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**DAVID W. TAYLOR NAVAL SHIP
RESEARCH AND DEVELOPMENT CENTER**

Bethesda, Md. 20084



**AUTOMATED TECHNICAL LIBRARY
SYSTEM USERS MANUAL**

by

Shevra L. Martin

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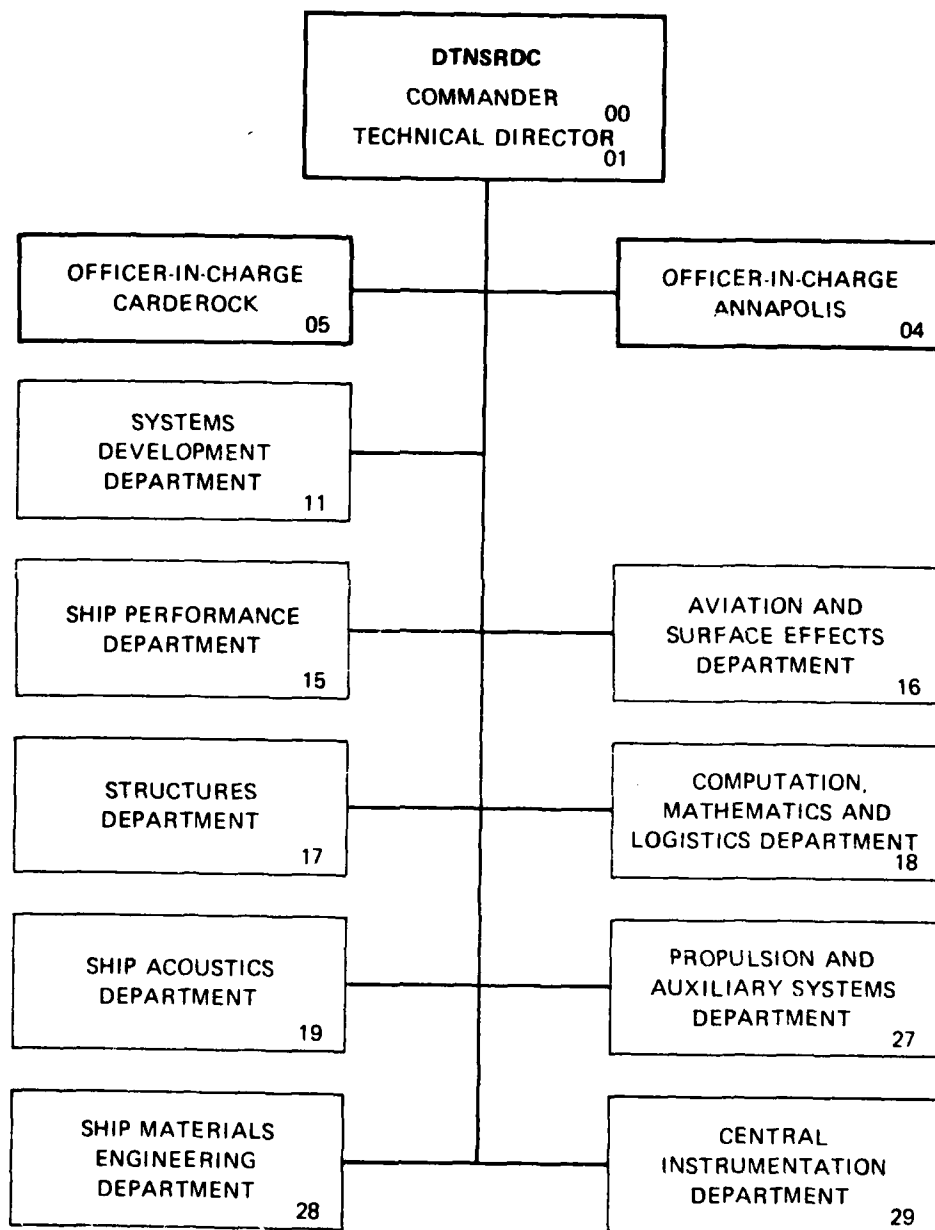
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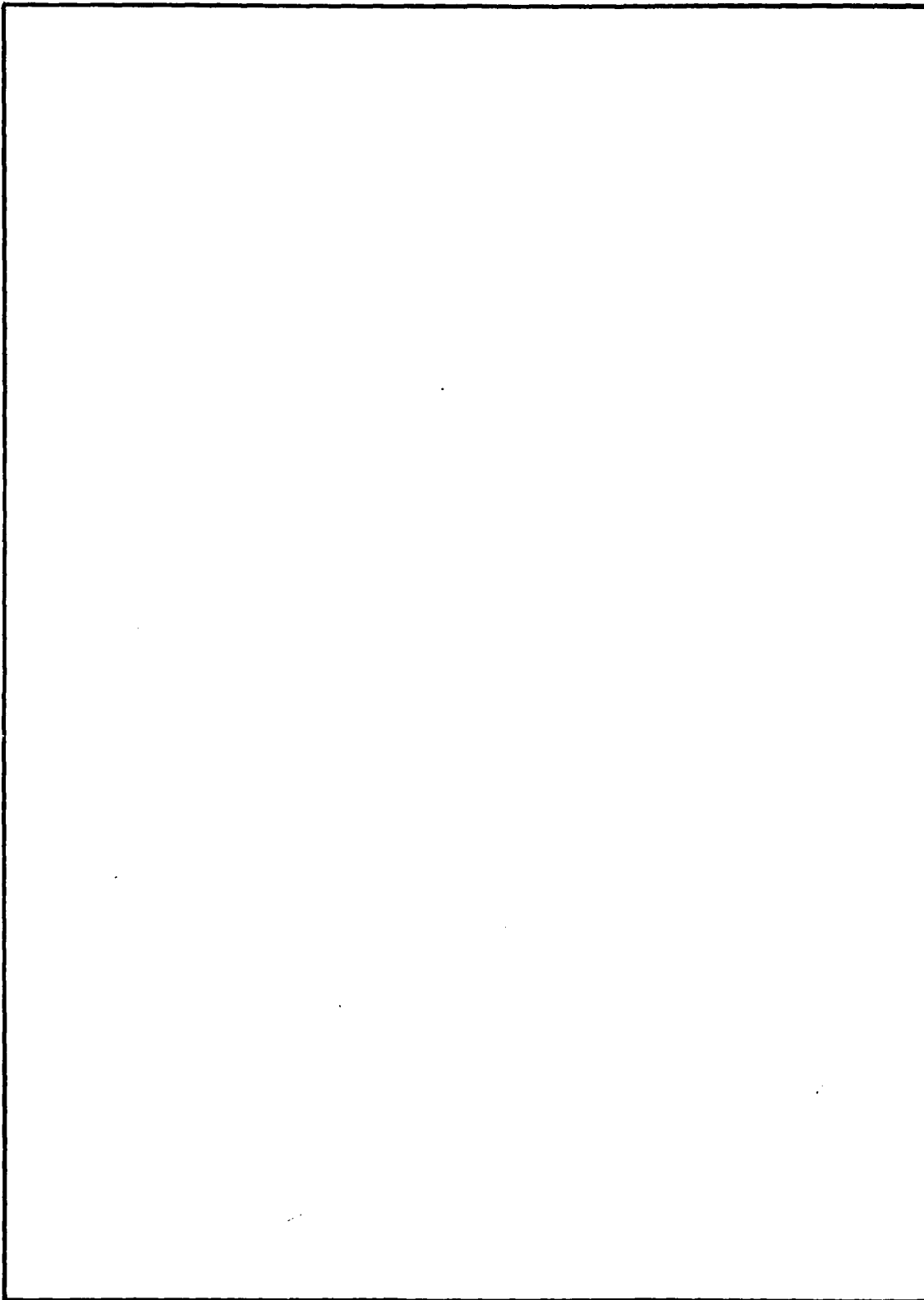
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PREFACE

The purpose of this manual is to acquaint users of the Library system with the scope and make-up of the Library data base, as well as techniques for retrieving information from the data base interactively. While "users" of the system are understood to be Library reference staff members, this manual may be used by Library clientele as well.

This manual contains all the information required for successful reference searching; however, you might want to supplement this manual with the Battelle-authored User's Reference Manual. A convenient wall chart entitled BASIS BASICS: UTILIZING THE LIBRARY SYSTEM is also available for approved TITLES users.

Any constructive comments about this manual, as well as requests for assistance in utilizing the Library system, should be directed to:

The Library Systems Analyst and
Data Base Administrator
Code 6080
David W. Taylor Naval Ship Research and
Development Center
Bethesda, Maryland 20084
Phone: (301) 227-1127

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TABLE OF CONTENTS

1.	Library System Overview	1
1.1	Introduction.	1
1.2	Collections in the Data Base	2
1.3	Publication Types in the Data Base.	2
1.4	Data Base Files and Records	3
1.4.1	Cataloging Records	3
1.4.2	Circulation Records	3
2.	Getting ONLINE	6
2.1	Logging ON	6
2.2	Logging OUT	7
3.	Retrieving Information	7
3.1	Thesaurus.	7
3.1.1	Library Thesaurus Relationships	11
3.2	Index	15
3.2.1	Document Sets	16
3.2.2	FIND Command	18
3.2.3	LOOK Command	19
3.2.3.1	Adjacent Term Lists	20
3.2.3.2	Stem Lists	21
3.2.3.3	Browse Lists	23
3.3	Free-Text Searching and SCAN Command.	24
3.3.1	Word and Character String Matches.	25
3.3.2	Word and Character Distance Searching	26
3.3.3	Existence Tests	27
3.3.4	Equality Tests	27
3.3.5	Relational Tests	27
3.3.6	Intrafield Comparisons	28
3.4	Special Search Modes	28
3.4.1	Universe Search Mode	28
3.4.2	Hierarchical Search Mode.	28
3.5	Sample Search	29
4.	Output	34
4.1	Format Options	34
4.2	SORT Command	36
4.3	DISPLAY Command	37

TABLE OF CONTENTS (CONT.)

4.3.1 Mapped Fields	38
4.4 PRINT Command	40
5. Circulation Searches	42
6. PROFILE	45
6.1 PROFILE Creation	45
6.1.1 SUSPEND Command	45
6.1.2 SAVE Command	46
6.1.2.1 NEW Command	46
6.1.2.2 CREATE Command	47
6.1.3 MAKE Command	47
6.2 PROFILE Parameters	48
6.3 PROFILE Execution	49
6.3.1 RESUME Command	52
6.4 PROFILE File Manipulation	52
6.4.1 PROFILE Listing	52
6.4.2 PROFILE Editing	54
6.4.3 Other Changes	55
7. Self-Help and Miscellaneous Commands	55
7.1 EXPLAIN Command	55
7.2 CLOCK Command	55
7.3 SET Command	56
7.4 LIST Command	56
7.5 XEQ Command	57
7.6 ABORT Command	57
Appendix A-1: Fields in Library Data Base	58
A-2: Fields and Groups	00
A-3: Center Document Types	00

LIST OF FIGURES

Figure 1 – Relationship between System Files	4
Figure 2 – A Typical Cataloging and Circulation Record	5
Figure 3 – Sample LOGIN and LOGOUT Procedure	8
Figure 4 – Indexed Fields	15

LIST OF FIGURES (CONT.)

Figure 5 – Format Options for Listing Literature Search Results	35
Figure 6 – Sample DISPLAY	39
Figure 7 – Sample PRINT	43

Abstract

TITLES (Taylor Information Tie Line for Engineers and Scientists) automates several library functions, including cataloging, reference, circulation, interlibrary loan, shelf list control, and SDI. Output products include Union COM (computer-output-microfiche) catalogs for five library branches, overdue notices, bibliographies, a new accessions bulletin, and a Center reports bibliography. This on-line users guide describes the concepts of a hierarchical thesaurus, generic retrieval, index searching, free-text searching, formatting output displays, PROFILE, and other available on-line search techniques.

Administrative Information

This work was performed under overhead. The principal investigator is Shevra L. Martin, Financial Management Department, David W. Taylor Naval Ship Research and Development Center (DTNSRDC).

1. Library System Overview

1.1 Introduction

Why automate? This is a question asked by many people concerned with the Center's Library. The DTNSRDC Automated Library System is the result of a Systems Analysis, Economic Analysis, Feasibility Study, and User Survey in which the productivity, timeliness, and impact of existing methods and procedures were evaluated in light of the established goals of the Library. Many of the circumstances and problems that led the Library to conduct this operational review are common among technical libraries:

- The exponential rate of growth in the literature of science and technology
- The difficulty in hiring under personnel ceilings
- The drudgery of performing repetitive and rote tasks
- The new interdisciplinary approach to solving today's technical problems, which render traditional classification schemes obsolete
- Redundant data-gathering and storage activities resulting in large and cumbersome filing systems
- Lack of standardization in cataloging practices and indexing terminology
- Requests by individual project offices to organize their private document collections
- Lack of adequate subject access to Center employee-authored literature.

TITLES (Taylor Information Tie Line for Engineers and Scientists) performs a variety of tasks, functions, and activities, of which the most important are:

- Interactive search and retrieval in support of the reference function
- Circulation control
- Integration of the collections of five distinct library branches

- Inventory control
- Production of public catalogs on computer-output-microfiche
- Maintenance of interlibrary loans
- Bibliographic control over Center reports
- Selective dissemination of information
- New accessions announcements

This manual will deal in depth with only one aspect of the Library system: on-line information retrieval.

1.2 Collections in the Data Base

The data base is broad in scope, encompassing the following:

- Library collections from the unclassified libraries at Carderock, Annapolis, and the Aviation and Surface Effects Department, and the classified libraries at Carderock and Annapolis
- The entire body of DTNSRDC-authored literature, including:
 - a. Formal and informal Center reports
 - b. pre-"Center" Carderock and Annapolis reports
 - c. informal reports including test & evaluation reports, technical memoranda, etc.
 - d. papers, articles, presentations, graphics, workshop proceedings
 - e. Contractor reports
 - f. proposals
 - g. planning documentation
 - h. plans and diagrams
- The Navy Energy R&D Office document collection
- Intelligence documentation
- NACA reports
- America/Britain/Canada document exchange reports
- COMTAC publications
- Submarine Control reports collection
- Seaplanes collection
- Patent Counsel collection

1.3 Publication Types in the Data Base

A wide variety of publication types and formats are included:

- Technical reports
- Memoranda
- Books and monographs
- Translations

- Foreign language material
- Theses and dissertations
- Patents
- Conference proceedings and individual papers
- Periodical articles
- Drawings and plans
- Handbooks, dictionaries, reference works
- Microfiche and film
- Serials

Not included are many technical reports and periodical articles from other available data bases, such as NASA/RECON, DDC, and Lockheed Dialog.

1.4 Data Base Files and Records

The Library system is comprised of Library data base files, BASIS* data base management system files and utilities, and other special program files. The data base files consist of head files, index files, a thesaurus file, and a queue file of records in processing. Figure 1 shows the relationship between these files.

The HEAD FILE, or master file, is the file of records that contains all of the information about the Library collection. The HEAD FILE is made up of RECORDS, and the RECORDS are made up of FIELDS. There are two types of RECORDS in the HEAD FILE, cataloging records and circulation records (see Figure 2).

1.4.1 Cataloging Records

A record containing bibliographic information is created for every document in the Library collection. One cataloging record is created for each title, irrespective of the number of copies owned. Every edition of a publication merits a separate record, as does each volume and part. Conference proceedings, as well as their individual relevant papers, are assigned separate cataloging records.

1.4.2 Circulation Records

A circulation record is generated for every circulating Library publication. Once the publication is returned, however, the circulation record is deleted. If several copies of a title are charged out, a circulation record containing due date and copy information is made for every circulating copy. Circulation records are also made for interlibrary loans.

*Battelle's Automated Search Information System of Battelle Columbus Labs.

Cataloging Record

ITEM 1

RECORD ID 365
CALL NUMBER VM 5.A 28G
DATA BASE B
RECORD ENTRY DATE 790104
CATALOGER NUMBER 2
CORPORATE SOURCE NAVAL SHIP RESEARCH AND DEVELOPMENT CENTER
PERSONAL AUTHOR MAIN ENTRY: ELLSWORTH W M
TITLE ADVANCED MARINE VEHICLES CONFERENCE, SAN DIEGO, 1974
PERSONAL AUTHOR ELLSWORTH W M
PUBLICATION DATE 19740200
PAGINATION 12
SERIES NUMBERS AIAA PAPER 74-306
SUPPLEMENTARY NOTE FOR PRIMARY DOCUMENT, SEE VM 5.A 28; SPONSORED BY AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS AND BY SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS.
SHELF LIST CODE M
PUBLISHER AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS
LIBRARY CARDEROCK C/REF
CARDEROCK COPIES 1
LIBRARY ANNAPOLIS AN
ANNAPOLIS COPIES 3
FIELD/GROUP 1320;1321;1322;1323
MAJOR DESCRIPTORS HYDROFOIL CRAFT-STATE OF THE ART; NAVAL RESEARCH
SUBJECT DESCRIPTORS: SHIP AUXILIARY EQUIPMENT; NAVAL VESSELS; HIGH STRENGTH ALLOYS; STAINLESS STEEL; PROPULSION SYSTEMS (MARINE); HYDROFOILS; STRUTS; CONTROL; SHIP STRUCTURAL COMPONENTS
IDENTIFIERS HUDAP (HYDROFOIL UNIVERSAL DIGITAL AUTOPILOT); SH: AGEH 1; SH: PGH 1; SH: PGH 2; SH: FHE 400 (CA); SH: PCH 1; SH: PHM; AL: HY-130; AL: 17-4PH; SH: PT150 (SW); SH: HS DENISON
CENTER DOCUMENT TYPE: PA

Circulation Record

ITEM 1

RECORD ID 400312
DATA BASE B
CIRCULATION CALL NR U021421C1
CATALOG RECORD ID 340
LIBRARY C
BORROWER'S NAME FOLB R
DUE DATE 780315
WAIT LIST HAGEN G R 1560

Figure 2 - A Typical Cataloging and Circulation Record

2. Getting ONLINE

The steps involved in utilizing the Library system on-line are:

- (i) Establishing computer communications
- (ii) Logging on to the Center's computer system
- (iii) Logging on to the Library system
- (iv) Conducting your search session
- (v) Terminating your search session
- (vi) Logging out of the computer system
- (vii) Breaking communications

This section will cover the procedures for all but one of these steps, (iv) conducting your search session, which will be covered in Sections 3 to 6.

2.1 Logging ON

The Library system is presently operational on the Center's CDC 6000 series computer system.

Those who wish to use the Library system must obtain a Computer Center USER NAME and ACCESS NUMBER, as well as a BASIS USER ID, from the Library Data Base Administrator.

STEP 1: Dial one of the following phone numbers from any remote terminal:

	300 BAUD	1200 BAUD
Carderock	227-3000	227-3400
Annapolis	(301) 267-2011	(301) 267-2025

STEP 2: Log on to the computer system:

LOGIN, User Name

or:

LOGIN, User Name, SUP (to "suppress" system bulletin)

STEP 3: Enter your ACCESS NUMBER.

STEP 4: Enter the following after each COMMAND:

COMMAND - ETL,500

COMMAND - SCREEN,80

COMMAND - FETCH,BASIS,BASIS

COMMAND - BASIS,DB=CRMD,ID=your BASIS ID

You are now ready to begin your search session.

2.2 Logging OUT

When finished with your BASIS search session, enter:

END

or:

QUIT

After exiting from BASIS, you must LOGOUT from the computer system by simply entering:

COMMAND-LOGOUT

Now you may disconnect your telephone and switch off your terminal. Figure 3 provides an actual sample LOGIN and LOGOUT.

3. Retrieving Information

3.1 Thesaurus

The key to understanding information retrieval in the Library system is understanding the concept of a THESAURUS. In its simplest form, a thesaurus is a list of terms which may be used to describe a particular aspect of a publication. A thesaurus is important to an information system simply because people – authors, indexers, library clientele, and search analysts – use different terms to denote the same concept. For example, what an author might describe as “atmospheric pollution,” a library user might ask for as “air pollution.” What a Library cataloger indexes under “residual fuels,” a Navy man might look up under “bunker oils.” The thesaurus tells those who are indexing documents and those who are searching for information the proper terms to use.

The Library has created and maintains both on-line and in printed form a two-part Thesaurus for Subjects and Corporate Sources. Both parts are extensive lists of thousands of terms that may be used by Library catalogers in indexing documents for the data base.

To create the corporate source thesaurus, the Library acquired the Defense Documentation Center (DDC) Source Hierarchy List and added records for professional societies, academia, DTNSRDC contractors, and other required corporate authors, as well as a detailed breakdown of the Center's organizational structure.

(User entry is underlined.)

NSRDC 6600 INTERCOM V 4.6
DATE 09/27/79
TIME 10.33.56.
LOGIN,CRSMARTIN,SUP

IIIIIIIIII ENTER ACCESS NUMBER-
COMMAND- ETL,500

COMMAND- SCREEN,80

COMMAND- FETCH,BASIS,BASIS

COMMAND- BASIS,ID=CRAD,DB=CRMD

BASIS 4.0 R15 790420

WELCOME TO THE DTNSRDC LIBRARY DATA BASE
THE LAST UPDATE WAS 790926 AT 124820
ENTER YOUR REQUEST
1/END

DTNSRDC LIBRARY DATA BASE USAGE TERMINATED

GOODBYE
COMMAND- LOGOUT

CPA 2.507 SEC
SS 4.143 SEC
EST. SYSTEM COST \$.58
EST. CONNECT COST \$ 0.50
CONNECT TIME 0 HRS. 3 MIN.
09/27/79 LOGGED OUT AT 10.37.04.

Figure 3 -- Sample LOGIN and LOGOUT Procedure

To create the subject thesaurus, the Library acquired DRIT* on tape, removed all cross-references, modified and expanded subject hierarchies in the disciplines listed below, and then added selected new cross-references, related terms, and scope notes.

Areas Modified in DRIT

- | | |
|---------------------------|----------------------------|
| ● Ship design | ● Acoustics |
| ● Propeller design | ● Materials |
| ● Ship's types | ● Structures |
| ● Fluid dynamics | ● Aerodynamics |
| ● Energy conservation | ● Fuels |
| ● Pollution abatement | ● Marine propulsion plants |
| ● Ships auxiliary systems | |

The Library thesaurus is a special kind of thesaurus because it not only stores permitted terms, but also the terms' relationships to other terms. Section 3.1.1. describes these relationships.

While the thesaurus may be "browsed" on-line or consulted in printed form, it is not necessary to address the thesaurus directly while searching. Several "synonym-switching" relationships from the thesaurus are automatically duplicated in the index. These switching relationships generate messages during a retrieval session that refer users from nonused terms to similar but permitted terms.

"Generic" or "hierarchical" retrieval is also achieved without having to address the thesaurus. When a record is input, the system will automatically index that record against every term defined in the thesaurus as a BROADER TERM (BT) to the assigned term. For example, if a Library indexer assigns the single corporate author "DTNSRDC. Computation and Mathematics Dept," the system will automatically "up-post" the document to appear also under the index entries for "DTNSRDC. Carderock," "Naval Material Command," and "Navy Dept." Likewise, when a user searches on "Fluid Flow," he automatically retrieves records for documents that had been indexed under many specific types of flow.

To see itemized lists of broader and narrower terms, as well as to retrieve lists of related terms, accepted abbreviations, and notes on a term's usage, you may consult the thesaurus on-line directly from the retrieval module by entering the term "BROWSE." To return to the retrieval module, enter "BASIS."

*DDC Retrieval and Indexing Terminology.

Example

1/BROWSE

ENTER TERM
/MARINE PROPULSION PLANTS

MARINE PROPULSION PLANTS
SN USE MARINE PROPULSION FOR GENERAL DISCUSSIONS.
SN FOR SPECIFIC SYSTEMS OR MACHINERY, CONSULT
SN MARINE PROPULSION PLANTS HIERARCHY.
BT MARINE PROPULSION
BT PROPULSION SYSTEMS
UF PROPULSION MACHINERY(MARINE)
UF PROPULSION PLANTS(MARINE)
UF SHIPS SYSTEMS
UF SHIP PROPULSION MACHINERY
NT * MARINE BOILERS
NT * MARINE NUCLEAR PROPULSION PLANTS
NT * PROPULSION AUXILIARIES(MARINE)
NT * PROPULSION UNITS(MARINE)
NT * PROPULSOR SYSTEMS(MARINE)
NT * TRANSMISSION SYSTEMS(MARINE)
RT EQUIPMENT
RT SHIPBOARD PIPING SYSTEMS
RT SHIP ELECTRIC POWER PLANTS

ENTER TERM
/NAVAL ORDNANCE LAB

NAVAL ORDNANCE LAB
SN FOR LOWER ORGANIZATIONAL LEVELS SEE NOL(LOWER ORG
SN LEVEL) EX-NOL. RESEARCH DIV
AB NOL

ENTER TERM
/BASIS

3.1.1 Library Thesaurus Relationships

<u>Symbol</u>	<u>Meaning</u>	<u>Explanation</u>
USE	Use	When a term is followed by an instruction to "USE" another term, it means that the first term ("lead" term) is not used in indexing. USE references indicate either: (1) two terms are synonymous, or (2) only one form of a multiword term is used. For example: 1/PRIME MOVERS USE DE=PROPULSION UNITS (MARINE) 16 ITEMS SAVED AS SET 1 2/BUNKER OILS USE DE=RESIDUAL FUELS 7 ITEMS SAVED AS SET 2 3/HIGH EFFICIENCY USE DE=EFFICIENCY 50 ITEMS SAVED AS SET 3
USE AND	Combine all given terms	The system will automatically retrieve and combine appropriate terms. For example: 4/FUEL STABILITY 175 USE DE=FUELS 71 AND DE=STABILITY 5 ITEMS SAVED AS SET 4 5/HIGH TEMPERATURE GAS TURBINES 74 USE DE=GAS TURBINES 33 AND DE=HIGH TEMPERATURE 7 ITEMS SAVED AS SET 5

Symbol
USE OR

Meaning
Select one or
more of the
following terms

Explanation

For example:

6/ENERGY USAGE

DO YOU MEAN ...

.ITEMS. TERM

A 80 DE=ENERGY CONSUMPTION

B 23 DE=ENERGY DEMAND

PICK LETTERS TO COMBINE

NT

Narrower Term

This identifies a generic or hierarchical relationship between terms which is utilized by the system. All "NT's" are members of the same family as the lead term, but at a lower level. Whenever you enter a search term that has "NT's," you automatically retrieve not only those documents about the selected term, but also documents about any of the terms defined as narrower terms to the selected term.

User entry: 1/fuel storage system

Response includes records on storage of all types of fuels

ENTER TERM
/FUEL STORAGE

FUEL STORAGE

BT STORAGE

NT COAL STORAGE

NT * GAS STORAGE

NT OIL STORAGE

NT PETROLEUM PRODUCTS STORAGE

RT ENERGY STORAGE

RT FUEL TANKS

RT UNDERGROUND STORAGE

BT

Broader Term

This is the reciprocal of the NT relationship. The lead term is a member, at a lower level, of each of the families of broader terms:

Symbol

Meaning

Explanation

ENTER TERM
/GUIDED MISSILE FRIGATES

GUIDED MISSILE FRIGATES

BT FRIGATES
BT GUIDED MISSILE SHIPS
BT NAVAL VESSELS
BT SHIPS

Because the narrower/broader term relationships are "looked up" by the system when new records are input, documents should always be indexed and searched for at the most specific level. The system will automatically "up-post" a record to every term defined as "broader" to the selected term. For example, a report assigned the descriptor "synthetic petroleum" will also appear under its broader terms "synthetic fuels" and "fuels."

RT

Related Term

Related terms suggest other approaches that might be taken in conducting a search. For example:

ENTER TERM
/MARINE BOILERS

MARINE BOILERS

BT BOILERS
BT MARINE PROPULSION PLANTS
BT MARINE PROPULSION
BT PROPULSION SYSTEMS
UF NAVAL BOILERS
UF SHIPS BOILERS
UF SHIP BOILERS
NT FORCED CIRCULATION BOILERS

<u>Symbol</u>	<u>Meaning</u>	<u>Explanation</u>
	NT	ONCE THROUGH BOILERS
	NT	REHEAT BOILERS
	NT	SUPERCHARGED BOILERS
	NT	TWO DRUM BOILERS
	NT	WASTE HEAT BOILERS
	RT	AIR HEATERS
	RT	BOILER CASINGS
	RT	BOILER CONTROLS
	RT	BOILER EFFICIENCY
	RT	ECONOMIZERS
	RT	FURNACES
	RT	OIL BURNERS
	RT	PROPULSION UNITS (MARINE)
	RT	SAFETY VALVES
	RT	SUPERHEATERS

AF Abbreviation for User may enter an acronym or initialism as a shortcut. For example:

ENTER TERM
/NOL

NOL
AF NAVAL ORDNANCE LAB

ENTER TERM
/SSTG

SSTG
AF SHIP SERVICE TURBOGENERATORS

ENTER TERM
/COM

COM
AF COMPUTER OUTPUT MICROFORM

<u>Symbol</u>	<u>Meaning</u>	<u>Explanation</u>
SN	Scope Note	A scope note tells a user how a term was used. For example:

ENTER TERM
/MARINE DIESEL FUELS

MARINE DIESEL FUELS
 SN FOR MARINE DIESEL FUEL
 SN ACCORDING TO MILITARY
 SN SPECIFICATIONS FOR NAVY
 SN USE, USE DIESEL FUEL MARINE.
 BT DIESEL FUELS
 BT ENERGY SOURCES
 BT FOSSIL FUELS
 BT FUELS
 BT FUEL OILS
 BT MATERIALS
 BT OILS
 BT ORGANIC MATERIALS
 BT PETROLEUM PRODUCTS

3.2 Index

On-line retrieval in the Library system is performed either through searching the on-line index or through a "free-text" search of a document set, or by a combination of both methods.

The index is an alphabetical list of key words that is created and updated with each data base update. Only certain data elements that are frequently requested in a reference search are pulled out and added to the index (see Figure 4). To search on other common data elements such as title, author, and report series number, consult the set of printed COM catalogs maintained by the Library (or free-text search nonindexed fields).

Figure 4 — Indexed Fields

<u>Field No.</u>	<u>Search Mnemonic</u>	<u>Name</u>
1	ID	Record ID
4	RED	Record entry date
7	CS	Corporate source
13	PD	Publication date
18	SL	Shelf list code
22	LC	Carderock ownership

Figure 4 – Indexed Fields (continued)

<u>Field No.</u>	<u>Search Mnemonic</u>	<u>Name</u>
24	LAN	Annapolis ownership
28	FG	Field/group (broad subject area)
29	DE (for Retrieval) MDE (for SORT and DISPLAY)	Major descriptors
30	DE	Specific descriptors
31	DE (for Retrieval) IDT (for SORT and DISPLAY)	Identifiers (open-ended terms)
32	TYP	Center document type
33	WU	Work unit number
36	RD	Reclassification date
46	CCN	Circulation call number
48	CRS	Corresponding cataloging record number for circulation records
49	LIB	Circulating library
51	BR	Borrower's name and code
53	DD	Due date
55	ILL	Interlibrary loan
61	LS	Lost

3.2.1 Document Sets

In order to conduct a literature search, one generally creates "document sets" and then combines these sets using Boolean expressions. To create a document set through an index search, enter the desired index term preceded by its field mnemonic and an "equal" sign:

Field Mnemonic = Value

Example

8/BR=COHEN S L

64 ITEMS SAVED AS SET 8
9/FG=9001

328 ITEMS SAVED AS SET 9

It is not necessary to precede subject queries (subjects include major descriptors, specific descriptors, and identifiers) with a field mnemonic. You may simply enter the field value.

Example

10/FLUID FLOW

115 ITEMS SAVED AS SET 10
11/ENGINE EXHAUST

2 ITEMS SAVED AS SET 11

In order to provide more efficient retrieval, certain fields are indexed according to predefined numeric ranges. Ranged fields include record ID (ID), Record Entry Date (RED), Publication Date (PD), Reclassification Date (RD), and Due Date (DD). Ranged fields may be searched by using the following relational operators:

EQ, IS,=	- EQUAL
GT	- Greater Than
LT	- Less Than
GE	- Greater Than or Equal to
LE	- Less Than or Equal to
BT,/	- Between, endpoints included
BX	- Between, endpoints excluded

To search a ranged field, enter the field value preceded by its search mnemonic and a relational operator:

Field Mnemonic Relational Operator Field Value

Example

12/PD GE 19790000

213 ITEMS SAVED AS SET 12
13/ID 1/399999

1739 ITEMS SAVED AS SET 13
14/DD LT 790815
111 ITEMS SAVED AS SET 14

After creating document sets by searching on desired parameters, sets may be combined using BOOLEAN expressions:

<u>Expression</u>	<u>Abbreviation</u>	<u>Interpretation</u>
AND	A	Both one and the other
OR	O	One or the other or both
AND NOT	AN	One and not the other

To combine sets, enclose all Boolean statements, including embedded statements, in parentheses:

(document set no. Boolean Expression document set no.)

Example

```
1/SHIPS
    279 ITEMS SAVED AS SET 1
2/CS=NAVY DEPT

    341 ITEMS SAVED AS SET 2
3/CS=COAST GUARD

    8 ITEMS SAVED AS SET 3
4/PD GE 19770000

    1016 ITEMS SAVED AS SET 4
5/(1 AND (2 OR 3) AND 4)

    85 ITEMS SAVED AS SET 5
```

The resulting set from the above search consists of titles on ships published by either the Navy Dept. or Coast Guard during or later than 1977.

3.2.2 FIND Command

The FIND command allows a searcher to "stack" multiple commands on a single line.

Example

```
6/FIND 3      (retrieves document set 3)

*      8      6/  3
7/FIND NAVAL VESSELS AND PD GT 19760000

*      164     7/  NAVAL VESSELS
*      1094    8/  PD GT 19760000
*      115     9/  NAVAL VESSELS AND PD GT 19760000
```

To combine more than one Boolean expression in a FIND statement, use parentheses to avoid confusion.

Example

```
10/FIND(FG=1315 AND (FG=1320 OR SHIPS) AND PD GE 19720000)

*      305     10/  FG=1315
*      122     11/  FG=1320
*      279     12/  SHIPS
*      1526    13/  PD GE 19720000
```

If a lengthy FIND statement exceeds a terminal line, use + followed by a carriage return and continue on the next line.

Example

(user input underlined)

16/FIND CS=ENERGY DEPT* AND +

FIND...FG=9001

```
*      65   16/  CS=ENERGY DEPT (  4   TERMS COMBINED)
*     328   17/  FG=9001
*      48   18/  CS=ENERGY DEPT* AND  FG=9001
```

Sometimes you are only interested in seeing the final results of a FIND statement without the step-by-step interim results. If this is the case, append the following to your FIND statement:

END NOLIST

Example

19/FIND CS=ENERGY DEPT* AND FG=9001 END NOLIST

```
*      48   21/  CS=ENERGY DEPT* AND FG=9001 END NOLIST
```

3.2.3 LOOK Command

Many times we do not know the proper form for entering a search term (field value). In a card catalog, it is possible to "thumb" through the cards at the approximate alphabetic location of the desired term. In the Library system it is not required for a searcher to know the precise format and spelling of a desired term. Remember that the thesaurus provides the index with a "synonym-switching" capability which directs you from an incorrect term to the preferred term with a message to USE, USE AND, or USE OR.

Occasionally, however, the system does not switch a user to a correct term.

Example

22/SWATH

NO SUCH TERM. ENTER TERM* FOR ADJACENT TERMS.
0 ITEMS SAVED AS SET 22

In these cases, it would be helpful to browse through the on-line index to see how terms were entered, as well as to see other terms with the same stem.

The LOOK command is used to display terms lists from the data base index. Three types of lists can be generated:

- Adjacent Term Lists
- Stem Lists
- Browse Lists

3.2.3.1 Adjacent Term Lists

An adjacent term list may be generated to display a list of terms from the index that is alphabetically adjacent to the user-supplied term. To create such a list, enter LOOK, field mnemonic, an "equal" sign, and the field value. For subjects, enter only LOOK and the field value.

Example

23/LOOK SWATH

```
. ITEMS.      TERMS
A         1    DE=SWARD MACHINE
B         1    DE=SWASH
C        50    DE=SWASH (SMALL WATERPLANE AREA SINGLE HULL)

                USE DE=HIGH PERFORMANCE SHIPS
***** YOUR TERM *****
D         6    DE=SWATH SHIPS
E         1    DE=SWATH 2
F         1    DE=SWATH 3
MORE TERMS ARE AVAILABLE
PICK LETTERS TO COMBINE
```

Three terms above and below your term will be displayed from the index. Your possible responses are:

- (i) ALL
- (ii) Select letters or range of letters
- (iii) MORE

In order to receive a longer display of adjacent terms, enter the desired number of terms in parentheses after the LOOK command. To receive a larger display of adjacents for your entire terminal session, use the SET command before the LOOK command using the form:

SET ADJACENTS TO number

```
Example      H         0    DE=PROPELLER BLADE CAVITATION NOISE
                4    USE DE=CAVITATION NOISE
                1    AND DE=PROPELLER CAVITATION
              I         0    DE=PROPELLER BLADE EROSION
                3    USE DE=EROSION
                16   AND DE=PROPELLER BLADES
              J        16   DE=PROPELLER BLADES
              K         7    DE=PROPELLER BLADES (MARINE)
              L         2    DE=PROPELLER BOSSES
                USE DE=PROPELLER HUBS
MORE TERMS ARE AVAILABLE
PICK LETTERS TO COMBINE
```

23/LOOK(10)ACOUSTIC

.ITEMS.	TERMS
A	1 DE=ACETONES
B	1 DE=ACETYLENE
C	0 DE=ACID NUMBER USE DE=SAPONIFICATION NUMBER
D	7 DE=ACIDS
E	1 DE=ACLS (AIR CUSHION LANDING SYSTEMS)
***** YOUR TERM *****	
F	3 DE=ACOUSTIC ABSORPTION
G	8 DE=ACOUSTIC ARRAYS
H	1 DE=ACOUSTIC BUOYS USE DE=SONOBUOYS
I	1 DE=ACOUSTIC CAMOUFLAGE USE DE=ACOUSTIC COUNTERMEASURES
J	5 DE=ACOUSTIC COATINGS

MORE TERMS ARE AVAILABLE

PICK LETTERS TO COMBINE

23/SET ADJACENTS TO 12

23/LOOK PROPELLER

.ITEMS.	TERMS
A	0 DE=PROPAGATION RATE 22 USE DE=PROPAGATION 17 AND DE=RATES
B	1 DE=PROPAGATION VELOCITIES 22 USE DE=PROPAGATION 48 AND DE=VELOCITY
C	3 DE=PROPANE
D	0 DE=PROPELLANT BINDERS 0 USE DE=BINDERS 7 AND DE=PROPELLANTS
E	0 DE=PROPELLANT STORAGE USE DE=STORABLE ROCKET PROPELLANTS
F	7 DE=PROPELLANTS
***** YOUR TERM *****	
G	3 DE=PROPELLER ALLOYS 99 USE DE=ALLOYS 59 AND DE=PROPELLERS

3.2.3.2 Stem Lists

By entering part of a search term followed by an asterisk, the system will display terms from the index with that common stem. The LOOK command preceding the stem is optional. A maximum of 26 terms may be displayed in a stem list. To reduce the default of 26 terms to a list, enter either:

Search term* number

or:

SET TERMS TO number

Example

1/CS=DT*

.ITEMS.	TERMS
A 2	CS=DTMB. ACOUSTICS AND VIBRATION LAB
B 2	CS=DTMB. AERODYNAMICS DEPT
C 2	CS=DTMB. AERODYNAMICS LAB
D 1	CS=DTMB. AEROMECHANICS LAB
E 3	CS=DTMB. APPLIED MATHEMATICS LAB
F 4	CS=DTMB. HYDROMECHANICS LAB
G 5	CS=DTMB. STRUCTURAL MECHANICS LAB
H 177	CS=DTNSRDC
	USE CS=DAVID W TAYLOR NAVAL SHIP RES AND DEV CENTER
I 4	CS=DTNSRDC. AVIATION AND SURFACE EFFECTS DEPT
J 4	CS=DTNSRDC. COMP MATH AND LOGISTICS DEPT
K 4	CS=DTNSRDC. COMPUTATION AND MATHEMATICS DEPT
L 8	CS=DTNSRDC. ENERGY R/D OFFICE
M 7	CS=DTNSRDC. MATERIALS DEPT
N 22	CS=DTNSRDC. PROPULSION AND AUXILIARY SYS DEPT
O 6	CS=DTNSRDC. SHIP ACOUSTICS DEPT
P 8	CS=DTNSRDC. SHIP MATERIALS ENGINEERING DEPT
Q 9	CS=DTNSRDC. SHIP PERFORMANCE DEPT
R 8	CS=DTNSRDC. STRUCTURES DEPT
S 1	CS=DTNSRDC. SYSTEMS DEVELOPMENT DEPT
T 1	CS=DTNSRDC. UNDERWATER EXPLOSIONS RESEARCH DIV

END OF TERMS WITH YOUR STEM

PICK LETTERS TO COMBINE

1/SET TERMS TO 5

1/CS=DT*

.ITEMS.	TERMS
A 2	CS=DTMB. ACOUSTICS AND VIBRATION LAB
B 2	CS=DTMB. AERODYNAMICS DEPT
C 2	CS=DTMB. AERODYNAMICS LAB
D 1	CS=DTMB. AEROMECHANICS LAB
E 3	CS=DTMB. APPLIED MATHEMATICS LAB

MORE TERMS ARE AVAILABLE

PICK LETTERS TO COMBINE

To retrieve all documents with a common stem without first displaying and selecting from a stem list, enter ALL after the asterisk.

Example

with stem list

2/WELD*

.ITEMS.	TERMS
A 6	DE=WELD JOINTS
	USE DE=WELDED JOINTS
B 1	DE=WELD METAL
C 1	DE=WELDABILITY

D 6 DE=WELDED JOINTS
 E 24 DE=WELDING
 F 1 DE=WELDING POSITION
 G 10 DE=WELDS
 END OF TERMS WITH YOUR STEM
 PICK LETTERS TO COMBINE

without stem list

2/WELD*ALL

7 TERMS WITH YOUR STEM WERE COMBINED
 30 ITEMS SAVED AS SET 2

3.2.3.3 Browse Lists

Index browsing operates exactly like stem selection, except that it will not stop when the common prefix is exhausted, but will continue until the requested number of index terms has been displayed.

Example

3/LOOK COMBUST**

	.ITEMS.	TERM
A	3	DE=COMBUSTIBILITY
		USE DE=FLAMMABILITY
B	26	DE=COMBUSTION
C	7	DE=COMBUSTION CHAMBERS
D	1	DE=COMBUSTION DEPOSITS
E	6	DE=COMBUSTION EFFICIENCY
F	1	DE=COMBUSTION MODIFIERS
	13	USE DE=ADDITIVES
	26	AND DE=COMBUSTION
G	1	DE=COMBUSTORS
H	1	DE=COMDAC (COMMAND, DISPLAY AND CONTROL SYSTEM)
I	1	DE=COMMAND GUIDANCE
J	1	DE=COMMERCIAL APPLICATIONS
K	1	DE=COMMERCIAL AVIATION
L	2	DE=COMMERCIAL EQUIPMENT
M	1	DE=COMMERCIAL FISHING
N	15	DE=COMMERCIAL SHIPS
		USE DE=MERCHANT VESSELS
O	1	DE=COMMERCIAL W GRADED ENGINE OILS
P	4	DE=COMMODITIES
Q	34	DE=COMMUNICATION AND RADIO SYSTEMS

R	8	DE=COMMUNICATION EQUIPMENT
S	3	DE=COMMUNICATION SATELLITES
T	1	DE=COMMUNICATIONS CHANNELS
		USE DE=MULTICHANNEL COMMUNICATIONS
U	1	DE=COMMUNICATIONS CIRCUITS
		USE DE=TELECOMMUNICATION CIRCUITS
V	4	DE=COMMUNICATIONS NETWORKS
W	1	DE=COMMUNICATIONS TERMINALS
X	100	DE=COMMUNIST COUNTRIES
Y	4	DE=COMMUNITIES
Z	1	DE=COMPARATIVE STUDIES

MORE TERMS ARE AVAILABLE
PICK LETTERS TO COMBINE

3.3 Free-Text Searching and SCAN Command

Most search requests will be satisfied with searches through the data base index. This is an extremely efficient method since it need not look at actual data records. There are some drawbacks to this method, however:

- (1) Searches can only be satisfied if the document had been indexed by a Library cataloger under the specific search term; that is, the cataloger must have known *ahead of time* that a search would be required for this term. In an R&D environment, this is extremely difficult.
- (2) Terms that are infrequently searched must be kept in the index even if rarely used, creating additional storage overhead.
- (3) A search might be required on one of the data elements not picked up for indexing at all, such as limiting a search by number of pages or by personal author.

A sequential search which looks at the actual bibliographic records in the head file may be used to overcome these drawbacks. Scanning the words in titles of technical documents is a very rich source of information.

The SCAN command is used to perform a "free-text" search on a document set and is used when direct index searches do not provide sufficiently specific results.

Since SCAN scans a document set, the first step in any free-text search is to form a document set with a regular index search. If a document set is not cited in a SCAN command, the last set formed will be used. Therefore, one frequently begins a free-text search by "bringing down" the desired document set so that it immediately precedes the SCAN command. This can be accomplished with the FIND command.

Example

```
FIND 7
SCAN Ti TRIDENT
```

All the tests cited in a SCAN statement will be performed on one pass over a document set. For the sake of efficiency, all desired tests on a specific set should be entered in one SCAN command. If you do not want to combine the tests until seeing the results of the SCAN, connect the tests with the word ALSO instead of with a BOOLEAN expression.

Example

SCAN FG(1) PR ALSO IDT TRIDENT ALSO CS=NAVY*

A SCAN statement may total 1000 characters. Continue terminal lines with a +. A search value should be put in quotes if it conflicts with a reserved word or symbol.

Example

SCAN TI "BASIS"

or

SCAN TI "COMMUNICATIONS AND RADIO EQUIPMENT" AND RED +
SCAN. . . 19790815/19790912

3.3.1 Word and Character String Matching

In its simplest form, the SCAN command may be used to search for a given word or character string embedded anywhere in a field. For example,

SCAN 8 TI ENERGY

will cause BASIS to search the TI (title) field in all records belonging to set 8, putting the records that have the word ENERGY in their titles into the resulting set.

Several fields can be scanned at once. For example,

SCAN TI,NT ENERGY CONSERVATION

will cause BASIS to search the TITLE and NOTE fields in all records belonging to the last set for the string ENERGY CONSERVATION. More than one string can be searched for by entering each string separated from the next by a comma.

SCAN TI COAL,GAS

will cause the TI field to be scanned for the word COAL followed later by the word GAS.

One can ensure that multiple words occur in the same sentence by entering a request using the SS operator.

SCAN TI SS COAL,GAS

will cause the TI field to be scanned for the word COAL followed by GAS in the same sentence.

SCAN AU(2) JONES W E

scans the second occurrence only of the author field.

SCAN TI TOXI*

will scan the title field for any word starting with TOXI, such as Toxicology, Toxicity, Toxic, etc. This is equivalent to:

SCAN TI TOXI*ALL

The open character "*" lets a user perform suffix and infix searches as well as prefix (stem) searches. Use the form:

SCAN TI PRE*, *SUF, IN*FIX

Example

SCAN TI,NT COAL,*TION

would find records in which the word "COAL" was followed by a word ending with ". . .TION," such as "Coal Liquefaction" and "Coal Gasification."

Other "open" characters are:

- * matches any number of characters of any kind
- @ matches any letter (A to Z)
- ! matches any digit (0 to 9)
- \$ matches any letter or digit
- matches any non alpha-numeric character
- ? matches any character.

Examples

SCAN CN=@!!!	The call number must be one letter followed by 3 digits
SCAN DE CON@@	The DE field must contain a word starting with "CON" followed by exactly two more letters
SCAN IDT 12!!!	The identifier field must contain a word that is a number from 12000 to 12999
SCAN NT_Sponsored by_	The note field must contain the word phrase "sponsored by"

3.2.2. Word and Character Distance Searching

The following words and symbols may be used to specify distances between desired words:

INCLUDES	Includes the words or strings
INC	Includes the words or strings
SS	Includes the words or strings in the same sentence
SF	Includes the words or strings in the same field
W=n	The words must be n words apart
W<n	The words must be <n words apart
W>n	The words must be >n words apart
ADJ	The words must be 0 words apart
C=n	The words or strings must be n characters apart
C<n	The words or strings must be <n characters apart
C>n	The words or strings must be >n characters apart

Examples

SCAN TI ENERGY ADJ CONSERVATION

"Energy" must be immediately followed by "Conservation"

SCAN TI,NT,SS COAL<5 GAS* W>4+
SCAN. . .PROJECT

"Coal" must be followed within five words by a word starting with "Gas. . ." followed at least four words later by "Project"

SCAN CS A C=12 B<10C

The corporate source field must contain a word with an "A" followed by any 12 characters, then a "B," and within 10 characters a "C."

3.3.3. Existence Tests

You may search for the presence or absence of a field or a particular occurrence of a field.

Examples

SCAN FG(1) PR

Tests if the first occurrence of the field/group field is present

SCAN DD AB

Tests if the due date field is absent, indicating an indefinite loan

SCAN LS PR

Tests if the lost field is present

3.3.4. Equality Tests

An equality test checks to see if the contents of a field or subfield are exactly the same as a user-supplied phrase. This differs from the simple SCAN command, which tests to see if the user-supplied phrase occurs anywhere in a given field or subfield.

Examples

SCAN AU=JONES E A

Checks if the entire contents of the AU field is "JONES E A"

SCAN AU EQ JONES*

Checks if the AU field starts with "Jones. . ."

SCAN AU(*)NE Jones E A

Checks if any occurrence of the AU field starts with something other than "Jones E A"

3.3.5. Relational Tests

This uses the relational operators in the SCAN command.

Examples

SCAN PP LT 100

Are there fewer than 100 pages

SCAN FG(1) GE 0800

Is the first occurrence of the field group field a number that is greater than or equal to 0800.

3.3.6 Intrafield Comparisons

You may compare the contents of two fields using a relational operator or an equality test. In order to differentiate between a field mnemonic and a character string, precede the field mnemonic that may cause confusion with a pound sign "#".

SCAN CS(*) = IDT

will scan the corporate source field for any element that is equal to "IDT".

SCAN CS(*) = #IDT(*)

will scan the corporate source field for any element that is the same as any element in the identifier field.

Examples

SCAN RED GE #RD

Is the record entry date greater than or equal to the reclassification date

SCAN SE=#CN

Is the report number the same as the call number

3.4 Special Search Modes

3.4.1 Universe Search Mode

It is sometimes useful to limit your search to a portion of the data base. For example, if you were interested in work sponsored or performed by the Navy, you would form a set of all Navy-authored reports and declare that set to be universe. Each set selected thereafter will be effectively ANDed with the universe. Use the form:

SET UNIV(ERSE) = document set no.

To "turn off" the universe:

SET UNIV OFF

3/CS=NAVY DEPT

341 ITEMS SAVED AS SET 3
4/SET UNIV=3

4/ENERGY CONSERVATION

25 ITEMS SAVED AS SET 4
IN YOUR DATA BASE SUBSET, LINE=3

3.4.2 Hierarchical Search Mode

This mode limits the "universe" of a search to the last set of documents selected, so that the universe gets smaller and smaller with each selection.

Use the form:

SET HIER = document set no.

or

SET HIER ON (defaults to last set formed)

To "turn off," use the form:

SET HIER OFF

To see the "status" of special search modes, use the form:

LIST STATUS

Example

5/SET HIER ON

5/LIST STATUS

ON-LINE LINE LENGTH	80
OFF-LINE LINE LENGTH	80
INDENTATION	5
SEARCH SUBSET (UNIV)	OFF
HIERARCHICAL SEARCHING MODE	ON
SEQ SEARCH WARNING MESSAGE	OFF
PAUSE COUNT	1000000
ADJACENT TERMS	6
USAGE OF LINKS	OFF
USAGE OF PAGING	ON
SHOW ITEM COUNT	ON
SHOW SEQUENCE NUMBERS	OFF
SHOW FIELD NUMBERS	OFF
SHOW FIELD HEADINGS	ON
SHOW FIELD UNITS	OFF
DEBUG	OFF
SUPPRESS UNIV IN TERM LISTS	OFF
USE DEFINED VARIABLE VALUE	OFF

3.5 Sample Search (on "Propulsion Plant Efficiency")

1/BROWSE

(enter the Thesaurus module)

/ENTER TERM

/GAS TURBINES

GAS TURBINES

BT ENGINES

BT TURBINES

BT TURBOMACHINERY

UF INDUSTRIAL GAS TURBINES
UF SMALL GAS TURBINE
NT * MARINE GAS TURBINES

ENTER TERM
/MARINE GAS TURBINES

MARINE GAS TURBINES
BT ENGINES
BT GAS TURBINES
BT TURBINES
BT TURBOMACHINERY
UF SHIP TURBINES
NT AUXILIARY GAS TURBINES(MARINE)
NT PROPULSION GAS TURBINES(MARINE)

ENTER TERM
/MARINE STEAM TURBINES

MARINE STEAM TURBINES
BT STEAM TURBINES
BT TURBINES
BT TURBOMACHINERY
UF SHIP TURBINES
NT * AUXILIARY STEAM TURBINES(MARINE)
NT PROPULSION STEAM TURBINES(MARINE)

("*" means term
has narrower
terms still)

ENTER TERM
/AUXILIARY STEAM TURBINES(MARINE)

AUXILIARY STEAM TURBINES(MARINE)
BT MARINE STEAM TURBINES
BT STEAM TURBINES
BT TURBINES
BT TURBOMACHINERY
NT SHIP SERVICE TURBOGENERATORS

ENTER TERM
/MARINE DIESEL ENGINES

MARINE DIESEL ENGINES
SN INCL. MEDIUM OR HIGH SPEED DIESEL ENGINES MANUFACTURED
SN OR ADAPTED FOR SHIPBOARD USE.
BT DIESEL ENGINES
BT ENGINES
BT INTERNAL COMBUSTION ENGINES
BT PISTON ENGINES
BT RECIPROCATING ENGINES
NT AUXILIARY DIESEL ENGINES(MARINE)
NT PROPULSION DIESEL ENGINES(MARINE)

ENTER TERM
/FUEL OILS

FUEL OILS

BT ENERGY SOURCES
BT FOSSIL FUELS
BT FUELS
BT MATERIALS
BT OILS
BT ORGANIC MATERIALS
BT PETROLEUM PRODUCTS
NT * DIESEL FUELS
NT HEATING OILS
NT NAVY DISTILLATE FUELS
NT RESIDUAL FUELS

ENTER TERM
/DIESEL FUELS

DIESEL FUELS

BT ENERGY SOURCES
BT FOSSIL FUELS
BT FUELS
BT FUEL OILS
BT MATERIALS
BT OILS
BT ORGANIC MATERIALS
BT PETROLEUM PRODUCTS
UF DIESEL OIL
NT DIESEL FUEL MARINE
NT MARINE DIESEL FUELS
RT RESIDUAL FUELS

ENTER TERM
/BASIS (return to retrieval module)

1/MARINE GAS TURB* (stem search)

.ITEMS. TERMS

A 1 DE=MARINE GAS TURBINE GENERATOR SETS

B 18 DE=MARINE GAS TURBINES

END OF TERMS WITH YOUR STEM

PICK LETTERS TO COMBINE

1/ALL

18 ITEMS SAVED AS SET 1

CONTINUE PICKS OR REQUESTS

2/MARINE STEAM TURBINES

28 ITEMS SAVED AS SET 2

3/MARINE DIESEL ENGINES

14 ITEMS SAVED AS SET 3
4/DIESEL FUEL MARINE

15 ITEMS SAVED AS SET 4
5/NAVY DISTILLATE FUELS

6 ITEMS SAVED AS SET 5
6/FUEL CONSUMPTION

48 ITEMS SAVED AS SET 6
7/LOOK COMBUSTION (adjacent term search)

.ITEMS. TERMS
A 1 DE=COMBINED CYCLE ENGINES
B 4 DE=COMBINED CYCLE POWER PLANTS
C 3 DE=COMBUSTIBILITY
USE DE=FLAMMABILITY
D 26**DE=COMBUSTION
E 7 DE=COMBUSTION CHAMBERS
F 1 DE=COMBUSTION DEPOSITS
MORE TERMS ARE AVAILABLE
PICK LETTERS TO COMBINE
7/MORE

.ITEMS. TERMS
A 6 DE=COMBUSTION EFFICIENCY
B 1 DE=COMBUSTION MODIFIERS
13 USE DE=ADDITIVES
26 AND DE=COMBUSTION
C 1 DE=COMBUSTORS
D 1 DE=COMDAC (COMMAND, DISPLAY AND CONTROL SYSTEM)
E 1 DE=COMMAND GUIDANCE
F 1 DE=COMMERCIAL APPLICATIONS
MORE TERMS ARE AVAILABLE
PICK LETTERS TO COMBINE
7/A

6 ITEMS SAVED AS SET 7
CONTINUE PICKS OR REQUESTS
8/ENGINE EFFICIENCY

5 ITEMS SAVED AS SET 8
9/LIST (lists all sets created so far)

```

.ITEMS. LINE      REQUEST
*      18      1/  DE=MARINE GAS TURB(STEM) A,B
*      28      2/  MARINE STEAM TURBINES
*      14      3/  MARINE DIESEL ENGINES
*      15      4/  DIESEL FUEL MARINE
*      6       5/  NAVY DISTILLATE FUELS
*      48      6/  FUEL CONSUMPTION
*      6       7/  DE=COMBUSTION EFFICIENCY
*      5       8/  ENGINE EFFICIENCY
9/FIND FG=1320 OR FG=2100 OR FG=1315
*      122     9/  FG=1320
*      40     10/  FG=2100
*      305    11/  FG=1315
*      421    12/  FG=1320 OR FG=2100 OR FG=1315
13/SCAN TI ENERGY,ADVANCED      (free-text search of title field)

*      4      13/  SCAN 12 TI ENERGY,ADVANCED
14/SCAN 13 TI,MDE,DE CYCLE*

*      0      14/  SCAN 13 TI,MDE,DE CYCLE*
15/((1 OR 2 OR 3 OR 4 OR 5 OR 6)AND(7 OR 8 OR 9)OR 13 OR 14)
                                (Boolean expression)
      24 ITEMS SAVED AS SET 15
16//2 NOLIST                    (list search results in format #2)

```

THE FOLLOWING ARE PARAMETERS TO BE SATISFIED
LINE?15

```

C34628                                LIBR: C                                02/1979 REC: 3461
      SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS
      ENGLAND (CG-22), TEST DATE: 1 DECEMBER 1978

```

```

C34686                                LIBR: C                                03/1979 REC: 5536
      SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS
      TUSCALOOSA (LST-1187), TEST DATA: 12 DECEMBER 1978.

```

REMAINDER OF LISTING OMITTED

4. Output

4.1 Format Options

Six bibliographic formats for listing literature search results are available. The listings may be printed either at your terminal or on a high-speed off-line printer. Samples of each format are shown in Figure 5.

The six formats sort records numerically by call number in order to facilitate physical retrieval of the desired documents. Formats 5 and 6, however, may be sorted in descending chronological order by publication date. The following are the possible format options (note that all format requests are preceded by a slash "/"):

For Terminal Listings	For Off-line Listings
/1	/1 OFFLINE
/2	/2 OFFLINE
/3	/3 OFFLINE
/4	/4 OFFLINE
/5	/5 OFFLINE
/5 DATE	/5 DATE OFFLINE
/6	/6 OFFLINE
/6 DATE	/6 DATE OFFLINE

After entering your format option, the system will prompt you for the document set number you wish to list. For off-line requests, you will also be asked to supply a terminal ID. Some of your possible responses are:

Terminal ID	Location of Printer
C	Central Site (Math Lab)
001	Printer at Data Systems Division
111	Printer in Code 15's terminal room
011	Printer at Annapolis
C, FC=HH	For Xerox at Central Site

Example

```
16//5 DATE OFFLINE

THE FOLLOWING ARE PARAMETERS TO BE SATISFIED
LINE?1

TERMINAL ID? 001
```

Figure 5 - Format Options for Listing Literature Search Results

/1

VM 753.S 671978I	LIBRARY: C/REF AN	RECORD: 4275
VM 753.S 671978M	LIBRARY: C/REF AN	RECORD: 4279
VM 753.S 671978N	LIBRARY: C/REF AN	RECORD: 4280

Fields included: Call Number, Library, Record ID

/2

VM 753.S 671978I	LIBR: C/REF AN	00/1979 REC: 4275
USEFULNESS OF QUASI-STEADY APPROACH FOR ESTIMATION OF PROPELLER BEARING FORCES. IN PROPELLERS 78, SYMPOSIUM, VIRGINIA BEACH, VA, 1978		
VM 753.S 671978M	LIBR: C/REF AN	00/1979 REC: 4279
INFLUENCE OF PROPELLER MEAN LOADS ON PROPULSION SHAFT ALIGNMENT. IN PROPELLERS 78, SYMPOSIUM, VIRGINIA BEACH, VA, 1978		

Fields included: Call Number, Library, Record ID, Publication Date, Title

/3

VM 753.S 671978I	LIBR: C/REF AN	00/1979 REC: 4275
USEFULNESS OF QUASI-STEADY APPROACH FOR ESTIMATION OF PROPELLER BEARING FORCES. IN PROPELLERS 78, SYMPOSIUM, VIRGINIA BEACH, VA, 1978		
DESCRIPTORS: PROPELLERS(MARINE)-LOADS(FORCES); SHIP WAKE; PROPELLER SHAFTS JAPAN		

Fields included: Call Number, Library, Record ID, Publication Date, Title, Descriptors

/4

VM 753.S 671978I	LIBRARY: C/REF AN
USEFULNESS OF QUASI-STEADY APPROACH FOR ESTIMATION OF PROPELLER BEARING FORCES. IN PROPELLERS 78, SYMPOSIUM, VIRGINIA BEACH, VA, 1978	
00/1979	PP.20 SASAJIMA T
SNAME-T/R-S-6-P-11	
FOR PRIMARY DOCUMENT, SEE VM 753.S 671978, P.11-1 - 11-20.	

Fields included: Call Number, Library, Record ID, Publication Date, Title, Special Form, Pagination, Author Main Entry, Report Number, Note

/5

VM 753.S 671978I LIBRARY: C/REF AN
 USEFULNESS OF QUASI-STEADY APPROACH FOR ESTIMATION OF PROPELLER
 BEARING
 FORCES. IN PROPELLERS 78, SYMPOSIUM, VIRGINIA BEACH, VA, 1978
 00/1979 PP.20 SASAJIMA T
 SNAME-T/R-S-6-P-11
 FOR PRIMARY DOCUMENT, SEE VM 753.S 671978, P.11-1 - 11-20.

DESCRIPTORS: PROPELLERS(MARINE)-LOADS(FORCES); SHIP WAKE;
 PROPELLER SHAFTS
 JAPAN
 IDENTIFIERS: BEARING FORCES

Fields included: Call Number, Library, Record ID, Publication Date, Title, Special
 Form, Pagination, Author Main Entry, Report Number, Note,
 Descriptors, Identifiers

/6

VM 753.S 671978I LIBRARY: C/REF AN
 SASAJIMA T SNAME
 MITSUBISHI HEAVY INDUSTRIES LTD(JAPAN)
 USEFULNESS OF QUASI-STEADY APPROACH FOR ESTIMATION OF
 PROPELLER
 BEARING FORCES. IN PROPELLERS 78, SYMPOSIUM, VIRGINIA BEACH,
 VA,
 1978
 00/1979 PP.20 SNAME-T/R
 -S-6-P-11
 FOR PRIMARY DOCUMENT, SEE VM 753.S 671978, P.11-1 - 11-20.

DESCRIPTORS: PROPELLERS(MARINE)-LOADS(FORCES); SHIP WAKE;
 PROPELLER SHAFTS
 JAPAN
 IDENTIFIERS: BEARING FORCES

Fields included: Call Number, Library, Record ID, Publication Date, Title, Special
 Form, Pagination, Author Main Entry, Report Number, Note,
 Descriptors, Identifiers, Publisher, Corporate Source, Authors

4.2 SORT Command

After retrieving a document set and before reviewing the results via the DISPLAY or PRINT commands, it is sometimes helpful to first sort the document records in some meaningful order. The default order of records in a document set is numerical by RECORD ID. Document sets that are to be output in one of the six format options should not be sorted by the user, since the format program automatically sorts the set by call number or, if specified, in descending chronological order by publication date.

With the SORT capability, a user can sort a document set defined by any previous line number in either ascending or descending order by any field, by occurrence within a field, or by any combination of fields.

Examples

SORT TI

Will sort the last document set alphabetically by title

SORT Line=7 TI

Will sort the document set defined by line 7 alphabetically by title

SORT Line=2 MDE, PD, TI

Will sort line 2 by major descriptors; within major descriptors by publication date; and then by title

SORT PD/D, TI/D

Will sort the last set in descending chronological order of publication date; and within each date, in descending alphabetical order of title (Z to A)

SORT FG(1) AU(1)

Sorts on the first occurrence of the field/group and author fields

SORT DE(*)

Sorts on each subject descriptor** (a title with three subjects will appear three times)

SORT TI(1:80)

Sorts on the first 80 characters of the title (the default is the first 60 characters)

SORT CS(*)

Sorts on all corporate authors

SORT TI(1)(1:150)/D

Sorts in reverse alphabetical order on the first 150 characters of the first title

The DROP parameter may be appended to the end of a SORT statement to drop from the output display records that do not contain the major (first) sort key. If DROP is not used, the records not containing the major sort key will appear first in the listing or, if sorted in descending order, will appear last.

Examples

SORT FG(1) DROP

Will sort records by the first occurrence of the field/group field and will drop from the set any records for which the first FG was omitted

SORT Line=1 PD/D DROP

Will sort the first document set so that most current titles will be placed first; records showing no publication date will be dropped

4.3 DISPLAY Command

The fastest way to review selected records at your terminal is with the DISPLAY command. Use the form:

DISPLAY document set no. fields FOR item numbers

If the document set number is omitted, the last set created is displayed. The fields may be field mnemonics, field numbers, or ALL. The item numbers may be ALL or a range of numbers.

Examples

DISPLAY ALL FOR ALL

Displays all fields for all records in the last set

DISPLAY=2, TI,CN FOR 1-5

Displays titles and call numbers for the first five records of the second document set

**The asterisk should be used for all sorts on repeating fields.

DISPLAY ALL for 10-20

Displays all fields for items 10 to 20 of the last document set

Another important function of **DISPLAY** is to print a single record from the head file. Use the **DISPLAY** command followed by the record's ID in parentheses followed by the fields desired.

Example

DISPLAY (1238) ALL

Displays all fields for record #1238

DISPLAY (400237) BR,DD

Displays the borrower and due date for record #400237

4.3.1 Mapped Fields

The Library data base has three "mapped fields."

- **BIB** for bibliographic data
- **CTR** for center report data
- **INV** for inventory data

When you **DISPLAY** a "mapped field," you actually display a group of fields all having a common attribute.

BIB shows ID, Major Descriptors, Specific Descriptors, and Identifiers. **BIB** would normally be used to "test" a document set for accuracy before outputting your search results in a format option.

Example

25/FIND TYP=FR-CTR

(code for formal reports)

* 18 25/ TYP=FR-CTR
26/DISPLAY BIB FOR 3

ITEM 3

RECORD ID 404
TITLE EVALUATION OF SINGLE PASS SEAWATER REVERSE OSMOSIS MODULES
AND PRETREATMENT TECHNIQUES, PHASE 2
MAJOR DESCRIPTORS DESALINATION-TEST METHODS;WATER TREATMENT-SHIPS;REVERSE
OSMOSIS-SHIPS;SEA WATER-ULTRAFILTRATION MEMBRANES
SUBJECT DESCRIPTORS:MODULAR CONSTRUCTION;FUSED SILICA;SILICATES;DESTRUCTION;
COLIFORM BACTERIA;VALUE;ELECTROLYSIS;HYDROLYSIS;PH FACTOR;DRINKING WATER;
CHLORINATION
IDENTIFIERS POTABLE WATER;SINGLE PASS;PRETREATMENT;BACTERIOLOGICAL
SPECIES

CTR shows the digits from a formal Center Report number (omitting the acronym), the title, and any circulation restriction.

Example

26/DISPLAY CTR FOR 3

ITEM 3

TRANPOSED REPORT NR:77-0011

TITLE EVALUATION OF SINGLE PASS SEAWATER REVERSE OSMOSIS MODULES
AND PRETREATMENT TECHNIQUES, PHASE 2

INV shows location and copy information, publication date, and item identification.
This would normally be used by the Acquisitions or Cataloging Staff to see the number of
copies owned for an existing title in the collection.

Example

26/ID=663

1 ITEM SAVED AS SET 26
27/DISPLAY INV

ITEM 1

RECORD ID	663
CALL NUMBER	TJ 151.M 31975
TITLE	MACHINERY'S HANDBOOK A REFERENCE BOOK FOR THE MECHANICAL ENGINEER, DRAFTSMAN, TOOLMAKER AND MACHINIST. 20TH EDITION
PUBLICATION DATE	19750000
LIBRARY CARDEROCK	C
CARDEROCK COPIES	5,6,8,9
LIBRARY ANNAPOLIS	AN
ANNAPOLIS COPIES	1-4,7,10,11

The format of the display may be modified by SETting certain parameters. Figure 6
shows a sample DISPLAY.

Example

SET HEADING LABELS ON/OFF

Supresses field lables such as "TITLE";
"AUTHORS;" etc.

SET FIELD NUMBERS ON/OFF

Used after setting headings OFF to replace
field labels with field numbers

SET ITEM ON/OFF

Turns off item count that normally precedes
each record display

SET PAUSE TO, #

Causes display of records to halt after a certain
number before continuing; this is intended for
CRT users

Figure 6 - Sample DISPLAYS

28/SORT PD/D CS TI

Sorts 16 records in descending chronological
order, by corporate source, and by title.

* 24 28/ 15 SORT=PD/D CS TI
29/DISPLAY PD,CS,TI FOR 1-2

Displays sorted set to show publication date,
corporate source, and title for two records.

ITEM 1

PUBLICATION DATE 19790300
CORPORATE SOURCE NAVAL OCEAN SYSTEMS CENTER
TITLE SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT,
USS TUSCALOOSA (LST-1187), TEST DATA: 12 DECEMBER 1978.

ITEM 2

PUBLICATION DATE 19790300
CORPORATE SOURCE NAVAL OCEAN SYSTEMS CENTER
TITLE SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT,
USS BROOKE (FFG-1), TEST DATE: 12 JANUARY 1979
29/SET ITEM OFF

29/SET HEADINGS OFF

29/SET FIELD NUMBERS ON

29/DISPLAY TI FOR 1-3

9. SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS TUSCALOOSA
(LST-1187), TEST DATA: 12 DECEMBER 1978.

9. SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS BROOKE
(FFG-1), TEST DATE: 12 JANUARY 1979

9. SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS BUCHANAN
(DDG-14), TEST DATE: 9 JANUARY 1979

29/SET PAUSE TO 2

29/DISPLAY TI FOR ALL

9. SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS TUSCALOOSA
(LST-1187), TEST DATA: 12 DECEMBER 1978.

9. SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS BROOKE
(FFG-1), TEST DATE: 12 JANUARY 1979

DO YOU WANT TO SEE THE NEXT ITEM (YES NO)? YES

9. SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS BUCHANAN
(DDG-14), TEST DATE: 9 JANUARY 1979

9. SURFACE SHIP RADIATED NOISE MEASUREMENT (SSRNM) REPORT, USS ENGLAND
(CG-22), TEST DATE: 1 DECEMBER 1978

DO YOU WANT TO SEE THE NEXT ITEM (YES NO)? NO

4.4 PRINT Command

DISPLAY is used to print results at your terminal. To print search results on an off-line high-speed printer, use either the PRINT command or one of the six format options. Users should understand the difference between generating an off-line listing with the PRINT command and with one of the six format options. With PRINT or DISPLAY, the data elements for each record are merely listed with one field to a line. The six format options arrange the fields on the page similarly to a standard catalog card. For user bibliographies, the six format options are preferable to DISPLAY and PRINT listings.

The syntax for DISPLAY and PRINT are identical.

Example**PRINT ALL FOR ALL**

Prints off-line all fields in all the records of the last document set

PRINT=4 TI,ID,CS FOR 10-20

Will print the title, Record ID, and corporate authors for the tenth through the twentieth records in document set number 4

PRINT(7012)ALL

Prints all fields for record #7012

Unlike the DISPLAY command and the six format options, PRINT allows a user to title bibliographies with the TITLE command. Issue the TITLE Command followed by the words of the title directly before the PRINT command.

Example**5/ TITLE HYDRODYNAMICS RESEARCH IN THE NAVY****5/ PRINT = 2 ALL FOR ALL**

If you should request a PRINT and later wish to cancel it, enter:

CANCEL

PRINTS will be automatically routed to the off-line printer at Central Site at the end of your terminal session unless they are specifically routed to another printer. To ROUTE your PRINTS to another printer, enter the following while still in BASIS:

ROUTE(RID) = "Terminal ID"

This may be entered following each PRINT command, or after several PRINTS have been issued.

Some possible values of Terminal ID are:

001 for Data Systems' printer

111 for Code 15's printer

011 for Annapolis' printer

Example**1/FIND FLUID FLOW AND PD GT 19790000**

```

*      115      1/  FLUID FLOW
*      95      2/  PD GT 19790000
*      4       3/  FLUID FLOW AND PD GT 19790000

```

4/TITLE VERY CURRENT WORK ON FLUID FOW**4/PRINT BIB FOR ALL**

ORDER NUMBER 790927-122201-CRAD -002-001 WITH 4 OF 4 ITEMS
WILL BE PRINTED OFF-LINE
4/ROUTE(RID)="-001"

PLEASE ENTER YOUR MAILING ADDRESS TO LABEL YOUR PRINTS.
SEPARATE EACH LINE WITH A COLON.
ADDRESS...SHERRY MARTIN CODE 6080

SHERRY MARTIN CODE 6080

4/END

DTNSRDC LIBRARY DATA BASE USAGE TERMINATED

GOODBYE

COMMAND- LOGOUT

CPA 59.961 SEC
SS 93.187 SEC
EST. SYSTEM COST \$ 13.54

EST. CONNECT COST \$ 10.83
CONNECT TIME 1 HRS. 5 MIN.
09/27/79 LOGGED OUT AT 13.26.02.

The printout for the above Search appears in Figure 7.

5. Circulation Searches

Printed listings are available at each circulation desk showing borrower and due date information for every circulating item. However, if a searcher wishes to inquire on-line whether or not a publication of interest is checked out, he should use one of two possible formats:

- (i) Perform a stem search on the prefix of the circulation call number. This is the same number as the cataloging record call number minus the copy number. For conference papers and other analytics, the call number used should be that of the bound set and not that of the individual paper. After identifying the call number from the cataloging record of interest, enter:

CCN = call number*

or

CCN = call number*ALL

ORDER NUMBER 790920-133637-CRMD -001-001

PAGE 1

VERY CURRENT WORK ON FLUID FLOW SET 3 WITH 4 OF 4 ITEMS

ITEM 1

RECORD ID 4902
 TITLE NULL ROUGHNESS AND ASSOCIATED BOUNDARY LAYER FLOW
 MAJOR DESCRIPTORS SHIP HULLS-ROUGHNESS; SHIP HULLS-BOUNDARY LAYER FLOW
 SUBJECT DESCRIPTORS:SKIN FRICTION; MEASUREMENT; FRIGATES; FOULING; CLEANING;
 GREAT BRITAIN
 IDENTIFIERS SH: ARIADNE(UK)

ITEM 2

RECORD ID 7074
 TITLE SOUND PRODUCTION DUE TO LARGE-SCALE COHERENT STRUCTURES
 MAJOR DESCRIPTORS TURBULENT FLOW; SOUND PRESSURE; MATHEMATICAL MODELS
 SUBJECT DESCRIPTORS:COHERENCE; AMPLITUDE; SHEAR FLOW; ACOUSTIC FIELDS
 IDENTIFIERS LIGHTHILLS THEORY

ITEM 3

RECORD ID 7076
 TITLE ON SOUND RADIATION FROM THE TRAILING EDGE OF AN ISOLATED
 AIRFOIL IN A UNIFORM FLOW
 MAJOR DESCRIPTORS SOUND TRANSMISSION-TWO DIMENSIONAL AIRFOILS
 SUBJECT DESCRIPTORS:TRAILING EDGES; UNIFORM FLOW; BOUNDARY LAYER FLOW

ITEM 4

RECORD ID 7077
 TITLE WIND TUNNEL STUDY ON THE EFFECTS OF ACOUSTICAL
 DISTURBANCES ON CONTROLLED LAMINAR FLOW
 MAJOR DESCRIPTORS ACOUSTICS-LAMINAR FLOW
 SUBJECT DESCRIPTORS:WIND TUNNEL TESTS; LAMINAR BOUNDARY LAYER; CONTROL; CROSS
 FLOW

THIS LIST OF PRINTS IS BASED ON

PLEASE MAIL THIS PRINTOUT TO

ITEMS. LINE REQUEST
 * 115 1/ FLUID FLOW
 * 95 2/ PD GT 19790000
 * 4 3/ FLUID FLOW AND PD GT 19790000

SHERRY MARTIN CODE 6080

ORDER NUMBER 790920-133637-CRMD -001 (1 PRINTS).

Figure 7 - Sample PRINT

Example

Who has checked out the seven copies of Machinery's Handbook?

1/CCN=TF J 151.M 31975*ALL

7 TERMS WITH YOUR STEM WERE COMBINED
7 ITEMS SAVED AS SET 1
2/DISPLAY CRS,CCN,BR FOR 1-2

ITEM 1

CATALOG RECORD ID 663
CIRCULATION CALL NR TJ 151.M 31975C2
BORROWER'S NAME ALIBERTI J A

ITEM 2

CATALOG RECORD ID 663
CIRCULATION CALL NR TJ 151.M 31975C3
BORROWER'S NAME ALIBERTI J A

(ii) Since every circulation record contains a corresponding cataloging record ID, you could also search on the corresponding record number:

CRS = cataloging record ID

Example

2/CRS=663

8 ITEMS SAVED AS SET 2
3/DISPLAY CRS,CCN,BR FOR 3-4

ITEM 3

CATALOG RECORD ID 663
CIRCULATION CALL NR TJ 151.M31975C4
BORROWER'S NAME CRAIG O E

ITEM 4

CATALOG RECORD ID 663
CIRCULATION CALL NR TJ 151.M 31975C5
BORROWER'S NAME TATUM S L

6. PROFILE

Because of the recurring nature of many functions, the library system provides a capability called PROFILE. Following are the PROFILE Capabilities:

- Allows users to save search statements, output requests, and other repetitive user text
- Allows users to save a search session for later completion
- Allows sophisticated users to "program" the system to perform simple repetitive tasks

There are two PROFILE files available to searchers:

- (i) Data base PROFILE file
- (ii) Your user's PROFILE file

The data base PROFILE file consists of profiles set up by the Data Base Administrator (DBA) for use by searchers. The six format options, in fact, are profiles stored on the data base PROFILE file. This file can only be altered by the DBA.

Every user is also provided a profile file associated with his or her BASIS ID that may be used for setting up and executing one's own profiles. Sections 5.1 through 5.4.3 describe procedures for creating and manipulating personal PROFILE files.

6.1 PROFILE Creation

PROFILES may be created with one of three commands: /SUSPEND, /CREATE, or /MAKE.

6.1.1 SUSPEND Command

This command is used to save all user input from a terminal session for total replay.

Enter:

/SUSPEND

or:

PROFILE SUSPEND

or:

/SUSPEND Profile name of 1 to 20 characters

The slash (/) is a shortcut for typing out PROFILE and is used to get into the PROFILE module. If no profile name is supplied by the user, the system automatically supplies the name "SUSPEND*SAVE."

Example

3//SUSPEND TRAINING SESSION

"SUSPEND*TRAINING SESSION"
SAVED WITH 4 LINES OF TEXT

```

3/FIND FROGS
*      0      3/  FROGS
4//SUSPEND

"SUSPEND*SAVE"
SAVED WITH 6 LINES OF TEXT

```

6.1.2 SAVE Command

While SUSPEND captures all user input from the terminal session, /SAVE captures user input entered only since the last user-supplied /CREATE, /NEW, or /SAVE command. If none of these three commands had been previously entered, /SAVE will capture all user input from the beginning of the session. If no user-supplied profile name follows a SAVE command, the system automatically supplies the profile name of SAVE. Enter:

```

/SAVE
or:
/SAVE Profile Name
or:
PROFILE SAVE Profile Name

```

6.1.2.1 NEW Command

/NEW notes the start of a possible new profile that may be saved via the /SAVE command. When entered, the line numbers are reset to one. When performing searches for several different users, /NEW is a handy way of "throwing away" the sets of a previous search before beginning a new one.

Example

```

(user input underlined)
1/FIND FROGS AND TOADS
*      0      1/  FROGS
*      0      2/  TOADS
*      0      3/  FROGS AND TOADS
4//NEW
1/FIND NAVAL VESSELS AND ENERGY CONSERVATION END NOLIST
*      16      3/  NAVAL VESSELS AND ENERGY CONSERVATION END NOLIST
4/DISPLAY TI, ID, PD, AU, CS FOR 1-2

```

ITEM 1

TITLE PROPOSAL FOR A STUDY OF TOTAL ENERGY SYSTEMS FOR NA VY
SHIPS;ENERGY SYSTEMS FOR NAVY SHIPS
RECORD ID 46
PUBLICATION DATE 19750200
CORPORATE SOURCE GARRETT CORP(AZ) AIRESEARCH MFG DIV;NSRDC. ENERGY R/D
OFFICE

ITEM 2

TITLE U.S. NAVY CARRIER WASTEWATER PURIFICATION AND RECYCLE
SYSTEM-COST EFFECTIVENESS ANALYSIS OF COMPETING METHODS
RECORD ID 2510
PUBLICATION DATE 19770800
PERSONAL AUTHOR PHULL K K;LINDSTEN D C
CORPORATE SOURCE ARMY MOBILITY EQUIPMENT RES AND DEV CENTER;DAVID W TAYLOR
NAVAL SHIP RES AND DEV CTR(ANNAPOLIS)
4//SAVE ENERGY EFFICIENT SHIPS

"ENERGY EFFICIENT SHIPS"
SAVED WITH 2 LINES OF TEXT

6.1.2.2 CREATE Command

/CREATE, like /NEW, notes the start of a possible new profile that may be later captured via /SAVE. /CREATE, however, does not reset the line number to one.

6.1.3 MAKE Command

/SUSPEND and /SAVE capture a regular retrieval session. /MAKE allows a user to build a profile for later execution without actually retrieving or listing any document sets. The profile is created through the PROFILE/REPORT editor. Profile lines are entered one at a time after a system prompt. "=" is entered to leave the profile ADD mode, and EXIT is entered to leave the PROFILE editor. See 5.4.2 for PROFILE editing.

Example

(user input underlined)
4//MAKE WELDING RESEARCH IN THE NAVY
END ADD WITH =
100 =FIND WELD*ALL AND CS=NAVY DEPT
110 =/5 DATE
120 = =
== EXIT

6.2 PROFILE Parameters

PROFILE parameters may be included in the text of a profile to allow for the substitution of different field values at execution time. The searcher has already encountered PROFILE parameters in requesting one of the six search output formats. Remember how the system prompted the user to enter his "Line Number?" and "Terminal ID?"

A parameter name is put in [square brackets]. When a user enters any data in [square brackets], the contents of the brackets are considered to be a profile parameter name. This name may be 1 to 60 characters long. Profile parameters may be inserted in profiles that are created in the "capture mode" via the /SUSPEND or /SAVE commands, or in the profile ADD mode via the /MAKE command.

Example

Profile parameters inserted in the capture mode:

```
(user input underlined)

4//NEW

1/FIND [DESCRIPTOR]

DESCRIPTOR? FLUID FLOW

1/ FIND    FLUID FLOW
*   115    1/  FLUID FLOW
2/PD GT [PUBLICATION DATE]

PUBLICATION DATE?19760000

2/ PD GT 19760000
   1094 ITEMS SAVED AS SET 2
3/CS=NAVY DEPT

   341 ITEMS SAVED AS SET 3
4/(1 AND 2 AND 3)

   18 ITEMS SAVED AS SET 4
5//6 OFFLINE

THE FOLLOWING ARE PARAMETERS TO BE SATISFIED
LINE?4

TERMINAL ID? 001

5/ SORT (LINE=4) CN KEEP(SUB="SUBS")DROP NOSET
5/ REPORT EXECUTE "6" PUT.FILE="OUTPUT"
```

```
ENTER REPORT DIRECTIVE
/ XEQ ROUTE,OUTPUT,DC=PR,TID=001,FID=CRSM
5//SAVE CURRENT NAVY PIC -A-TOPIC
```

"CURRENT NAVY PIC-A-TOPIC"
SAVED WITH 5 LINES OF TEXT

Profile parameters inserted in the profile ADD mode:

(user input underlined)

```
5//MAKE SHIPS AND SOME BUZZWORD
END ADD WITH =
100 =FIND [BUZZWORD] AND SHIPS
110 =/3 NOLIST
120 = =
== E
```

The above profile, in line 110, issues the command to execute another profile — the format 3 option. Profiles may be nested so that one profile executes another profile.

6.3 PROFILE Execution

To execute a profile from your PROFILE file, enter:

/EXECUTE

or:

/Profile name

or:

/EXECUTE Profile name

If no profile name is supplied, the system will execute the profile, if any, named "SAVE."

Example

/2

/5 DATE OFFLINE

/MY VERY OWN PROFILE MADE BEFORE LUNCH BREAK

Each line of the profile will be echoed back to the user as it is executed, and all output will be displayed. To see the results only, append "NOLIST" to the execute command.

Example without NOLIST

(user input underlined)

5/EXECUTE SHIPS AND SOME BUZZWORD

THE FOLLOWING ARE PARAMETERS TO BE SATISFIED
BUZZWORD? TOTAL ENERGY SYSTEMS

5/ FIND TOTAL ENERGY SYSTEMS AND SHIPS

* 10 5/ TOTAL ENERGY SYSTEMS

* 279 6/ SHIPS

* 2 7/ TOTAL ENERGY SYSTEMS AND SHIPS

8/ /3 NOLIST

THE FOLLOWING ARE PARAMETERS TO BE SATISFIED
LINE?7

U050312 LIBR: AN 02/1975 REC: 46
PROPOSAL FOR A STUDY OF TOTAL ENERGY SYSTEMS FOR NA VY SHIPS

DESCRIPTORS: WASTE HEAT BOILERS;ENGINES;DIESEL ENGINES;TOTAL
ENERGY SYSTEMS;NAVAL VESSELS-ENERGY CONSERVATION
HEAT RECOVERY EQUIPMENT;ENERGY SOURCES;GAS TURBINES;FUEL
CONSUMPTION;RANKINE CYCLE

U058913 LIBR: AN 10/1974 REC: 2521
REDUCED WEIGHT AND VOLUME ELECTRICAL SYSTEMS FOR SMALL WATERPLANE
AREA TWIN-HULL(SWATH) SHIPS. DRAFT

DESCRIPTORS: SWATH SHIPS-WEIGHT REDUCTION;SHIP ELECTRIC POWER
PLANTS-WEIGHT REDUCTION; SWATH SHIPS-VOLUME
SIZES(DIMENSIONS);ELECTRICAL EQUIPMENT;OPTIMIZATION; ELECTRIC
GENERATORS;POWER CONVERSION SYSTEMS(SHIPS);POWER DISTRIBUTION
SYSTEMS(SHIPS);TOTAL ENERGY SYSTEMS;GAS TURBINES;SHIP SERVICE
GENERATORS; WASTE HEAT UTILIZATION;WASTE HEAT BOILERS;CABLES;
END OF PROFILE

Example with NOLIST

(user input underlined)

16/SHIPS AND SOME BUZZWORD NOLIST

THE FOLLOWING ARE PARAMETERS TO BE SATISFIED
BUZZWORD?INTEGRATED SYSTEMS

THE FOLLOWING ARE PARAMETERS TO BE SATISFIED
LINE?16

QA 913.L 911976Y LIBR: C 01/1978 REC: 4898
AXISYMMETRIC VEHICLE SYSTEM DESIGN FOR TOTAL PROPULSION POWER
OPTIMIZATION. IN LOW-SPEED BOUNDARY-LAYER TRANSITION WORKSHOP: II,
SANTA MONICA, CA, 1976. PROCEEDINGS

DESCRIPTORS: UNDERWATER VEHICLES-MARINE PROPULSION PLANTS
DESIGN; OPTIMIZATION; TURBULENT BOUNDARY LAYER; LAMINAR BOUNDARY
LAYER; WIND TUNNEL TESTS; INTEGRATED SYSTEMS; AXISYMMETRIC;
BODIES; SHIP HULLS

REMAINDER OF DISPLAY OMITTED

In order to execute a profile with parameters that are to be user-supplied, you may either issue the regular profile execute command and wait for the system to prompt you for required field values; or you may append a SATISFY clause to your execute command in the form:

/Profile Name SATISFY (parameter name = value)

Example

Sample Profile

```
USER FILE
"CURRENT NAVY PIC-A-TOPIC"
AUTHOR = CRAD
DATE   = 790927  TIME = 140316
100 =FIND [DESCRIPTOR]
110 =PD GT [PUBLICATION DATE]
120 =CS=NAVY DEPT
130 =(1 AND 2 AND 3)
140 =DISPLAY BIB FOR ALL
```

(user input is underlined)

19/EXECUTE CURRENT NAVY PIC-A-TOPIC SATISFY(DESCRIPTOR=DRAG REDUCTION, +
SATISFY...PUBLICATION DATE=19750000)

```
* 19/ FIND DRAG REDUCTION
    5 19/ DRAG REDUCTION
20/ PD GT 19750000
    1247 ITEMS SAVED AS SET 20
21/ CS=NAVY DEPT
    341 ITEMS SAVED AS SET 21
22/ (19 AND 20 AND 21)
    1 ITEM SAVED AS SET 22
23/ DISPLAY BIB FOR ALL
```

ITEM 1

RECORD ID 4893
TITLE COMPARISON BETWEEN MEASURED AND COMPUTED LOCATIONS OF
TRANSITION ON NINE FOREBODIES OF REVOLUTION. IN LOW-SPEED BOUNDARY-LAYER
TRANSITION WORKSHOP: II, SANTA MONICA, CA, 1976. PROCEEDINGS
MAJOR DESCRIPTORS BODIES OF REVOLUTION-PRESSURE DISTRIBUTION
SUBJECT DESCRIPTORS: COMPARISON; AXISYMMETRIC; MODEL BASINS; BLUNT BODIES;
COMPUTERIZED SIMULATION; MODEL TESTS; LAMINAR BOUNDARY LAYER; BOUNDARY
LAYER SEPARATION; DRAG REDUCTION; EXPERIMENTAL DATA; PRESSURE MEASUREMENT

6.3.1 RESUME Command

/EXECUTE and /Profile Name were used to execute profiles that had been created with the /SAVE command or the /MAKE command. /RESUME is used to execute a profile that had been created with the /SUSPEND command. Use the form:

/RESUME

or:

/RESUME Profile Name

If no profile name is supplied, a profile called "SUSPEND*SAVE," if any, will be executed. The SATISFY clause may not be used with /RESUME. The following commands are eliminated from the profile before it is executed: DISPLAY, PRINT, LIST, and ROUTE.

6.4 PROFILE File Manipulation

6.4.1 PROFILE Listing

To see the names of the PROFILES in the PROFILE file associated with your BASIS ID, as well as those in the Data Base PROFILE file, enter:

/SHOW

Example

23//SHOW

USER FILE

A1 CURRENT NAVY PIC-A-TOPIC
A2 ENERGY EFFICIENT SHIPS
A3 SHIPS AND SOME BUZZWORD
A4 SUSPEND*SAVE
A5 SUSPEND*TRAINING SESSION
A6 TRAINING SESSION
A7 WELDING RESEARCH IN THE NAVY

DATA BASE FILE

B1 ACCESSIONS BULLETIN
B2 CURRENT NAVY PIC-A-TOPIC

B3	PROFXPROF
B4	SHIPS AND SOME BUZZWORD
B5	1
B6	1 OFFLINE
B7	2
B8	2 OFFLINE
B9	3
B10	3 OFFLINE
B11	4
B12	4 OFFLINE
B13	5
B14	5 DATE
B15	5 DATE OFFLINE
B16	5 OFFLINE
B17	6
B18	6 DATE
B19	6 DATE OFFLINE
B20	6 OFFLINE

DO YOU WANT TO EXECUTE ANY OF THESE PROFILES?

Your possible responses are:

- (i) NO
- (ii) YES the system will then ask you to ENTER THE TAG OF THE PROFILE TO EXECUTE

or:

- (iii) enter the desired profile TAG

While /SHOW lists only the names of the available profiles, you may list the actual text of any one profile by entering:

/SHOW Profile Name

Example

23//SHOW 1

DATA BASE FILE

"1"

AUTHOR = CRMD

DATE = 781025 TIME = 135452

100 =SORT(LINE=[LINE]) CN KEEP(SUB="SUBS")DROP NOSET

110 =REPORT EXECUTE "1"

111 =BASIS

The text of all profiles can be listed with the command:

/SHOW ALL

6.4.2 PROFILE Editing

The PROFILE/REPORT editor must be used to change any existing PROFILE in your personal profile file. The first step in editing a particular profile is to enter:

/EDIT Profile Name

To list the lines of a profile, enter:

L

or L line #

or L line # – line #, line #

To delete lines, enter:

D

or:

D line #

or:

D line # – line #, line #

To replace or insert a line, enter:

line # = text

To add on to an existing profile, enter:

ADD

To change a line, enter:

/bad text/ = /good text/

(this will replace all occurrences of "bad text")

/bad text/ = /good text/, line #

(will replace "bad text" only in the specified line)

To leave the editor and keep the changes made, enter:

EXIT

or E

To leave the editor and discard the changes, enter:

KILL

Example

L 100-500

Lists lines 100 to 500

L

Lists entrie profile

D

Deletes the last line listed

D 500

Deletes line 500

500 = FIND FG=[field group]

Makes or replaces line 500 with the text shown

505 = DISPLAY ALL FOR ALL

Inserts a new line

/DISPLAY ALL/ = /DISPLAY BIB/, 505

Changes 505 above to read "DISPLAY BIB FOR ALL"

6.4.3 Other Changes

To rename a profile, enter:

/RENAME old name TO new name

To delete an entire profile from your file, enter:

/DELETE Profile Name

Example

RENAME CODE 2705 SDI TO CODE 2780 SDI
DELETE TEST PROFILE

7. Self-Help and Miscellaneous Commands

7.1 EXPLAIN Command

The EXPLAIN command may be used by searchers to obtain on-line orientation and assistance. A list of all topics available for explanation may be generated with:

EXPLAIN TOPICS

or:

? TOPICS ("?" is a short form for EXPLAIN)

Any topic listed can be further explained by entering:

? Topic Name

Common topics are:

? COMMANDS

? FIELDS

? DISPLAY

? Command Name

? PARAMETERS

EXPLAIN or ? may also be used after receiving a system message or error message to solicit further explanation.

7.2 CLOCK

The CLOCK command allows you to find information regarding correct time, time of day, and CPU time used. This same information is provided automatically when a user logs out from the computer. The CLOCK command would be useful for obtaining statistics on resources utilized for various user's searches when conducting searches for multiple users.

Example

23/CLOCK

SESSION TIME 39 MINS. 49 SECS. AT 140718 CP=26.367

7.3 SET Command

With the SET command, a searcher may change values for parameters that control the mode of your terminal session. After logging out, the values of all parameters automatically revert to their default values set by the DBA.

You have already encountered the SET command in conjunction with certain parameters. These were:

SET ADJ(ACENTS) TO #	To alter adjacent term list length
SET TERMS TO #	To alter stem and browse list length
SET FIELDS ON/OFF	To turn off or on the field #s in a DISPLAY
SET HEAD(ING)S ON/OFF	To turn off or on labels in a DISPLAY
SET ITEMS ON/OFF	To turn off or on item #s in a DISPLAY
SET PAUSE ON/OFF	To stop and start DISPLAY after a certain item count
SET UNIVERSE TO LINE #	To start UNIVERSE search mode
SET HIERARCHIC ON	To start hierarchical search mode

Other parameters may be SET as well. The default sort for a document set is in ascending numerical order of record ID. To reverse this order, enter:

SET DESCEND ON

To indent the display of fields exceeding one line to a number of characters other than the default of five, enter:

SET INDENT TO #

The library system "conducts" three different levels of dialog with interactive searchers according to their expertise. To change the TALK LEVEL, enter:

SET TALK = 0	for expert
SET TALK = 1	for standard (default)
SET TALK = 2	for novice

7.4 LIST Command

The LIST command may be used for various purposes, some of which are the same as the EXPLAIN command. To list document sets and commands issued since the start of your terminal session, enter:

LIST

LIST line #

LIST line # - line #, line #

Other uses for LIST are:

LIST COMMANDS
LIST PARAMETERS
LIST STATUS
LIST SEARCH

7.5 XEQ Command

To issue INTERCOM commands, use the XEQ Command. This command allows you to perform tasks not handled by BASIS. Use the form:

XEQ Intercom Command

Examples

XEQ SCREEN,80

Formats displays on an 80-character screen

XEQ ROUTE,PRINT,DC=PR,TID=001, FID=CRSM

Routes a BASIS print file to data system's printer

XEQ J,CRMD

Checks on the status of a batch job named CRMD

7.6 ABORT Command

To stop a terminal display, such as a lengthy listing or an incorrect command, enter the following after halting the display by hitting the space bar:

% ABORT

or:

% A

APPENDIX A-1. FIELDS IN LIBRARY DATA BASE

Field	Explanation	Searchable through Index	Mnemonic	Field Number	Repeating Occurrences	Characteristics
Record ID	Serially assigned number	*	ID	1		Ranged. 1-300000 for cataloging records, 400000 - 999999 for circulation records
Call Number	Location of physical item		CN	2		For reports; U,C, or S number. For monographs, LC call number (put space after groups of letters and before groups of numbers, except for Vol, PRT copy).
Record entry date	Date record added to data base	*	RED	4		Ranged. YYMMDD
Cataloger's ID	ID of individual who cataloged item		CAT	5		Number from 1 - 9
Corporate source	Corporate authors and sponsors	*	CS	7	*	Corporate source thesaurus entries only. Generic retrieval
Author main entry	First personal author		AME	8		Last name first initial middle initial
Title	Title		TI	9	*	
Authors	Personal authors		AU	12	*	Same form as field 8

APPENDIX A-1. (Cont.)

Field	Explanation	Searchable through Index	Mnemonic	Field Number	Repeating Occurrences	Characteristics
Publication date	Publication date	*	PD	13		Ranged. YYYYMMDD. Year for monographs, month and year for documents
Pagination	Number of pages, volumes, parts, etc.		PP	14		Number
Report number	Series number		SE	15	*	Standardized formats used for each series
Note	Refers to earlier or later editions, other vols., etc.		NT	16		
Shelf list	Indicates analytics, monographs, etc.	*	SL	18		Used for Library administrative purposes only
Publisher			PUB	20		
Carderock Library	Shows Carderock ownership	*	LC	22		C or C/REF
Carderock copies	Copy numbers owned		CC	23		
Annapolis Library	Shows Annapolis ownership	*	LAN	24		AN or AN/REF

APPENDIX A-1. (Cont.)

Field	Explanation	Searchable through Index	Mnemonic	Field Number	Repeating Occurrences	Characteristics
Annapolis copies	Copy numbers owned		ANC	25		
Field group	Code for broad disciplines	*	FG	28	*	See Appendix A-2 for possible values
Major descriptors	1-4 major subjects	*	MDE for display, DE for retrieval	29	*	Subject thesaurus entries only
Specific descriptors	0-40 specific subjects	*	DE	30	*	Subject thesaurus entries only
Identifiers	Acronyms, proper names, hull nos., formulars, other subjects	*	ID for display DE for retrieval	31	*	Open-ended subjects; not thesaurus controlled
Center document type	Code for all Center employee-authored work	*	TYP	32	*	See Appendix A-3 for possible values
Work unit number	Funding code for Center Reports	*	WU	33	*	
Transposed report number	Digits only in Center formal reports numbers		TRP	34		

APPENDIX A-1. (Cont.)

Field	Explanation	Searchable through Index	Mnemonic	Field Number	Repeating Occurrences	Characteristics
Circulation restriction	Omitted for unlimited distribution		CR	35	*	Values are C for no contrac- tors; F for no foreigners or SD for special distribution
Reclassifica- tion review date	First date report re- quires classification change	*	RD	36		YYMMDD
Security code level	For library adminis- trative purposes only		SC	37		Provides security locks for OMITS, NATO, and other sensitive reports
Special features	Nonprint forms		SF	38		Film; fiche; kit., etc.
Circulation call number	Call no. with copy number	*	CCN	46		Same as for field 2 but with copy number
CRS	Corresponding cataloging record ID	*	CRS	48		Number between 1-3999999
Library	Library circulating the item	*	LIB	49		C or AN
Borrower	Borrower and code	*	BR	51		Last name, first initial, middle initial, code
Due date	Left blank for indefinite loans	*	DD	53		YYMMDD. Usually, the 15th day of 3rd month from date of check-out

APPENDIX A-1. (Cont.)

Field	Explanation	Searchable through Index	Mnemonic	Field Number	Repeating Occurrences	Characteristics
Interlibrary loan	For ILL transactions	*	ILL	55		L for items loaned to another library; B for items borrowed
Lending library			LL	56		Name of library
Wait list	Reserve list		WL	58	*	Up to 3 names and codes
Classified code	Used only for inter- library loans		CL	59		C or S
Remarks			RK	60		
Lost information	LOST	*	LS	61		

APPENDIX A-2. FIELDS AND GROUPS

- 0100 Aeronautics
 - 01 01 Aerodynamics
 - 01 02 Aeronautics
 - 01 03 Aircraft
 - 01 04 Aircraft flight instrumentation
 - 01 05 Air facilities
- 0200 Agriculture
 - 02 01 Agricultural chemistry
 - 02 02 Agricultural economics
 - 02 03 Agricultural engineering
 - 02 04 Agronomy and horticulture
 - 02 05 Animal husbandry
 - 02 06 Forestry
- 0300 Astronomy and astrophysics
 - 03 01 Astronomy
 - 03 02 Astrophysics
 - 03 03 Celestial mechanics
- 0400 Atmospheric sciences
 - 04 01 Atmospheric physics
 - 04 02 Meteorology
- 0500 Bibliography, reference, and management
 - 05 01 Administration and management
 - 05 02 Information sciences
 - 05 03 Economics
 - 05 04 History, law, and political science
 - 05 05 Human factors engineering
 - 05 06 Humanities
 - 05 07 Linguistics
 - 05 08
 - 05 09 Personnel selection, training, and evaluation
 - 05 10 Psychology
 - 05 11 Sociology
- 0600 Biological and medical sciences
 - 06 01 Biochemistry
 - 06 02 Bioengineering
 - 06 03 Biology
 - 06 04 Bionics
 - 06 05 Clinical medicine
 - 06 06 Environmental biology
 - 06 07 Escape, rescue, and survival
 - 06 08 Food
 - 06 09 Hygiene and sanitation
 - 06 10
 - 06 11 Life support
 - 06 12 Medical equipment and supplies
 - 06 13 Microbiology
 - 06 14 Personnel selection and maintenance (medical)
 - 06 15 Pharmacology
 - 06 16 Physiology
 - 06 17 Protective equipment
 - 06 18 Radiobiology
 - 06 19 Stress physiology
 - 06 20 Toxicology
 - 06 21 Weapon effects
- 0700 Chemistry
 - 07 01 Chemical engineering
 - 07 02 Inorganic chemistry
 - 07 03 Organic chemistry
 - 07 04 Physical and general chemistry
 - 07 05 Radio and radiation chemistry
- 0800 Earth sciences and oceanography
 - 08 01 Biological oceanography
 - 08 02 Cartography
 - 08 03 Dynamic oceanography
 - 08 04 Geochemistry
 - 08 05 Geodesy
 - 08 06 Geography
 - 08 07 Geology and mineralogy
 - 08 08 Hydrology and limnology
 - 08 09 Mining engineering
 - 08 10 Physical oceanography
 - 08 11 Seismology
 - 08 12 Snow, ice and permafrost
 - 08 13 Soil mechanics
 - 08 14 Geomagnetism
- 0900 Electronics and electrical engineering
 - 09 01 Components
 - 09 02 Computers
 - 09 03 Electronic and electrical engineering
 - 09 04 Information theory
 - 09 05 Subsystems
 - 09 06 Telemetry
- 1000 Energy conversion (Nonpropulsive)
 - 10 01 Conversion techniques
 - 10 02 Power sources
 - 10 03 Energy storage

APPENDIX A-2. FIELDS AND GROUPS (Continued)

- 1100 Materials
 - 11 01 Adhesives and seals
 - 11 02 Ceramics, refractories, and glasses
 - 11 03 Coatings, colorants, and finishes
 - 11 04 Composite materials
 - 11 05 Fibers and textiles
 - 11 06 Metals
 - 11 07 Miscellaneous materials
 - 11 08 Oils, lubricants, and hydraulic fluids
 - 11 09 Plastics
 - 11 10 Rubbers
 - 11 11 Solvents, cleaners, and abrasives
 - 11 12 Wood and paper products
 - 11 13 Corrosion and degradation
- 1200 Mathematical sciences
 - 12 01 Mathematics and statistics
 - 12 02 Operations research
- 1300 Mechanical, industrial, and civil engineering
 - 13 01 Air conditioning, heating, lighting, and ventilating
 - 13 02 Civil engineering
 - 13 03 Construction equipment, materials, and supplies
 - 13 04 Containers and packaging
 - 13 05 Couplings, fasteners, and joints
 - 13 06 Ground transportation equipment
 - 13 07 Hydraulic and pneumatic equipment
 - 13 08 Industrial processes
 - 13 09 Machinery, tools, and industrial equipment
 - 13 10
 - 13 11 Pumps, filters, pipes, tubing, and valves
 - 13 12 Safety engineering
 - 13 13 Structural engineering
 - 13 14 Environmental pollution
 - 13 15 Energy conservation
- 1320 Marine engineering and naval architecture
 - 13 21 Design construction, maintenance, salvage operation, and performance of all types of ships, boats, and marine equipment
 - 13 22 Structural mechanics as applied to naval ships. Stress analysis, elasticity, shock, and vibration
 - 13 23 Hydrodynamics
- 1400 Methods and equipment
 - 14 01 Cost effectiveness
 - 14 02 Laboratories, test facilities, and test equipment
 - 14 03 Recording devices
 - 14 04 Reliability
 - 14 05 Reprography
 - 14 06 Research
 - 14 07 General concepts
 - 14 08
 - 14 09 Geometric forms
- 1500 Military sciences
 - 15 01 Antisubmarine warfare
 - 15 02 Chemical, biological, and radiological operations
 - 15 03 Defense
 - 15 04 Intelligence
 - 15 05 Logistics
 - 15 06 Nuclear warfare
 - 15 07 Operations, strategy, and tactics
- 1600 Missile technology
 - 16 01 Missile launching and ground support
 - 16 02 Missile trajectories
 - 16 03 Missile warheads and fuzes
 - 16 04 Missiles
- 1700 Navigation, communications, detection, and countermeasures
 - 17 01 Acoustic detection
 - 17 02 Communications

APPENDIX A-2. FIELDS AND GROUPS (Continued)

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> 17 03 Direction finding 17 04 Electromagnetic and acoustic countermeasures 17 05 Infrared and ultraviolet detection 17 06 Magnetic detection 17 07 Navigation and guidance 17 08 Optical detection 17 09 Radar detection 17 10 Seismic detection 17 11 Miscellaneous detection 17 12 CONTACT Publications | <ul style="list-style-type: none"> 2000 Physics <ul style="list-style-type: none"> 20 01 Acoustics 20 02 Crystallography 20 03 Electricity and magnetism 20 04 Fluid mechanics 20 05 Masers and lasers 20 06 Optics 20 07 Particle accelerators 20 08 Particle physics and nuclear reactions 20 09 Plasma physics 20 10 Quantum theory and relativity 20 11 Mechanics 20 12 Solid state physics 20 13 Thermodynamics 20 14 Wave propagation | |
| <ul style="list-style-type: none"> 1800 Nuclear science and technology <ul style="list-style-type: none"> 18 01 18 02 Isotopes 18 03 Nuclear explosions 18 04 Nuclear instrumentation 18 05 18 06 Radiation shielding and protection 18 07 Radioactive wastes and fission products 18 08 Radioactivity 18 09 Reactor technology 18 10 Reactor materials 18 11 Reactor physics 18 12 18 13 18 14 | <ul style="list-style-type: none"> 2100 Propulsion, engines, and fuels <ul style="list-style-type: none"> 21 01 21 02 Combustion and ignition 21 03 Electric propulsion 21 04 Fuels 21 05 Jet and gas turbine engines 21 06 Nuclear propulsion 21 07 Reciprocating engines 21 08 Rocket engines 21 09 Rocket propellants 21 10 Engine components 21 11 General engine concepts 21 12 General propulsion concepts | |
| <ul style="list-style-type: none"> 1900 Ordnance <ul style="list-style-type: none"> 19 01 Ammunition, explosives, and pyrotechnics 19 02 Bombs 19 03 Combat vehicles 19 04 Explosions, ballistics, and armor 19 05 Fire control and bombing systems 19 06 Guns 19 07 Rockets 19 08 Underwater ordnance | <ul style="list-style-type: none"> 2200 Space technology <ul style="list-style-type: none"> 22 01 Astronautics 22 02 Spacecraft 22 03 Spacecraft trajectories and reentry 22 04 Spacecraft launch vehicles and ground support 2300 Planning Documents | |
| <ul style="list-style-type: none"> 9000 ABC Collection 9001 Energy Collection 9002 Intelligence Collection 9003 Seaplane Collection | <ul style="list-style-type: none"> 9004 EEO Collection 4/2/79 9005 9006 9007 | <ul style="list-style-type: none"> 9008 9009 9010 |

APPENDIX A-3. CODES FOR CENTER DOCUMENT TYPE
[Field (32)]

FR-CTR	=	Formal Center reports	}	Carderock and Annapolis since the merger
DR-CTR	=	Center Departmental reports		
FR-C	=	Carderock Formal reports	}	Carderock/premerger only
DR-C	=	Carderock Departmental reports		
FR-AN	=	Annapolis Formal reports	}	Annapolis/premerger only
DR-AN	=	Annapolis Departmental reports		
IR	=	Informal reports*		
PT	=	Patents, patent applications, related papers		
PA	=	Papers, articles, discussions of papers, presentations, symposia, workshops, conferences, lectures, viewgraphs, graphics		
CR	=	Contractor reports that are not a formal, departmental, or informal report		
IP	=	Informal papers		
		Includes: trip reports, interdept. memoranda, working papers, in-branch reports that are not IR; RFP's, proposals, specifications, drawings, etc.		
PD	=	Planning documentation, responses to AGORS, annual repts., five year plans, 1498's, etc.		
PL	=	Ships Plans		

*Includes: test and/or evaluation reports, letter reports, memorandum reports, technical manuals, design guides, operators or users manuals, specification development reports, training manuals or guides, speed letter reports, tech notes, tech memoranda.

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- 1. DTNSRDC REPORTS, A FORMAL SERIES, CONTAIN INFORMATION OF PERMANENT TECHNICAL VALUE. THEY CARRY A CONSECUTIVE NUMERICAL IDENTIFICATION REGARDLESS OF THEIR CLASSIFICATION OR THE ORIGINATING DEPARTMENT.**
- 2. DEPARTMENTAL REPORTS, A SEMIFORMAL SERIES, CONTAIN INFORMATION OF A PRELIMINARY, TEMPORARY, OR PROPRIETARY NATURE OR OF LIMITED INTEREST OR SIGNIFICANCE. THEY CARRY A DEPARTMENTAL ALPHANUMERICAL IDENTIFICATION.**
- 3. TECHNICAL MEMORANDA, AN INFORMAL SERIES, CONTAIN TECHNICAL DOCUMENTATION OF LIMITED USE AND INTEREST. THEY ARE PRIMARILY WORKING PAPERS INTENDED FOR INTERNAL USE. THEY CARRY AN IDENTIFYING NUMBER WHICH INDICATES THEIR TYPE AND THE NUMERICAL CODE OF THE ORIGINATING DEPARTMENT. ANY DISTRIBUTION OUTSIDE DTNSRDC MUST BE APPROVED BY THE HEAD OF THE ORIGINATING DEPARTMENT ON A CASE-BY-CASE BASIS.**