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PUBLICATION SEARCH AND RETRIEVAL SYSTEM

Elizabeth A. Winget

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PUBLICATION SEARCH AND RETRIEVAL SYSTEM

INTRODUCTION

The publication search and retrieval system of the Branch of Atlantic-Gulf of Mexico Geology, U.S. Geological Survey, Woods Hole, Mass., is a procedure for listing and describing branch-sponsored publications. It is designed for maintenance and retrieval by those having limited knowledge of computer languages and programs. Because this branch currently utilizes the Hewlett-Packard HP-1000 computer with RTE-IVB operating system, database entry and maintenance is performed in accordance with the TE-IVB Terminal User's Reference Manual (Hewlett-Packard Company, 1980) and within the constraints of GRASP (Bowen and Botbol, 1975) and WOLF (Evenden, 1978).

DATABASES

As each publication enters the branch review system, it is numbered and recorded in a suspense file for immediate tracking. The information on the suspense card (fig. 1) is transposed to the pertinent databases as changes occur. The cards, which are color-coded according to type, serve as both source and back-up.

The publication is also entered into a log that contains the basic system information: the publication number, surname of first author, date worksheet was sent (and whether or not it was returned), and a simple identifying comment. The log is annotated to confirm correct entry into each of the databases.

		No.
Author:		
Title:		
Rec'd:		
Rev: 1.		
2.	Sent:	Ret'd:
Author:		
Br. Chief:		
TRU:	Dir Appr:	TRU#:
Publisher:		
Deadlines?		

Figure 1. Suspense card maintained for each publication.

- CITATN: 1. Citation number
2. Full text of citation
3. Budget line item
4. Type of publication
5. Project number
-

- SEARCH: 1. Citation number
2. Author(s)
3. Year of publication
4. Type of publication
5. Category
6. Geographical area
7. Minimum latitude
8. Maximum latitude
9. Minimum longitude
10. Maximum longitude
11. Field
12. Topic
13. Quick subject description
-

- STATUS: 1. Citation number
2. Date received in pubs office
3. Reviewer No. 1 - name
4. #1 reviewer - date sent to
5. #1 reviewer - date returned
6. Reviewer No. 2 - name
7. #2 reviewer - date sent to
8. #2 reviewer - date returned
9. Forwarded to author for revision - date
10. Final draft to branch chief - date
11. Final draft to RTRU - date
12. Director's Approval - date
13. RTRU control number
14. Publisher
15. Date submitted
16. Date accepted
-

MONTHLY REPORT: STATUS OF PUBLICATIONS FILE

Full text of publication title as formally cited or referenced, plus current status (in press, TRU, Dir. Appr., etc.) and corresponding citation number used in branch search and retrieval system above. A published citation is eliminated after full, correct citation has been listed once in the report and circulated in hard copy as part of the branch Monthly Report.

Figure 2. Summary of data bases in system.

The publication program comprises four databases (See Summary, fig. 2). Three of them, CITATN, SEARCH, and STATUS, can be linked using GRASP procedures. The fourth is maintained as an addendum to the branch Monthly Report and is used alone as a ready reference for publications currently in progress.

The CITATN, SEARCH, and STATUS databases are updated on a continuing basis and are, at predecided intervals, converted to GRASP (Bowen and Botbol, 1975) and/or transferred to MULTICS (U.S. Geological Survey, 1978b) in order that they may be available for GRASP retrieval throughout the Geological Survey.

CITATN. The simplest of the four databases, and the most frequently accessed, is CITATN (fig. 3). Its five data fields include (a) the citation control number, (b) the full text of the citation, (c) a budget line item, (d) the type of publication, and (e) an appropriate project number. CITATN, like the other GRASP-accessible databases, utilizes a back-slash (\) delimiter to separate the fields within each record and a dollar-sign (\$) to signify the record's end.

```
0402\  
Bunn, A.R., and McGregor, B.A., 1980, Morphology of the  
North Carolina Continental Slope, western North Atlantic,  
shaped by deltaic sedimentation and slumping: Marine  
Geology, v. 37, p. 253-266\E\oj\02806\$\
```

Figure 3. CITATN database entry.

The CITATN file provides accurate reference listings as well as stand-alone information that may be required for summary and progress reports. CITATN also serves as a textual master link from the other databases in this system.

- a. The four-digit citation control number is assigned when the publication first enters the branch review system. It remains the same in all four subsystems, and is entered on the suspense file card and in the log as well.
- b. The reference is given in full U.S. Geological Survey format in accordance with Suggestions to Authors of the Reports of the United States Geological Survey, Sixth Edition (1978a). An exception to this format clarifies the status of not-yet-published manuscripts. In such cases, the date is noted as "19xx" and the citation is followed by a parenthetical note on status, i.e. in press, in review, submitted, etc. Because it further

delineates the conditions of search and thus facilitates retrieval, this is especially useful when citations must be categorized for administrative purposes and reports.

- c. Budget line item notations (R, E, MG, CZ, T, O, X) reflect the program under which the study was funded: (R) resource assessment; (E) environmental assessment; (CZ) coastal zone studies; (T) environmental assessment of frontier areas; (O) multifunded support projects such as computer and administrative services whose funding is shared; and (X) publications written, generally, prior to entrance on duty in the branch and/or without branch funding.
- d. The type of publication is added as a separate field for statistical use. Abbreviations are entered in lower case as abs (abstract), of (open-file report), oj (outside journal), pp (professional paper), circ (circular) or c/circ (contribution to circular), bull (bulletin), map (map), ad (administrative report), th (thesis), and inf (public information brochure). These categories are not broken into subcategories (such as MF, I, GP, etc.) because that information is readily available in the textual citation field.
- e. The project number listed for each citation is the final five digits of the Program and Budget-assigned project number. The entry reflects either the project number of the publication's senior author or the project under which most of the research was performed. The four-digit prefix that identifies the branch has been omitted for ease of entry.

SEARCH. The second database, SEARCH, provides the base for an interactive search of the publications files in accordance with conditions set by the user. To facilitate that search, the SEARCH files (fig. 4) are built primarily on information furnished by the senior author (see Worksheet, fig. 5).

```
0522\Dillon, W P\19xx\oj\marine geology\North Atlantic\+38\+43\75\69.5\sedimentology\shelf history review\$
0522\Oldale, R N\19xx\oj\marine geology\North Atlantic\+38\+43\75\69.5\sedimentology\shelf history review\$
0533\Holmes, C W\1981\of\marine geology\Gulf of Mexico\+24\+26\85\83\stratigraphy\slope\process sediment structure\$
0534\Martin, E A\1981\of\marine geology\geochemistry\other\dating sampling\$
0635\Berryhill, H L\1981\map\marine geology\Gulf of Mexico\+28\+29\98\96\geology\STOCS\history faulting\$
0888\Winget, E A\1981\of\other\computer\data base\$
0904\Poag, C W\1978\oj\marine geology\Atlantic\+50\+58\80\20\stratigraphy\margin\review\$
0904\Valentine, P C\1978\oj\marine geology\Atlantic\+50\+58\80\20\stratigraphy\margin\review\$
```

Figure 4. SEARCH database entries.

- a. The four-digit citation number is assigned by the branch publication office and remains constant for that publication wherever noted.
- b. A separate record is entered for each branch member cited as author or co-author so that the user may search for publications on the basis of authorship alone. If the publication was branch-sponsored but not authored by branch personnel, only the name of the senior author is used.
- c. The date of publication is entered only for the final, published paper. During any stage prior to full publication, "19xx" is entered in lieu of a date. There are no time limits for such a notation, but the manuscript or abstract is generally eliminated from the system if it has not been accepted for publication within a year after director's approval.
- d. The category is assigned by the senior author. It is a reflection of the paper's general thrust and is not necessarily the same as the budget line item used in the CITATN file, although it is generally so.
- e. The area of geographic concern is the name or location of the publication's main study area. If more than one area is emphasized in the publication, the largest common denominator (such as "Atlantic") is used (fig. 4). In very rare instances when two or more areas are each clearly and separately discussed (as, for instance, in a paper comparing in detail the continental margin of one continent with that of another), dual records may be entered for each major

area.

- f. To narrow the search to a specific geographic window, minimum and maximum latitudes and longitudes are entered. These are, in all cases, supplied by the author. If they have not been supplied, the fields are left vacant. Because database search and retrieval is made in accordance with GRASP constraints, the search cannot be run between limits that contain both numeric and alphabetic characters. For that reason, degrees North and East are entered as plus (+) the numeral and degrees South and West are entered as minus (-). Minutes are rounded and entered as decimal additions to the numeral.
- g. The field entry notes the scientific discipline most pertinent to the paper. This is a decision of the senior author.
- h. To narrow the search, a topic of effort is also entered. It is, in general, a reflection of the physical characteristic most descriptive of the study area, i.e., bay, gulf, coastal plain, etc.
- i. The quick field is the only field that is not restricted to one entry. Up to three categories may be requested by the author. These represent briefly the main ideas discussed in the publication and those that the author believes will be most pertinent to a search for that particular reference.

The limit placed on the number of entries in each field is a continuing bone of contention between the authors and system manager. However, while there is no great difficulty in entering as many descriptions as the author may choose, the retrieval becomes a ponderous guessing game unless the retriever is offered a finite number of possibilities within which he can restrict his choice and, thus, locate the desired reference more easily.

REFERENCE WORKSHEET

CITATN No. _____

Reference:

Line Item: _____ Type of pub. _____ Project No. _____*

SEARCH No. _____ Year of publication: _____ Type of publication: _____

*Category: coastal zone, environmental assessment, marine geology, resource assessment, other

*Geographic area: Atlantic, Mid-Atlantic, North Atlantic, South Atlantic, Gulf of Mexico, Caribbean, Great Lakes, Pacific, Africa, Alaska, Mesoamerica, North America, Puerto Rico, other

*Latitude - Minimum _____ Maximum _____
 *Longitude - Minimum _____ Maximum _____ (Indicate as + or - numeral)

*Field: computer geophysics mineralogy sedimentology summary report
 geochemistry geotechnology oceanography stratigraphy other
 geology hydrology paleontology system development N/A

*Topic: bay delta lake OCS shelf other
 caldera estuary margin reef slope N/A
 canyon global nearshore ridge STOCS
 coastal plain gulf ocean rise trench
 coastal zone island offshore river well

*Quick: aquifer data base electronic hydrocarbon review summary
 bathymetry data source faulting hydrography sampling tectonic
 chalk dating fracture zone instrumentation sand trace metals
 clathrate diapir geothermal magnetic sediment transport
 climate drilling glacial morphology seismic
 coring DSRV obs gravity navigation sonar other:
 current earthquake hazard process stability
 chemistry ecology history reconstruction structure _____

STATUS No. _____ Date Received: _____

Reviewer #1: Sent: Returned:
 Reviewer #2: Sent: Returned:

To author for revision: Returned:

To Branch Chief: Returned:

Forwarded to TRU: Dir. Approval:
 TRU Serial No;

Publisher: Submitted:
 Accepted:

Copy in repro files: Copies to repositories:

Figure 5. Worksheet containing database information.

STATUS. The STATUS database (fig. 6) is used for interactive retrieval of information pertaining to the status of a publication during the review process.

0297\050880\Butman\050880\050980\Paul1\050680\050880\050880\051280\051280\051380\052880\R80-442\GSA\053080\18
a b c d e f g h i j k l m n o p q

Figure 6. STATUS database entry.

It is entered as:

- a. the citation number;
- b. the date on which the draft was received in the branch publication office;
- c. the name of the first reviewer;
- d. the date on which the publication was sent to him for review, and
- e. the date on which his review was completed and returned to the publication office;
- f,g,h. similar information on the second peer review;
- i. the date on which both peer and branch editor reviews were returned to the author;
- j. the date on which the final draft and all reviews were forwarded to the branch chief for signature;
- k. the date on which branch chief approval was granted;
- l. the date on which the approved package was forwarded to the Technical Reports Unit for technical editing;
- m. Director's Approval date and
- n. TRU-assigned file number;
- o. the publisher of record;
- p. submittal date (by author), and
- q. date of acceptance.

Status of Publications file. The STATUS database is backed up and commonly replaced for hard-copy referral by the fourth, or Status of Publications file, maintained for use in the branch Monthly Report (fig. 7). This file is updated daily for immediate status referral by means of the RTE-IVB EDITR program (Hewlett-Packard Co., 1980) and a simple character-string search for senior author.

The citations are written in the format of any Survey reference listing, i.e., alphabetically by author, and each is followed by parenthetical status information such as in review, in press, in preparation, etc., and by the bracketed citation number assigned for use in the Search and Retrieval files. After the paper or abstract has been published, the correct citation is entered and circulated with the next report; the reference is then dropped from the file.

This file is reproduced in hard copy and appended to the branch Monthly Report for distribution. It is easily accessible in-house to branch authors, as is the back-up card file maintained in the publications office.

PLEASE CHECK YOUR PUBLICATIONS TO BE SURE THERE ARE NO CORRECTIONS TO STATUS, ETC.

STATUS OF PUBLICATIONS AS OF 12 MAY 1981

- Aaron, John M., Butman, Bradford, Bothner, Michael H., and Hampson, John C., 19xx, U.S. Geological Survey environmental studies on the Continental Shelf and Slope off New England, in Farquhar, O.C., ed, Geotechnology in Massachusetts Symposium volume (in press) [274]
- Ambuter, Bruce C., and Davis, Ray C., 19xx, Data acquisition in remote environments: outside journal (in revision) [289]
- Aubrey, D.G., Twichell, D.C., and Pfirman, S.L., 19xx, Holocene sedimentation off Nauset Inlet, Cape Cod, Mass.: Marine Geology (TRU) [528]
- Ball, M.M., Idris, F.M., Bock, W.D., Martin, R.G., Sylwester, R.E., Bowles, R.M., and Taylor, D., 1980, Explorable structures in Old Bahama Channel, north of Cuba (abs): American Assoc. Petroleum Geologists Bull., n. 64, p. 674 [279]
- Ball, M.M., Harrison, C.G.A., Peter, G., Varchol, D, Chermak, A., Bock, W.D., and Nagle, F., 1980, A partial outline of Caribbean history (abs): 9th Caribbean Conference [280]
- Ball, Mahlon M., Martin, Ray G., Bock, Wayne D., Taylor, David, Sylwester, Richard E., and Bowles, Robert W., 19xx, Multichannel measurements over a possible gas-bearing structure near Cay Sal, Bahamas (abs): American Assoc. Petroleum Geologists, 4/81 (Dir Appr) [399]
- Beach, D.K., and Trumbull, J.V.A., 1980, Marine geology of the Puerto Rico insular shelf, Isla Caja de Muerto area: U.S. Geological Survey Misc. Investigations Series Map I-1265 (in press) [605]

Figure 7. Portion of Status of Publication file appended to branch Monthly Report.

RETRIEVAL DIRECTIONS

All publication databases are maintained on cartridge 444. Each is security coded to prevent inadvertent loss, but all are accessible for reading and printout and three are available for GRASP search and retrieval.

A detailed explanation of the Geologic Retrieval and Synopsis Program (Powen and Botbol, 1975) as adapted to the RTE-IV environment is available in Evenden and Bowen (unpub. administrative report, 1979).

Of the system's 18 supported commands, only eight are needed for interactive search and retrieval within the publications databases:

CO (Condition) initiates the request for retrieval criteria;

LO (Logic) initiates the request for logical expression of the search;

SE (Search) initiates a search of a files based upon the conditions and logic entered by the first two commands;

LI (List) allows the user to select the variables (fields) within the file in which he has an interest and to eliminate the other fields from contention;

FI (File) allows the user to change or reselect a database;

LK (LinK) is used to link master files of different structure;

DU (Dump) will print all information within each of the records selected as a result of the search;

QU (Quit) terminates the program's use during that session. The user will determine whether or not the files created during that session are to be retained by responding appropriately to a prompt for that information.

A ninth command, NA (Names) will identify the fields within the selected file so that the user can be sure of correctly setting his conditions.

The search (SE) and list (LI) commands are the only commands that create new structures; the new files they generate can be used as databases on which additional conditions (CO) and logical (LO) parameters can be set during that same session.

In the examples that follow, the full command word is used for added clarity. GRASP effectively requires only the two-letter abbreviation.

Initiation. GRASP is initiated on the RTE-IV system with a run (RU,GRASP) command. (On MULTICS, once a linkage is established, only a "GRASP" command is needed). To retrieve publication information from this system, the cartridge (444) must be identified; a \emptyset or space, carriage return will satisfy the prompt for a security code. If this cartridge is not specified, the first cartridge containing GRASP files will be substituted.

GRASP will respond to correct entrance with a list of the available databases and request that one of them be chosen (fig. 8). It will then prompt for a command.

```
RU,GRASP
          GRASP
        JULY 31, 1979
ENTER GRASP INDEX CARTRIDGE: 444
ENTER GRASP SECURITY CODE:  $\emptyset$ 
WELCOME TO THE USGS GRASP RETRIEVAL SYSTEM.
AT THE CURRENT TIME THE FOLLOWING DATA BASES ARE AVAILABLE:
CITATN - BIBLIOGRAPHIC REFS, AGOM
SEARCH - SEARCH FOR BIBLIO REFS, AGOM
STATUS - CURRENT STATUS, PUBS IN PROGRESS
BEFORE ANY OF THESE DATA BASES MAY BE ACCESSED,
A DATA BASE FROM THE ABOVE LIST MUST BE SELECTED.
ENTER DATA BASE NAME:  CITATN
```

Figure 8. Initiation of and entry into GRASP.

Condition. In a search for information about citations, the user must first enter the condition (CO) command and then - after prompt A., B., etc. - set the conditions of his search (fig. 9). A space-carriage return reply will terminate the request for further conditions.

Up to 26 logical conditions may be entered using any of seven relationships: EQ (is equal to); LT (is less than); GT (is greater than); LE (is less than or equal to); NE (is not equal to); GE (is greater than or equal to); BE (is between); and CS (contains the string). The last allows the user to specify any character string within an identified field. The CS condition should be unique and must be entered exactly as it appears in the database.

```
ENTER COMMAND: CONDITION
A. TEXT CS Folger,
B. TEXT CS 1979
C. TEXT CS 1980
D.
```

Figure 9. Establishing conditions of search.

Logic. The relationship between conditions is established by the logic (LO) command (fig. 10) and the logical operators:

.A. .OR. .NOT.

Each of these operators must be written exactly that way, bracketed by periods.

```
ENTER COMMAND: LOGIC
ENTER LOGIC: (A.AND.B) .OR. (A.AND.C)
```

Figure 10. Establishing logical relationship.

Search. With the criteria for selecting individual records from the data file established, the search (SE) command is entered, followed on prompt by the input (original file being searched) file name and the user-determined output (result of search) file name (fig. 11).

```
ENTER COMMAND: SEARCH
ENTER INPUT FILE NAME: CITATN
ENTER OUTPUT FILE NAME: DWF
  913 RECORDS OF CITATN HAVE BEEN SEARCHED.
   6 RECORDS HAVE BEEN FOUND WHICH SATISFY REQUEST.
THEY HAVE BEEN STORED IN DWF.
ENTER COMMAND:
```

Figure 11. Initiation and result of SEARCH command.

The publication files are comparatively long; a time delay before response is normal. When GRASP has finished its search, the user will be notified by the system that X number of records have been searched and XX number found that satisfy the conditions of the search. The latter will have been stored in the designated output file where they can be accessed and printed by one of two methods (figs. 12, 13).

Dump. If the dump (DU) command is entered, the full record will be printed on the user's terminal (fig. 12). This method is convenient if all the data within the file, i.e., all fields within each record, are needed. The file name entered after the dump (DU) command should be that of the newly created output file. When prompted to enter the number of records per pause, a space-carriage return entry will print the entire file on the terminal; if a specific number is entered instead, the output will pause after that many lines have been printed. Output is resumed after each such pause by re-entering a space, carriage return.

ENTER COMMAND: DUMP
ENTER NAME OF FILE: DWF
ENTER NUMBER OF RECORDS/PAUSE:

CATEGORY: ENTIRE RECORD

TEXT Butman, B., Noble, M.A., and Folger, D.W., 1979, Long term observations of bottom current and bottom sediment movement on the Mid-Atlantic Continental Shelf: J. Geophysical Research, v. 84, no. C3, p. 1187-1205.

ITEM E
NUMBER 0343
TYPE oj
PROJ 01797

CATEGORY: ENTIRE RECORD

TEXT Folger, D.W., Palmer, H.D., and Slater, R.A., 1979, Two waste disposal sites on the Continental Shelf off the Middle Atlantic states: Observations made from submersibles, in Palmer, H.D., and Gross, M.G., eds, Ocean Dumping and Marine Pollution: Stroudsburg, Pa., Dowden, Hutchinson & Ross, p. 163-184.

ITEM E
NUMBER 0615
TYPE oj

CATEGORY: ENTIRE RECORD

TEXT Folger, D.W., Dillon, W.P., Grow, J.A., Klitgord, K.D., and Schlee, J.S., 1979, Evolution of the Atlantic continental margin of the United States, in Talwani, M., Hay, W., and Ryan, W.B.F., eds, Deep Drilling Results in the Atlantic Ocean: American Geophysical Union, Maurice Ewing Series, Vol. 3, p. 87-108.

ITEM R
NUMBER 0648
TYPE oj

CATEGORY: ENTIRE RECORD

TEXT Butman, B., and Folger, D.W., 1979, An instrument system for long-term sediment transport studies on the Continental Shelf: J. Geophysical Research, v. 84, no. C3, p. 1215-1220.

ITEM E
NUMBER 0683
TYPE oj
PROJ 01797

Figure 12. Portion of output resulting from DUMP command to subset of CITATN file.

List. The dump (DU) command does not have the flexibility of the list (LI) output command, which provides for terminal output of selected fields or subsets rather than the full record (fig. 13). The list (LI) command can also be used to sort the data into ascending or alphabetical order. It does, however, restrict such a sort to the first six characters of the field and prints the result in columnar fashion.

If the list (LI) command is used to restrict the output to a textual information field such as the full citation, the row (R) listing type must be requested. Any other will truncate or garble the citation.

```
ENTER COMMAND: LIST
ENTER NAME OF FILE: DWF
ENTER NUMBER OF RECORDS/PAUSE:
ENTER LISTING TYPE (COLUMN, USER FORMAT, OR ROW): R
ENTER THE LIST OF ITEM NAMES:
1 TEXT
2

TEXT =Butman, B. Noble, M.A., and Folger, D.W., 1979,
      Long term observations of bottom current and bottom
      sediment movement on the Mid-Atlantic Continental
      Shelf: J. Geophysical Research, v. 84, no. C3, p.
      1187-1205.
*****

TEXT =Folger, D.W., Palmer, H.D., and Slater, R.A., 1979,
      Two waste disposal sites on the Continental Shelf
      off the Middle Atlantic states; observations made
      from submersibles, in Palmer, H.D., and Gross, M.C.,
      eds, Ocean Dumping and Marine Pollution: Stroudsburg,
      Pa., Dowden, Hutchinson, & Ross, p. 163-184.
*****

TEXT =Folger, D.W., Dillon, W.P., Grow, J.A., Klitgord, K.
      D., and ...
```

- - - - -

```
ENTER COMMAND: LIST
ENTER NAME OF FILE: DWF
ENTER NUMBER OF RECORDS/PAUSE
ENTER LISTING TYPE (COLUMN, USER FORMAT, OR ROW): C
WOULD YOU LIKE THE OUTPUT TO BE TO DISK? NO
WOULD YOU LIKE OUTPUT SORTED? YES
DO YOU WISH TO ENTER A NEW LIST OF NAMES? YES
ENTER THE LIST OF ITEM NAMES:
1 NUMBER
2

NUMBER
343
615
648
683
685
745
```

Figure 13. File outputs resulting from LIST command.

Retrieval. If the search has been made within the SEARCH database, the full citation can be retrieved from the CITATN database in either of two ways (figs. 14 and 15). The user may request a list (LI) of the citation numbers that have been stored in the output file and then enter the CITATN file to list those numbers as the conditions of his new search, or he may use the link (LK) command to go directly to the CITATN database via file (FI) and list (LI).

Because the logic becomes ponderous if the list is too long, the first (fig. 14) is rarely the fastest method. In practice, numeric conditions are more often used simply to fill in gaps left in the printout because of line noise or interference of one sort or another.

```
ENTER DATA BASE NAME:  CITATN
ENTER COMMAND:  CONDITION
A. NUMBER EQ 0343
B. NUMBER EQ 0615
C. NUMBER EQ 0648
D. NUMBER EQ 0683
E.
```

```
ENTER LOGIC:  A.OR.B.OR.C.OR.D
```

```
ENTER COMMAND:  SEARCH
ENTER INPUT FILE NAME:  CITATN
ENTER OUTPUT FILE NAME:  DAVE
      913 RECORDS OF CITATN HAVE BEEN SEARCHED.
      4 RECORDS HAVE BEEN FOUND WHICH SATISFY REQUEST.
THEY HAVE BEEN STORED IN DAVE
```

```
ENTER COMMAND:  DUMP
ENTER NAME OF FILE:  DAVE
ENTER NUMBER OF RECORDS/PAUSE
```

```
*****
CATEGORY:  ENTIRE RECORD
TEXT      Butman, B., Noble, M.A., and Folger, D.W., 1979,
          Long term observations of bottom current and ...
```

Figure 14. Output resulting from search of CITATN file for specific publication by number only.

Link. In order to link the initial retrieval result with the CITATN file, the list (LI) command is entered, followed by the name of the newly created output file (fig. 15). The user will be prompted for the number of records (and responds with space, carriage return) and the listing type (user format [U] for a numeric linkage). The output must be to disk and the user will be prompted to name the disk data file he wishes created. "NUMBER" is the only entry made on the list of item names desired. Because each citation number identifies the same publication in each of the databases, it is sufficient information with which to locate and retrieve the full record.

After the numeric file (which has been stored on disk and will not appear on the terminal screen) has been created, a file command (FI: change files) will exit the user from the SEARCH database and into the more complete, newly selected database, CITATN (fig. 15).

```
ENTER COMMAND: LIST
ENTER NAME OF FILE: DWF
ENTER NUMBER OF RECORDS/PAUSE:
ENTER LISTING TYPE (COLUMN, USER FORMAT, OR ROW): U
WOULD YOU LIKE OUTPUT TO BE TO DISK? YES
ENTER NAME OF DISK DATA FILE TO BE CREATED: WORK
WOULD YOU LIKE A HEADER RECORD CONTAINING THE ITEM NAMES: NO
ENTER THE LIST OF ITEM NAMES:
1 NUMBER
2

ENTER COMMAND: FILE
ENTER DATABASE NAME: CITATN
```

Figure 15. Using LIST and FILE commands to begin retrieval from second, CITATN, database.

When the user requests a link (LK) between CITATN (the input file name) and the just-named disk data file that contains a list of the appropriate citation numbers, GRASP will create a subset (the linked output file) whose name is determined and entered by the user on prompt (fig. 16). This file may then be output to the terminal using either the dump (DU) or list (LI) methods outlined above (figs. 12, 13).

```
ENTER COMMAND: LINK
ENTER INPUT FILE NAME: CITATN
ENTER THE LIST OF ITEM NAMES:
1 NUMBER
2
...KEY,WO:: 444..K::: 10: 209,/E
ENTER NAME OF FILE CONTAINING LINK KEYS: LINK
HAVE THE KEYS BEEN SORTED? NO
...LINK :: 444..K::: 1: 80,/E
ENTER NAME OF LINKED OUTPUT FILE: FOL
6 RECORDS SELECTED BY LINK
```

Figure 16. Using LINK command to create new subset (FOL).

Termination. GRASP is generally terminated by a quit (QU) command (fig. 17). The user should not request that the temporary files created during the session be saved for future processing inasmuch as the information can be easily reaccessed, and retaining such temporary files will quickly clog the cartridge. These files are always purged by the system manager without notice.

ENTER COMMAND: QUIT

THE FOLLOWING FILES HAVE BEEN CREATED DURING THIS SESSION:

- 1 DWF
- 2 FOL
- 3 DAVE
- 4 LINK

DO YOU WISH TO SAVE ANY OF THEM? NO

:

Figure 17. QUIT command and notice of subset files created during the session.

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