subsequent screen editing. First, assign the opening CD-ROM help screen that will pop up when the CD-ROM searcher presses the specified keys, eg ALT and H. This will usually be an opening menu (Figure 1) that links to other menu screens and informational screens. Mark each menu selection as a "pointer" in order to link it to other CD-ROM help screens. Polaris Rescue calls menu selections "pointers" because they point Polaris Rescue to other help screens. For example, the menu selection MORE INFORMATION ON MENUS? in Figure 1 is linked to a second menu screen (Figure 2) which offers access to more help screens on specific aspects of ASFA menu searching. During CD-ROM usage, pointers display in reverse video highlight as the CD-ROM searcher moves through them with the cursor arrow keys. A reverse video highlight displays onscreen as the opposite of the normal text display -- as a light background surrounding black characters (reversed in Figure 1 for the purpose of publication). The CD-ROM searcher pauses at the desired menu selection (pointer) which will be in reverse video highlight and then presses the "enter" key to select it. Polaris Rescue then displays the help screen linked to that pointer.

After assigning the opening menu screen and its pointers to other help screens, create the pointers or linkages throughout the entire file of help screens. Next use Polaris

Rescue to compress the file of help screens into a small file that will be used by the RAM-resident Polaris Rescue on the CD-ROM microcomputer. Any editing of the help screens after file compression (and there will be plenty) are made on the uncompressed file which then has to be recompressed into a new file. The ASFA file compressed in one minute.

Polaris Rescue can be used to draw single and double lines and also assign text colors on the CD-ROM help screens. Line drawing and screen colors are best added after the entire CD-ROM help system is designed as text screens alone and then given a test run. Seeing a help system in action suggests many modifications; it is easiest to modify text-only screens at first. After a shakedown cruise and the resulting modifications, the extra effort for lines and screen colors can begin since the screens will not undergo much further modification. Polaris Rescue's line drawing is basic, somewhat awkward, and will not automatically insert Tees and Crosses when appropriate. However it does works and the other extended ASCII characters needed for full line drawing (Tees and Crosses) are available by pressing a combination of the ALT key and numeric keys.

Creating a Polaris Rescue help system is actually easier than a casual reading of the Polaris Rescue manual (or maybe this article) suggests. The manual, while explicitly clear, has the difficult task of presenting a distinctly unfamiliar process. After toughing it out through a learning period, Polaris Rescue is very simple to use. Polaris Rescue has menus for using its features and its screen design is sensible making usage quicklly intuitive. Two readings of the manual and about two hours of playtime with a self-created test file of help screens were the author's learning period; discovery of the 15 character limit for screen names consumed 20 minutes of this time.

Polaris Rescue is sold by Polaris Software and runs on COMPAQ, IBM PC, PC-XT, AT or other 100% IBM compatible microcomputers with monochrome or color displays and DOS 2.0 or higher. Version 2 was used for this review. A hard disk is not required and Polaris Rescue is not copy protected. Polaris Software is not kidding about this 100% IBM compatibility criteria. IBM compatibility is primarily a function of a microcomputer's BIOS portion of its DOS operating system (BIOS means Basic Input/Output System). Only IBM has a truly 100% IBM compatible BIOS. Other BIOS manufacturers try to make their BIOS as near IBM-like as possible (with IBM's mistakes, too) to enable the

microcomputers with their BIOS function exactly like an IBM. An IBM-compatible BIOS cannot be an exact copy of IBM's BIOS without infringing on IBM's patents and the degree to which an IBM-compatible BIOS works exactly like an IBM is the measure of its IBM-compatibility. Microsoft FLIGHT SIMULATOR is commonly acknowledged to be a good test of a BIOS' IBM compatibility; Polaris Rescue is another test.

PHOENIX makes a good IBM-compatible BIOS as the author learned (hearsay is that AWARD makes a good BIOS also). The author developed the ASFA CD-ROM help system on a true-blue IBM PC-XT and an AT clone with a PHOENIX BIOS. Polaris Rescue worked perfectly on the IBM and PHOENIX BIOS. When Polaris Rescue was finally mounted on the actual ASFA CD-ROM microcomputer (a PC-XT clone with unknown BIOS), a major glitch appeared onscreen causing stressful minutes. After exiting the Polaris Rescue help system, the ASFA CD-ROM screen display failed to refresh to its former state. Instead a screen display of question marks and triangles appeared -- the revenge of the mystery BIOS of the ASFA CD-ROM IBM-compatible microcomputer. After swapping for another microcomputer in the UCSD Library system (don't tell anyone), the problem was resolved.

Polaris Software has a generous 30-day money-back guarantee which amounts to a free trial period for any IBM-compatibility problems. If using an IBM-compatible microcomputer without a PHOENIX BIOS, try Polaris Rescue quickly upon receipt of the software. Create a small test file or use the test file supplied by Polaris. Try the various Polaris Rescue functions like pointers and line drawing. If it doesn't work quite right, it is best to find out while the software can still be returned. For the less adventurous, Polaris Rescue can be added to the list of justifications for purchasing true-blue equipment.

Another potential problem with Polaris Rescue may be its RAM-resident nature. RAM-resident (also known as TSR "terminate and stay resident") software can occasionally create problems depending on the nature of the software already in use on a microcomputer. Some software (for example, SIDEKICK) are notorious for their intolerance of RAM-resident software. Since RAM-resident software ties up some of the microcomputer's RAM memory, this permanent commitment may not be acceptable to other software. Certain software incuding CD-ROM search software may need as much of the microcomputer's RAM memory as it can get and will not tolerate giving some away to Polaris Rescue. Polaris Rescue

presented no RAM problems for the Scripps Library's ASFA CD-ROM microcomputer. ASFA CD-ROM software requires a minimum 512K RAM memory and Polaris Rescue consumed another 25K RAM. Polaris Rescue is managed by an executable file PR.EXE that is 16K in size and consumed 25K of RAM managing the 41.5K ASFA help screen file. Since the Scripps Library's ASFA CD-ROM microcomputer has 640K RAM, there is more than enough RAM for both ASFA CD-ROM and Polaris Rescue.

Polaris Rescue is sold by Polaris Software, 613 West Valley Parkway, Suite 323, Escondido, California 92025, 1-800-338-5943 or 619-743-7800. Polaris Rescue Version 2 costs $149 plus $6 shipping and handling; a demonstration disk is available for $10. Add California sales tax if California resident. The author thanks Polaris Software for providing a copy of Polaris Rescue for review. When contacting Polaris, please mention this review.