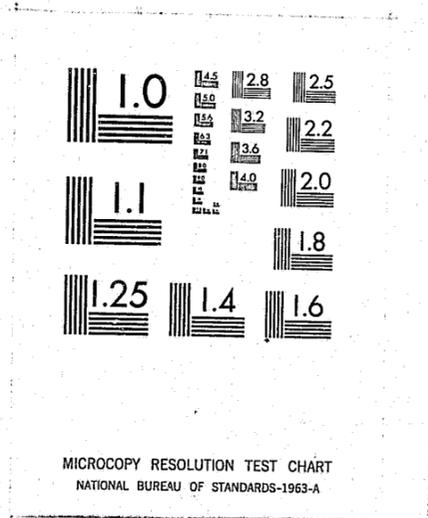


National Criminal Justice Reference Service



This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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National Institute of Justice
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CRIMINAL JUSTICE
HUMAN RESOURCES PLANNING
PROJECT

CRIMINAL JUSTICE CENTER
SAM HOUSTON STATE
UNIVERSITY

81920



NCJRS
MAR 22 1982
ACQUISITIONS

TECHNICAL DOCUMENTATION ON
SYSTEM UTILIZATION
PART I

Volume VII

U.S. Department of Justice
National Institute of Justice

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FOREWORD

Volumes VII and VIII of the Final Report for the Criminal Justice Human Resources Planning Project contain the full technical documentation for system utilization. Volume VII provides the basic guide for system utilization and Volume VIII contains additional documentation and reference material.

Volume VII, modeled after the Bibliographic Retrieval Service (BRS) user's manual, provides two chapters. The first chapter is intended to permit the user quick access and ready knowledge of the rudiments of system operation. Chapter 2 provides in-depth information on each command and user option.

Volume VIII is organized into four sections. The first section contains the basic thesaurus listing developed for the bibliographic data base. Section II is a listing of user functions by paragraph label and content while Section III provides the operational definition for each of the 702 paragraph labels used in the system. The final section of Volume VIII contains the data field layouts for the data bases.

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PREFACE

This manual directs your use of a Criminal Justice Data System. Though the scope of the data will expand to all areas of Criminal Justice Manpower Planning, the current data principally provides access to information required to deal appropriately with labor negotiations between law enforcement staff and agency management.

This system is original to Criminal Justice Manpower Planning. Other fields such as physics and economics have constructed data banks, but Criminal Justice has not previously had a tool of this type.

One way to view the data bank is to compare its contents to the contents of a file cabinet. The computer assists you in opening this cabinet much as a very well trained clerk would. You control the clerk by typing words on the keyboard of your computer terminal typewriter.

When you are satisfied with the computer clerk's response, stop. Converse further by typing more words. The computer is your conversational research assistant.

If this is your first experience with an online computer system you may feel a bit apprehensive. Knowing a few fundamentals of the system will help you to speed the process of becoming relaxed at the terminal.

The first thing to remember is that YOU are smart enough to do anything that you will ask the computer to do, but the computer can do it much faster. There is nothing subtle about the functions used in online computer searching. The computer only makes the most obvious connections between things, i.e., is there or is there not a match between what you asked for and what is stored in its "memory"? Are "education" and "educatoin" the same word?

The possibility that the second might be a misspelling of the first cannot occur to the computer as it most certainly would to you.

Occasionally the computer goes "down," which simply means it is temporarily out of service. Could you have caused it to go "down?" You will be relieved to know that there is nothing you can do to cause a computer failure. You'll also be glad to know that neither you nor any other user can destroy the records stored in the computer's "memory." Yet another thing you cannot do is to get access to other users' searches, nor can they get access to yours. Nor can you nor they charge searches against each other's accounts unless you exchange passwords. So all of this mechanical orderliness is something which you can depend on.

HOW TO USE THIS MANUAL

This manual is presented in two chapters. As you become experienced with the data system, your capabilities to access needed information will continually expand. In fact, once you become adept with the basics which this manual provides, you will be able to utilize the system in ways not directly addressed in the manual. Chapter I is constructed to quickly give you the ability to get into the system and actually do searches for a variety of information. These initial skills, which you will rapidly master, are in and of themselves sufficient to accomplish most of the tasks you may want to perform. However, experience has taught us that the more you become acquainted with the system's techniques, the more you will want to know about the increasingly sophisticated techniques available. Thus, while you will immediately be able to access the information and obtain meaningful results, using Chapter I. As you proceed to Chapter II, you will be exposed to ever increasing levels of system capability. Throughout Chapter I you will notice cross references to Chapter II. The purpose of this is to insure that the user can rapidly access more detailed instructions if needed.

This chapter includes instructions for getting into and out of the data system as well as providing basic techniques for searching, limiting the search results and providing documents resulting from searches.

1.1 GETTING INTO THE SYSTEM

Check the terminal for the location of the "Duplex" switch. Set the switch to "FULL." Turn on the terminal. (the location of the "ON" and "DUPLEX" switches vary from model to model). Pick up the phone. Dial the telenet number for your city. (See Appendix III for a listing of the telenet). When you hear a high pitched tone, place the receiver cord end down in the cradle slots. (The cradle is either on the terminal or in a small box next to it.)

Press the "RETURN" or "CARRIAGE RETURN" key twice. When the word "TERMINAL" appears, press the return key again. Wait for a single character to appear; then type "C 315 20BR", then type return. Wait for a message requesting the password; then type the password in the "XXXXXXXXXX" spaces, then return. Wait for a second message requesting a second password; then type the password on the "XXXXXXXXXX" spaces.

Wait for the message requesting news about the status of the system. Press the return key to avoid the news. Type Y if you want to see the news. Wait for a message requesting the name of the data base of interest. There are four data bases in the Criminal Justice data bank. These will be discussed later. Type in the name of the data base you wish to use, then type return. Wait for the number "1" to appear. This number requests your first search question. (See also Chapter II, sections 2,3,4, for more detailed instructions on system access).

1.1.1 STARTING UP AFTER BEING DISCONNECTED.

Occasionally, searchers are disconnected from the system before searches are completed. This may be caused by a variety of things, but it should not be a cause for alarm unless it happens frequently. If it does occur often, you might investigate your telephone connections, your model and your terminal.

If you should be disconnected in the middle of a search, simply dial in again and you will receive a message asking you whether you wish to continue the search which was interrupted. The procedure looks like this:

SIGN ON IS COMPLETE

ENTER YES IF BROADCAST MESSAGE
IS DESIRED:

You don't need to read the
message, so you depress RETURN.

RO111 RESTART IS POSSIBLE FOR DATE-
BASE 'TCJC'
REPLY 'Y' IF DESIRED-ELSE HIT
RETURN: Y

System message to you, if you want
to continue previous search, type a
"y". Otherwise, press RETURN and you
will be asked to specify a new database.

*SIGN-ON 11.04.27 03.05;79;
BRS/TCJC/1980-MAR 80
BRS-SEARCH MODE-ENTRY QUEEN
5_:

Since a "Y" was typed here,
system returns the next search
statement.

If you type "Y", as shown above, the system will give you the next search statement number and you can continue as though you had never been disconnected.

1.2 GETTING OUT OF THE SYSTEM

To get out of the system at any time, type ..off. Wait for the computer to tell you how long you have been seeking information. Remove the phone receiver from the cradle. Turn the terminal off. In the event that the terminal will not respond to you, simply hang up the phone and turn the terminal off. (See also Chapter II, Section 16 for more detailed instructions on system sign off).

1.3 CONTENTS OF THE CJDS DATA BANK

The information in this data bank is divided into four data bases. (You may think of this as four separate filing cabinets). Each data base contains different types of information. Each type of information is a separate data base.

Each data base is further divided into a unit of information known as a document. An individual document is made up of units of information known as paragraphs. You may think of documents as separate file folders; the contents of each may be thought of as paragraphs. For example:

CRIMINAL JUSTICE DATA BANK

Data Base.....	Bibliographic Data Base
Document.....	Journal Article
Paragraph.....	Title
Paragraph.....	Author
Paragraph.....	Abstract

The example above illustrates the relationships between a data base, document, and paragraphs. A data base may have many documents. A document may be composed of many paragraphs. (See also Chapter II, Section 1 for more detailed information as to organization of data base).

Each paragraph in every document has a specific paragraph label. Paragraph labels may be used to retrieve and print information. Located within Appendix VIII; are lists of all the paragraphs and paragraph labels for each data base within the data bank.

Each data base within the total data bank contains documents and paragraphs. However, because the types of information within each data base differ, the effective style of searching each data base differs also.

The following five sections describe the individual data base contents and suggest some of the techniques which you might want to use. The four data bases are:

1. Bibliographic Data Base
2. Contract Data Base
3. Non-Contract Data Base
4. Legal Reference Data Base

1.3.1 BIBLIOGRAPHIC DATA BASE (CBIB)

You will want to use this data base to find any journal article, book or government publication contained in the data base.

You can find information in this data base by asking the computer about the contents of any paragraph. Examples of paragraph contents are: title, author, abstract, date of publication, etc. You may want to turn ahead briefly to Appendix VIII, to get a better idea of the contents of this data base.

As mentioned above, virtually any word or name or subject which occurs to you may be typed at the terminal as a question for the computer.

However, book and journal articles in this file have also been indexed. Indexing is the process of organizing documents by concept or subjects. You may think of index terms as the equivalents of subject headings found in the yellow pages of most telephone books.

Moreover, just as an index of subjects appears as a separate section in many telephone books, a separate index to the documents in this file has also been prepared. The index list is referred to as a "Thesaurus" (see Appendix VII).

You would use the thesaurus if you wish to use keywords or phrases which most likely would obtain a group or set of documents dealing with a specific topic. You may think of this as an aid in structuring your search. Not all the topics of possible interest to you will appear in the thesaurus term listing. If you find that your topic of interest does not appear, simply type in your own words and phrases as they occur to you. Remember that the thesaurus is an aid in structuring your search, not a replacement for your own ideas. You may want to turn briefly to the thesaurus to view some of the words and phrases available to you.

When you use terms from the thesaurus which are phrases, (such as "bargaining unit") always be sure to type adj between each word in the phrase (for example, bargaining adj unit). This will ensure that the computer will find the information containing the exact thesaurus phrase you are requesting.

When you use the thesaurus, you can always be sure that some information will be found for each term or phrase.

1.3.2 AGENCY CONTRACT DATA BASE (TCON)

You will find entire labor relations contracts in this data base between management and labor for over 250 law enforcement jurisdictions across the United States. Each contract is identified by a variety of variables such as jurisdiction name, LEAA region, etc.

All contracts are made up of clauses. Each clause in every contract has been coded by subject. Subject codes for this data base are the same as paragraph labels. Subjects in this data base should be searched by paragraph labels. Turn to Appendix VIII and examine the possible subject codes available to you for searching.

1.3.3 AGENCY NON-CONTRACT DATA BASE (TNCN)

You would use this data base to review data for those jurisdictions without formal labor contracts. Turn to Appendix VIII to review the options available to you in this data base.

1.3.4 LEGAL REFERENCE DATA BASE (TLEG)

You would use this data base to examine legal reference materials dealing with Public Employee Collective Bargaining. Data for each state in the United States is provided and a brief summary is included giving the current legal status of public employee collective bargaining in that state. Turn to Appendix VIII to review the kinds of information contained in this data base.

Specific information in this data base differs from other data bases in that references to legal data rather than specific legal text is contained in the various paragraphs. For example, the SMA paragraph (state mediation-arbitration) refers to the location of specific legal cases, discussions, statues, etc. in the Commerce Clearing House (CCH) publication Public Employee Bargaining. This format was used because the CCH publication is the most comprehensive and up-to-date source for legal information in the field of Public Employee Bargaining, and is widely available through libraries and local agencies.

1.3.5 DEMOGRAPHIC DATA

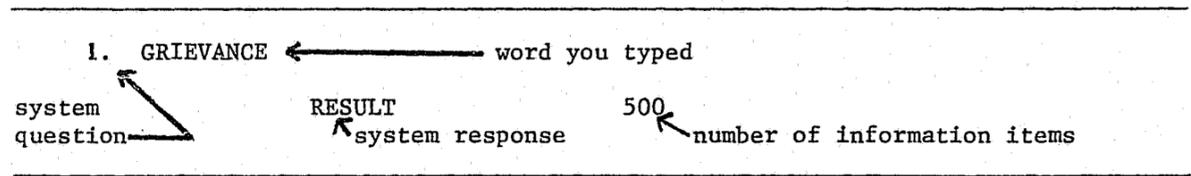
The Demographic Data consists of United States Census Data, the Uniform Crime report, Employment and Expenditure Data for the Criminal Justice System, and other numeric data sources. To review the options available in this data base turn to Appendix VIII.

The legal, contract and non-contract data bases are linked to the Demographic Data Base by the Census Geographical Area Code for cities, counties, states, and Standard Metropolitan Statistical Areas (SMSA). This is important because it allows you to identify jurisdictions with demographic characteristics to your own.

1.4 SEARCHING THE BIBLIOGRAPHIC (CBIB) BASE FOR A "RESULT"

The CJDS is conversational. Any word you would use to converse with an associate can be typed. If the computer can make no sense of the word you type (usually because you have misspelled it), it will reply "KEYWORD NOT IN DICTIONARY". (See also Chapter II Section 1.3). Normally, the system replies "RESULTS" and states the number of times your words appears in the Data Base.

For example, if you typed in the "grievance", the "RESULT" would appear as follows:



1.4.1 SEARCHING CBIB TO LOWER THE "RESULT"

Frequently, if you type only one word, the "RESULT" count may be as high as 500 or more. The number listed for the result identifies information items in which the word you typed appears, of which only a small segment is likely to be of concern to you. If the "RESULT" count is high, you would need to examine each information item to determine whether or not it dealt directly with your information need.

However, to save you time, your computer clerk can accept more than one word at a time.

Just as an associate in conversation with you would have a more precise understanding of your information need if you described it in more than one word, the computer, acting as retrieval clerk, would obtain information more closely related to your need if you typed more than one word.

For example, if you typed "grievance and disability," the result count might be reduced to 50. This is because you have now required the information items you retrieved to contain both the words "grievance and disability". If you typed "grievance and disability and retirement", the "RESULT" count might be reduced to 5, because you have now required that all three words be contained in the information items you have retrieved.

The more words you use to describe your information need, the more precise your computer result is. (See also Chapter II, Section 6 for more detailed instructions on searching).

On occasion, some words have the same meaning as others. Your computer understands this if you provide the other meaning with the term "or". For example, you might request information such as "grievance and (disability or injury)".

Note that when you use the term "or" you must enclose both terms in parent theses as is the example above.

Finally, some ideas can only be expressed as a phrase. Your computer understands this if you use the term "adjacent" (typed as "adj" for short). For example, you might request information such as "grievance and (disability or injury) and bargaining adj unit". (See also Chapter II, Section 6.2).

SEARCH ILLUSTRATION

1. GRIEVANCE		
	RESULT	500
2. GRIEVANCE AND DISABILITY		
	RESULT	50
3. GRIEVANCE AND DISABILITY AND RETIREMENT		
	RESULT	5
4. GRIEVANCE AND (DISABILITY OR INJURY)		
	RESULT	65
5. GRIEVANCE AND (DISABILITY OR INJURY) AND BARGAINING ADJ UNIT		
	RESULT	15

1.5 HOW TO PRINT INFORMATION FROM THE CBIB DATA BASE

Now that you have learned to tell the computer how to find what you need, additional commands must be learned to instruct the computer to print what you have found.

The `..print` instruction consists of four parts:

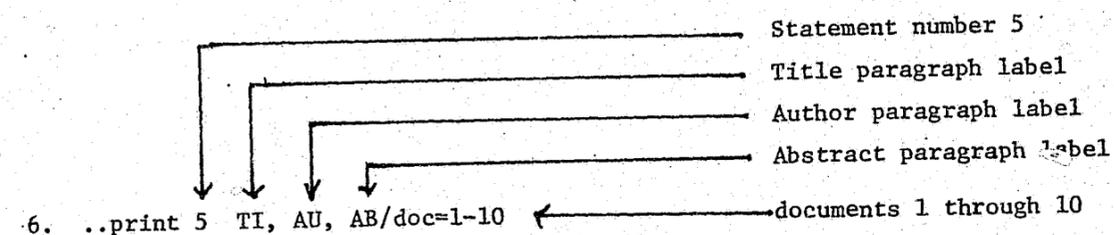
- `..print`
- the number of the question asked
- paragraph labels for the pieces of information to be printed
- the number of pieces of information or "documents" you would like to have printed.

A typical print instruction appears below. The preceding question which instructed the computer in finding the information is also shown so that you can see the context of the `..print` command use.

5. Grievance and (disability or injury) and bargaining adj unit

Result

15



Your print instruction to the computer would then cause it to print out a list of documents 1 through 10 including the title and author of the document and an abstract of the document.

Any combinations of paragraph labels may be printed in any order you specify.

The term "doc" specifies to the computer complete record, including all information related to that specific record. Document numbers may not exceed the "RESULT" number listed, but any lesser number may be requested; for example, `/doc=1` or `/doc=1-5`.

Instead of listing the paragraph labels you want to print, you could simply specify `all`; for example,

6. `..print 5 all/doc=1-10` all paragraphs within the document

This would present the entire documents, rather than just specific paragraphs as in the previous examples.

If you use "all", instead of specifying paragraphs, you likely will find that too much information would be printed. Experience with the system will help you to determine the best method for you to use.

1.6 HOW TO STOP PRINTING IF TOO MUCH MATERIAL APPEARS

The computer may gather more information than you really want to see. If you find that you are printing too much, simply press the terminal key marked "Break" or "Interrupt". This will stop the printer and allow you to return to searching.

1.7 HOW TO RETURN FROM PRINTING TO SEARCHING

To return to searching, after completion of printing or following your use of interrupt or breaking, type `..search`. The computer will automatically return with a statement number and wait for your next query.

1.8 HOW TO PRINT LENGTHY DOCUMENTS

Even if you don't feel like sitting at the terminal for the length of time it would take for the computer to print all of the answers to your questions, you might still want to see the total documents.

In this event, you can tell the computer to print the document off-line (at the central computer site). The printed information will be mailed to you within 24 hours. The command to do this is similar to the `..print` command. You still must specify the question number, paragraphs, and document numbers. However, instead of saying `..print`, you must type `..printoff` as it appears in the examples below.

6. `..printoff 5 TI, AU, AB/doc=1-10`

or,

6. `..printoff 5 all/doc=1-10`

See also Chapter II, section 7 for more detailed instruction on the `..print` command.

1.9 SEARCHING THE CONTRACT (TCON), LEGAL (TLEG), AND NON-CONTRACT (TNCN) DATA BASES

The basic search routines in the above data bases are similar to those for the Bibliographic (CBIB) data base with several additional features and options. These are discussed below.

1.9.1 Searching for a Result

The most appropriate method for searching these data bases is by searching on paragraph labels. Each paragraph label represents a specific kind of information for each data base therefore free-text searching is not needed nor desirable.

For example, the paragraph label AXG for the contract data base contains salary schedules for those jurisdictions that have labor contracts. The paragraph label NWS for the non-contract data base contains salary schedules for those jurisdictions that do not have labor contracts. In the legal data base the paragraph label STS contains the state summary of public employee bargaining, legal information, for all fifty states. (See Appendix VIII for available paragraph labels.)

The following example illustrates a basic search of the paragraph label in the contract data base.

1. WG

RESULT 298

In this example, the user searched for clauses or portions of clauses in the labor contracts which contain wage and salary information. The result indicates that there are, within the entire contract data base, 298 documents which contain wage and salary information.

1.9.2 Lowering the Search Results

In the above example the user may only be interested in wage and salary information in a specific geographic area. The system allows the user to identify a geographical area by state or states. The following example illustrates this feature.

1. WG

RESULT 298

2. 1 and Nevada

RESULT 7

As is indicated by the reduction in the "RESULT", the addition to the search strategy of the state of Nevada lowers the "RESULT" of the search to seven documents.

If you have fully described your information request by using and, or and adj, statements and still the "RESULT" is too high, it may be desirable to ask the computer to limit the information further by use of demographic variables. The demographic paragraph labels are searched in the same way as the contract, legal and non-contract paragraph labels. For purposes of specifying parameters for the demographic variables however the @ sign must precede the paragraph label. The following example illustrates this process.

2. 1 and Nevada

RESULT 7

3. 2 and @PQ > 300000

RESULT 2

As the above example illustrates the user only wanted to retrieve those documents which contain wage and salary information for jurisdictions with populations greater than 300,000 within the state of Nevada.

The user may further limit by use of the symbols = (equal to), < (less than), as well as > (greater than). Thus the command

6. 5 and @QM > 10000 and @QM < 15000

RESULT 85

would limit the results to those jurisdictions with a population per square mile (QM) of 1,000 to 15,000. The user could use the @QM to specify a specific population density. For example

7. 6 and @QM = 12000

RESULT 3

1.10 PRINTING THE RESULTS IN THE CONTRACT (TCON), LEGAL (TLEG), AND NON-CONTRACT (TNCN) DATA BASES

As in the Bibliographic (CBIB) data base, additional commands are necessary to print the results of your search. The print commands for the above data bases are exactly the same as for the Bibliographic (CBIB) data base. Note that an @ sign is not included in the print statement. For example:

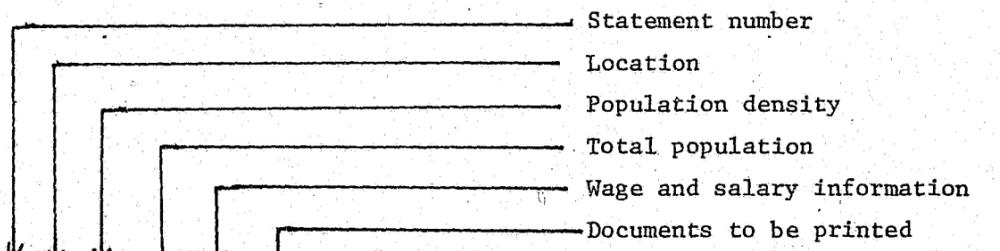
6. 5 and @QM > 10000 and @QM < 15000

RESULT 85

7. 6 and @QM = 12000

RESULT 3

8. ..print 7 LO, QM, PO, WG/doc=1-3



1
LO Las Vegas
QM 12,000
PO 307,316
WG narrative omitted in example

2
LO Reno
QM 12,000
PO 302,106
WG narrative omitted in example

1.11 CHANGING DATA BASES

To change from one data base to another enter the command `..change`.
The computer will request another data base name. Example:

5. `..change`

R0102 enter data base name:

When the user changes from one data base to another, all the previous
input made while signed into the first data base will be erased.
(See Section 10 for a shortcut change procedure.)

SECTION I
THE ORGANIZATION OF BRS DATABASES

THE BRS SEARCH SYSTEM

The BRS search program is a general purpose interactive program that provides for both online and offline searching of databases, regardless of their size and content. This program can convert databases of all sizes and structures into a common format for both controlled vocabulary and free text (natural language) searching on a single system.

Because the BRS program was designed as a general purpose program and not tailored to a specific database, some of its features will be utilized only when accessing particular databases and not others. The purpose of this chapter of the manual is to provide a general discussion of all the BRS system features.

THE USER/SYSTEM DIALOG

The part of the retrieval program that is of particular interest to the user of any system is the online dialog.

The BRS dialog is short, simple, and easy to learn, consisting entirely of English language words or abbreviations.

The full BRS dialog has been abbreviated by the programmers to further enhance its simplicity. Most of the tutorial information that was routinely printed along with each system message or instruction to the user was removed from the original version to save interaction time at the online terminal. For example, the first instruction the user originally received when signing on to the system indicated:

```
RO201 ENTER ONE OF THE FOLLOWING COMMAND:
      ..SEARCH ..PRINT ..LIMIT ..CHANGE
      ..OFF ..SAVE ..EXEC
```

Since the user invariably begins with the ..SEARCH command, BRS now automatically puts the user into search mode when first dialing in:

```
BRS - SEARCH MODE - ENTER QUERY
1_:
```

However, the beginning users must rely on this manual to provide the additional tutorial information necessary to interact with the system until they are familiar with the available responses.

In any case, in only a few sessions at the terminal, all users should find it very easy to manipulate the system to produce desired retrieval results.

A complete list of all original system messages and instructions may be found in Appendix I.

There are many different databases available for online searching on the BRS system.

A brief discussion of the BRS database loading procedures is essential to an understanding of the way in which the content of these databases may be manipulated by the user at the online terminal. The discussion in this section will be presented in extremely simplified and non-technical terms, and it will serve as the basic background information to which later sections of the manual will refer.

All users are encouraged to read this section very carefully before reading any further in the manual.

1.1 THE BRS LOADING PROGRAM

The BRS loading programs treat each database as a series of individual documents, any one of which may provide the answer to a user inquiry. From the user point of view, a document is a bibliographic citation or a citation plus an abstract.

The information in each document loaded into the BRS system is divided into separate paragraphs, labeled with 2 or 3 alphabetic characters (e.g. TI for title) so that users may elect to print only certain parts of each document and, most importantly, so that the user may qualify a search by requesting that the terms which are entered be found in a specific paragraph within a document.

The actual number of paragraphs selected for each database depends on the amount of information that is available for each document in that base. For example, each document in the legal reference database has been divided into 24 separate paragraphs of information. Figure 1 provided a breakdown of the paragraph structure of the legal reference database.

The information within each paragraph may be further divided into sentences when necessary. This sentence within paragraph structure is particularly important in the case of the abstract paragraph, because it permits the user to require that the terms for which he is looking appear in the same sentence if necessary for more precise retrieval. This procedure is described in detail in Chapter II, Section 6.2.4.

1.2 SEARCHABLE PARAGRAPHS

After a paragraph division has been made for each database, the decision must then be made as to which paragraphs will be searchable--i.e., which parts of the citation may the searcher access directly.

If the information in a specific paragraph is to be directly searchable, all the significant words in that paragraph must be entered separately into a special file called the Dictionary File to serve as access points to that document.

1.3 THE DICTIONARY FILE

The Dictionary File is precisely what its name implies--a dictionary where all the searchable terms are entered in alphabetical order. There is one entry in the file for each term from every searchable paragraph in a document. This entry contains statistics indicating the total number of unique documents in the database containing that term. This file is the place where search terms (keywords) are "looked up" when the user enters them in a search statement at the online terminal.

The Dictionary File contains all those terms (words, word fragments, codes, etc.) from all paragraphs that have been designated searchable for that particular database. For example, if the user wants to be able to search the content of a title, all the significant words in the title paragraph must be entered into the Dictionary File for that database.

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The word search will appear in the User Function column of each of the paragraph breakdown sheets to indicate to the user which paragraphs have been designated searchable for that database. (See Figure 1).

1.3.1 STOPWORDS

The discussion in the above section specifies that only significant words from the searchable paragraphs are loaded into the Dictionary File. This means that all common articles such as "the", "a", "of", etc., have been removed or stopped. They do not go into the Dictionary File and cannot, therefore, be entered in a search statement. They will, however, appear when the documents are printed out so that the titles and abstracts will read normally.

A list of these nonsignificant or "stopwords" is available in Appendix II.

1.3.2 POSITIONAL INFORMATION

In addition to the alphabetic listing of the term itself, the Dictionary File also contains all the information pertaining to the exact position of each term in the document.

The following information is noted after each unique term entry in the Dictionary File:

1. Document number--the number of the document containing the term.
2. Paragraph label--the labels of the paragraphs in the document containing the term.
3. Sentence number--the number of the sentence within the paragraph (applicable primarily to the abstract paragraph in which there are usually several distinct sentences.)
4. Word number--the number of the word within the sentence.

The fact that the BRS Dictionary File for each database contains all this positional information for every unique term means that the system may satisfy requests that terms be in a specific positional relationship to one another without ever looking at the actual text of the citation itself. This, in turn, permits searchers to combine (nest) various levels of search logic in a single search statement (see Chapter II, Section 6.2.3).

Figure 2 provides a graphic display of the Dictionary File entries that would result when a sample document title is loaded into the system.

PARAGRAPH STRUCTURE FOR THE LEGAL REFERENCE DATABASE

<u>PARAGRAPH LABEL</u>	<u>CONTENT OF PARAGRAPH</u>	<u>USER FUNCTION</u>
LO	Location	Search
TI	Name of State	Search
STS	State Summary of Public Employee Bargaining Legal Information	Search
SRG	State Statutes and Regulations	Search
SCV	State Coverage	Search
SUR	State Union Recognition-Elections	Search
SBU	State Bargaining Units	Search
SBG	State Bargaining or Meet to Confer	Search
SBS	State Bargaining Subjects	Search
SBN	State Bargaining Negotiations	Search
SMA	State Mediation-Arbitration	Search
SWC	State Working Conditions: Grievance-Awards	Search
SUS	State Union Security	Search
SUP	State Unfair Practices Employer-Union	Search
SSP	State Strikes-Picketing	Search
SET	State Enforcement Tools	Search
SFD	Other Devices with Possible Impact	Search

<u>TERM</u>	<u>DOCUMENT NUMBER</u>	<u>PARAGRAPH LABEL</u>	<u>SENTENCE NUMBER</u>	<u>WORD NUMBER</u>
labor	0001	TI	1	3
negotiating	0001	TI	1	4
police	0001	TI	1	1
relations	0001	TI	1	5
skills	0001	TI	1	2

*Sample title: "Negotiating skills for police labor relations."

Note: Although the term "for" appears in the title here, it is a stopword, so it does not go into the Dictionary File nor does it get assigned a word number; therefore "labor" becomes word number 3, not 4. This is important to remember when you want to do searches with the ADJ operator.

The discussion of search logic in Chapter II, Section 6.2 will refer back to Figure 2 above to illustrate the actual function of each of the positional search operators and indicate the matching process that the system goes through in the Dictionary File to satisfy requests containing positional operators.

KEEPING THIS DISCUSSION OF THE WAY IN WHICH DATABASES ARE STRUCTURED AND LOADED INTO THE BRS SYSTEM IN MIND, THE USER MAY NOW PROCEED TO THOSE SECTIONS OF CHAPTER II CONTAINING SPECIFIC INSTRUCTIONS FOR THE RETRIEVAL OF THE DOCUMENTS IN THESE FILES.

MANY OF THE LATER SECTIONS OF THE MANUAL WILL CONTAIN REFERENCES TO THE PARAGRAPH STRUCTURE OF THE DOCUMENTS AND TO THE DICTIONARY FILE THAT HAS BEEN SET UP FOR EACH DATABASE.

THUS THE PRECEDING INFORMATION IS CRUCIAL TO YOUR UNDERSTANDING OF ALL THE INSTRUCTIONS TO FOLLOW.

There are three possible types of access methods which can be used to reach the BRS computer in New York. These methods are:

1. TELENET public dial service
2. TELENET in-WATS service
3. Direct dial service

Directions for using each of the three methods are presented in this section.

2. TELENET PUBLIC DIAL SERVICE

The TELENET international dial-up communication network provides the major form of access to the BRS computer.

With local dial ports in all major cities and many smaller metropolitan areas, the TELENET network permits users to dial a local number and then be switched to the BRS computer at hourly rates significantly lower than normal long-distance charges.

A list of the cities with public dial TELENET nodes is reproduced in Appendix III.

Instructions for dialing into BRS via TELENET public nodes are displayed in Figure 3.

2.2 TELENET IN-WATS SERVICE

A special 800 number is available nationwide to enable BRS users with no TELENET node in their city to reach the BRS computer at a flat connect hour rate of \$15.00.

The instructions for dialing in to BRS via this in-wats service are presented in Figure 4.

Special TELENET passwords, in addition to the regular BRS password, are assigned to users who request this type of access at membership time.

2.3 DIRECT DIAL SERVICE

Users with their own WATS telephone service or who have access to Federal Telephone Service (FTS) lines, may dial directly into the BRS computer.

The direct dial numbers at the BRS Computer Center are provided at membership time to those users who indicate their intent to bypass TENENET and dial directly in via their own communication network.

Preliminary Instructions:

1. You may set your terminal on either HALF or FULL duplex. The sample session below is for access in HALF duplex, with notes for FULL duplex procedure indicated where appropriate.
2. Dial the number of the TELENET node listed for your city in Appendix III.
3. When you hear the high-pitched tone, place the receiver in the coupler in (or accompanying) your terminal.

NOTE: If you get either a busy signal or no answer upon dialing your node number, you should call the TELENET Customer Service number collect to report the problem:

(202) 347-2424

4. Press the CARRIAGE RETURN key on your terminal twice to call up TELENFT.
5. Follow the procedure indicated in the sample terminal session below.

Sample TELENET sign-in (user input is in lower case to distinguish it from system responses)

```
CR CR
TELENET
612 DL2
TERMINAL= ti33
@hhaallff
@c 315 20br
31520BR CONNECTED
ENTER BRS PASSWORD:
XXXXXXXXXX
```

Enter the identifier for your terminal type from the list in Appendix V.

Enter the word "half"--each letter will print twice (eliminate this step for full duplex operation).

Enter the BRS computer address:
c 315 20br

See Chapter II, Section 4 for BRS sign-on instructions

FIGURE 4
USING THE TELENET IN-WATS SERVICE

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Preliminary Instructions:

1. You may set your terminal on either HALF or FULL duplex. The sample session below is for access in HALF duplex, with notes for FULL duplex procedure indicated where appropriate.
2. Dial the following TELENET in-WATS number: (800) 424-9494
3. When you hear the high-pitched tone, place the receiver in the coupler in (or accompanying) your terminal.

NOTE: If you get either a busy signal or no answer upon dialing this 800 number, you should call the TELENET Customer Service number collect to report the problem:

(202) 347-2424

4. Press the CARRIAGE RETURN key on your terminal twice to call up TELENET.
5. Follow the procedure indicated in the sample terminal session below.

Sample TELENET in-WATS Sign-in (user input is in lower case to distinguish it from system responses)

CR	CR	
TELENET		Enter the identifier for your terminal
800DW12		type from the list in Appendix V.
TERMINAL=ti33		Enter your telephone area code--each
YOUR AREA CODE=661122		letter will print twice
@hhaallff		Enter the word "half"--each letter will
@id 31520br/userX		print twice (eliminate this step for full
		duplex operation)
PASSWORD=		Enter entire line after @ sign, with X
XXXXXXXXXX		representing the user number provided to
		you by BRS at membership time
315 20BR CONNECTED		See Chapter II, Section 4 for BRS sign-on
ENTER BRS PASSWORD:		instructions
XXXXXXXXXX		

SECTION 3
BASIC ENTRY MECHANICS

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The mechanics of entering searches into the BRS system from the online terminal will vary slightly depending on the type and model of the access terminal.

The general procedures are described below, with a special section at the end of the discussion for the user to fill in the exact procedure required at his particular type of terminal.

3.1 USER ENTRY PROMPT

The system will always prompt the user for input by typing a special character indicating that it is awaiting a user response. On most types of terminals the prompt translates as an underline followed by a colon or as a back arrow followed by a colon--e.g.:

_: or ←:

On other terminals, the user prompt may appear slightly different. In any case, the user should not attempt to enter any data until the user prompt has been automatically generated by the system.

If, for some reason, no user prompt is given by the system, the user should press the CARRIAGE RETURN key to receive either the prompt or the appropriate instruction.

3.2 TRANSMITTING ENTRY

Sending the completed user entry from the terminal to the system is usually accomplished by merely pressing the CARRIAGE RETURN key on the terminal.

If additional steps are required on some terminals, users will be so instructed upon membership.

Several system messages contain the instruction HIT CR TO CONTINUE or RETURN TO CONTINUE. This means the user is to press the CARRIAGE RETURN key to continue the session in progress.

There is no need to ever capitalize any words or letters when entering searches at the online terminal. Most terminals automatically translate all user entry into upper case letters.

However, the user input in all of the search examples in this manual are in lower case letters so that they may be easily distinguished from the system responses, which are always in upper case letters.

3.3 THE CORRECTION OF TYPING ERRORS

3.3.1 BACKSPACING

Errors made in typing can be easily corrected by backspacing to the error and simply typing the correct letter/s over the incorrect one.

The actual backspacing mechanics varies depending on the type of terminal. Backspacing wipes out the original input and replaces it with the new entry.

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3.3.2 LINE DELETION

It is possible to delete an entire line of input by entering the question mark (?) at any point along a line of entry. If a line of entry has been nearly completed before an early error is detected, the question mark can be entered at the point the error is discovered--e.g.:

1: police and ghettos and ?

1:

3.4 BREAK FUNCTION

To discontinue online printing, the searcher depresses the BREAK key at any point. After the system has interrupted its display of documents or statements or terms, it will respond with a user cue indicating it is awaiting another command from the user:

1: negotiating adj relations with labor
RESULT 13

2: ..print 1 ti/doc=1-5

1
TI FACT SHEET: NEGOTIATING SKILLS FOR POLICE LABOR RELATIONS

2
TI DEFINITIONS AND A MODEL FOR FOUR DESIGN (BREAK)

Note: At the present time, the BREAK function only operates to stop online printing. It does not serve to interrupt search processing.

3.5 SYSTEM ERROR MESSAGES

If errors are made in entry, the system will always respond with an appropriate error message, indicating what the user has done wrong so that he may re-enter correctly. Appendix I contains a list of all the possible error messages, their explanation, and the appropriate action to be taken by the user. Please refer to this Appendix when you are uncertain about the proper response to an error message.

Be assured that there is nothing that the individual user can do to cause a general system failure! If at any time during a session the system fails to respond to entry from a user, it is not the result of user error but is an indication that the system is experiencing some kind of internal difficulty from which recovery will, in most cases, be rapid.

When the user has reached the BRS computer via either TELENET or direct dial (see instructions in Section 2) and has received the message:

315 20BR CONNECTED

he will then receive the message:

ENTER BRS PASSWORD:

It is at this point that the user enters the unique 6-character BRS password assigned to him at the time of membership. Note that the entry is "masked" by the system as a privacy protection.

4.1 ERROR MESSAGES RECEIVED AT SIGN ON

The system responds to the entry of all authorized passwords with the message:

SIGN ON IS COMPLETE

Problems at sign-on time are indicated by one of the following messages:

NAME ERROR

This message returns in response to the entry of unauthorized passwords or to authorized passwords that are entered incorrectly. Sign off is immediate after this message and the user is automatically disconnected from the system.

E0702 BRS UNAVAILABLE FOR SIGN ON

This message indicates that the system is operational and that a master terminal transaction is in process at the computer center to activate all passwords. The user should hang up and wait 10 minutes to repeat the sign-on procedure again.

4.2 USER SUBACCOUNT CODES

In addition to the entry of his authorized 6-character user password, the user may enter a 2-character subaccount code to identify certain subaccounts within his central user organization.

This subaccount code is optional and need be used only if the terminal user wants the monthly billing from BRS under a single password to be broken down by specific subaccounts for his own internal billing or accounting purposes.

The subaccount code is to be entered at the same time as the password, leaving a space between the 6-character password and the 2-character code--e.g.:

ENTER BRS PASSWORD:
smithu nu

In this example, the user entered the subaccount code nu after his password to indicate that the search was being done for the nursing school.

The subaccount code cannot exceed 2 characters, but it may be either alpha or numeric. These codes are assigned by the user, not by BRS, and need not be registered with BRS.

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A password security feature is available to searchers who wish to add another personal code to their BRS-assigned passwords. See Chapter II, Section 24.4.7 for instructions.

4.3 ENTERING DATABASE NAME

The first instruction after the sign on is completed successfully is always

ENTER DATABASE NAME:

In response to this message, the user enters the 4-character search label for the database to be accessed:

ENTER DATABASE NAME: CBIB

BRS/CBIB/1979-NOV 80

BRS - SEARCH MODE - ENTER QUERY

1_:

Note that after the user enters the database label, the system automatically reconfirms the database choice, indicates the online currency status and places the searcher in search mode.

4.3.1 ACCESSING THE BRS NEWS FILE

BRS users may access an online news file at any time during the system's operational hours by responding to the message ENTER DATABASE NAME with the label NEWS:

ENTER DATABASE NAME: news

The news file database has a paragraph structure similar to the other BRS databases. Once signed into the news file the user can request printing of any or all these paragraphs. The paragraph structure and content of the news file is listed in Figure 5, followed by a sample terminal session.

Note that the searcher is automatically placed in print mode after signing into the news database. Multiple paragraphs may be displayed by entering the abbreviations separated by a comma; however, once the original paragraphs requested have been printed, the searcher must re-enter the ..print command to obtain additional NEWS paragraphs.

FIGURE 5
STRUCTURE OF THE BRS NEWS DATABASE

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<u>PARAGRAPH NAME</u>	<u>PARAGRAPH LABEL</u>	<u>CONTENT OF PARAGRAPH</u>
NEWS	NW	System news items, program changes, etc.
SDIRUNS	SD	Schedule for automatic SDI processing, by database
ONLINE	ON	Schedule of <u>online</u> coverage
OFFLINE	OF	Schedule of <u>offline</u> coverage
CURRENT MONTH	CU	Schedule of coverage for current month files
ROYALTIES	RO	Database royalty fees
TRAINING	TR	Scheduled BRS training sessions
FILENEWS	FN	News about changes to current databases, upcoming new files
ALL	ALL	All of the above information

SAMPLE SEARCH ON THE NEWS DATABASE

ENTER DATABASE NAME: news

BRS-PRINT MODE-SPECIFY PARAGRAPHS
nw/doc=1

1
NW NEWS

THE MESSAGE FILE WILL BE CLEARED EVERY MONDAY NITE. PLEASE MAKE SURE U CHECK FOR MESSAGES ON MONDAY EACH WEEK.....THANK-YOU. THE SYSTEM IS AVAILABLE 8AM-8PM EST., MONDAY THRU FRIDAY. EXCEPT MONDAY THE HOURS ARE 8:30 AM to 8:00 PM (EST). PLEASE NOTE THAT THE SYSTEM WILL SHUTDOWN PROMPTLY AT 6 PM (EST) AND BE BACK UP AT 6:10 PM EACH DAY.

Searching on the BRS system is accomplished via a series of commands made by the user to the system indicating what type of services are to be performed.

In most instances, the BRS system will automatically place the user in search mode. However, the user has the option of requesting several BRS commands to perform various functions.

All the BRS commands available to the user are listed in Table 1 below:

TABLE 1
BRS USER COMMANDS

..SEARCH	..PURGE	..SEARCHOFF
..PRINT	..DISPLAY	..PRINTOFF
..LIMIT	..COST	..SDI
..SAVE	..USAGE	..EDIT
..CHANGE	..OFF	..TIME
..EXEC	..SET DETAIL	

Notice that all commands must be entered preceded by two periods. If the periods are omitted, the command will be unrecognizable to the system and an appropriate error message will be returned to the user indicating the mistake.

These commands activate the major processing functions of the system and put the user into a certain MODE of operation within the system. By using these commands in a logical sequence, the user can enter a search request, get a result statement, refine the search by using the LIMIT function and then ask for the results of the search to be printed either at his terminal online or offline at the BRS Computer Center.

Each of these commands will be discussed separately in detail in the following sections, accompanied by examples of their use in the online searching process.

The actual search terms used in all the sample searches in the manual are applicable for the CJDS databases, and the search results are hypothetical. The search terms you enter will be different, depending on the database you are accessing, but the general procedures described here for utilizing all the system commands is applicable to all databases in the BRS system.

It is in the SEARCH MODE that the keywords are entered by the user, searched by the system, and a resulting set of documents produced.

When first signing in to a database, the system will automatically put the user into the SEARCH MODE--e.g.:

```
ENTER DATABASE NAME_: CBIB
*SIGN-ON 14.07.37      12/02/78
BRS/CBIB/1979-NOV80
BRS-SEARCH MODE-ENTER QUERY
1_:
```

Note that the system automatically generates a statement number, followed by the user prompt (1_:). All search entries must be preceded by this system-generated statement number. The user may then enter his search term/s according to all the guidelines discussed in the remainder of this section.

At any other time during the online session, the user may activate the SEARCH MODE by typing in the command ..search.

6.1 PERMISSIBLE SEARCH TERMS (KEYWORDS)

The search terms will be referred to as keywords throughout the rest of this manual. Technically, they are called operands by the system, and some of the error messages may use this terminology.

There are 4 major types of keywords used to access BRS databases:

1. Author names
2. Controlled vocabulary terms
3. Free text (natural language) terms
4. Special code or numeric keywords.

Each of these keyword types are discussed in more detail in the following sections.

6.1.1 AUTHOR NAMES

Author names may be entered as keywords for only the bibliographic database. A detailed discussion of author searching, format requirements, etc., is presented in Chapter III, Section 6.4.

6.1.2 CONTROLLED VOCABULARY KEYWORDS

The bibliographic database available on the system is the result of a controlled vocabulary indexing system. As a result, each of the documents in this database contains a list of subject terms from a printed thesaurus that were assigned in the indexing process to denote the subject content of the document. (See Appendix VII).

These controlled vocabulary terms are always listed in a separate paragraph or paragraphs when documents are loaded for searching so that they can serve as direct access points to the document. Thus the subject terms from controlled thesauri are always permissible keywords for use in accessing the bibliographic database.

6.1.2.1 ENTRY FORMAT FOR THESAURUS TERMS

Keywords from printed thesauri should be entered exactly as they are listed in the book, with the following format exceptions:

1. All compound thesaurus terms must be separated by "adj"

INFORMATION RETRIEVAL enter as information adj retrieval

2. Apostrophe's in a thesaurus term should be omitted:
MANAGEMENT'S RIGHTS enter as managements adj rights

3. A slash (/) within or following a thesaurus term should be removed:

ABILITY/ enter as ability

Users must check the CJDS database thesaurus (Appendix VII) notes on entry format for thesaurus terms.

6.1.3 FREE TEXT KEYWORDS

In addition to controlled vocabulary terms, most of the databases may also be accessed via any word or combination of words or word stems that appear in the paragraphs designated searchable for that database.

This type of access is referred to as free text searching. Free text searching provides the user with much more flexibility since it permits many more access points to a given document and may greatly enhance the retrieval from databases which may have been indexed with limited or inadequate subject vocabularies. It is important to point out, however, that databases are usually most effectively searched with a combination of controlled vocabulary and free text terms.

6.1.3.1 ENTRY FORMAT FOR FREE TEXT KEYWORDS

There is no standardization of entry format imposed on free text entries as is the case with thesaurus terms.

In fact, the procedure for free text searching as has been indicated in Chapter I of this manual, will vary slightly from one database to another.

There are specific punctuation marks that cannot be entered as part of search terms on any database because they imply other meaning to the system. Special punctuation not permissible within a search term include commas, asterisks, and decimal points.

6.1.3.2 SEARCHING FOR ONE - OR TWO-DIGIT NUMBERS

If the user wants to look for either one - or two-digit numbers in the text or titles of documents or as special subject content codes on

certain databases, these numeric entries should be enclosed in single quote marks (these marks are called literals by the system)--e.g.:

1_ : colt adj '45'

This format precaution will distinguish the number 45 here from statement number 45 if it happens to be outstanding at the time. In the above example, the user was only at statement 1 when the entry was made, so the literals were not actually necessary. However, it is suggested that users get in the habit of enclosing all one and two-digit numbers in literals to avoid this situation:

45_ : police and weapons
RESULT 64

46_ : colt adj 45

E1405 SYNTAX ERROR ADJ FOR SENTENCE LEVEL. REENTER QUERY AFTER STATEMENT NUMBER

In the above example, the user was at statement 46 when he entered the search containing the number 45 as a search element. Since it was not enclosed in literals, the system assumed the user was referring back to statement 45, and returned the error message indicating that his logic was in error because the ADJ operator cannot refer back to a statement containing an AND operator (see Section 6.2.5).

6.1.4 SPECIAL CODE AND NUMERIC KEYWORDS

Some databases are also available for searching via various codes and numbers. This searching technique is covered in the first chapter of this manual.

6.2 BASIC SEARCH LOGIC

If a search entry consists of only a single term (keyword), the system simply checks to find the documents in the database that contain that keyword.

However, most information requests are such that more than a single search term is required to retrieve the relevant documents from a database. The complexity of many search requests makes it necessary for the searcher to use many different keywords in various combinations in a search entry.

Like most other information retrieval programs, the BRS program employs the basic logical principles of Boolean algebra as a framework for establishing various logical relationships between multiple entry terms.

6.2.1 BRS LOGICAL OPERATORS

Searchers can express the relationship that they desire between entry terms by using connectors called operators. There are two types of operators available to BRS searchers:

1. Standard Boolean operators

The following standard Boolean operators are available:

AND
OR
NOT
XOR

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These Boolean operators do not require any precise positional relationships between terms--only that they be either present or not present in the same document.

2. Positional operators

The following special operators are available to BRS searchers to indicate more precise positional relationships between terms:

SAME
WITH
ADJ

These operators require not only that the two terms be present in the same document but also that they occupy a particular position relative to one another in that document.

All these available operators are listed in Table 2, along with a brief description of their function.

The operators have been listed in hierarchical order, according to the degree of specificity they imply. The OR operator requires the least specific relationship between two terms, and the ADJ operator requires the most specific relationship.

The rules that apply to the entry of these operators and examples of their use in searching are presented in the sections that follow.

TABLE 2
BRS LOGICAL OPERATORS

<u>OPERATOR</u>	<u>REQUIRED RELATIONSHIP</u>
OR	Either one or both terms can be anywhere in the document.
AND	Both terms must be in the same document.
NOT	A term must not appear anywhere in a document.
XOR	Either one or the other term must be in the document but not both.
SAME	Terms must be in the same <u>paragraph</u> .
WITH	Terms must be in the same <u>sentence</u> .
ADJ	Terms must be immediately <u>adjacent</u> to one another, in that order.

6.2.2 ENTRY FORMAT FOR LOGICAL OPERATORS

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The following rules apply to the use of the logical operators:

1. Operators are entered as words. The ampersand (&) cannot be substituted for the word AND, nor the comma for the word OR.

2. There must be a space inserted both before and after each operator so that the system will recognize it as separate from the keywords--e.g.:

1_: adult adj education and financial adj support

3. If no operator is inserted between keywords, the system assumes the OR relationship--e.g.:

1_: adult adj education adult adj education adj programs

There must, of course, be a space between the two keywords if no operator is being used.

The system assumes the OR only if no previous operator has been used in that search statement. If a previous operator is present, any spaces following it will be translated to that same operator--e.g.:

1_: adult adj education and fees financing

In this case, the system will insert the AND operator between the two keywords fees and financing where the user has left a space.

4. There is no limit to the number of operators that may be used in a single search statement.

5. A search statement must not end with an operator. If this statement was entered:

1_: adult adj education or adult adj education adj programs or

the system would return the error message:

E1412 QUERY DOES NOT END WITH AN OPERAND. REENTER QUERY AFTER STATEMENT NUMBER

Here we see the system terminology "operand", referring to the fact that the search statement does not end with a keyword.

6.2.3 COMBINATION SEARCH LOGIC (NESTING)

A combination of logical operators may be entered together in the same search statement by using parentheses to make the relationships clear. The examples that follow indicate the use of nested search logic in a single search statement:

1_: (adult adj education or vocational adj education) and fees

The parentheses here separate the two keywords in the OR relationship from the third keyword to which the user wants either or both of them related.

In more complex searches, several sets of parentheses may be required:

1_: (adult adj education or vocational adj education) and (fees or financing)

If the search is complicated and has many keywords, it may be easier to break it up into several statements and then AND and OR the statement numbers together to get the total relationship. 35

Statement numbers may be "and-ed" or "or-ed" together and may also be used in combination with keywords as in this example:

```
1_ : adult adj education or adult adj education-programs
RESULT      80
2_ : financial adj support or tax adj support or fees
RESULT      120
3_ : rural adj areas or rural adj education
RESULT      52
4_ : 1 and 2 and 3
RESULT      11
```

This same search could have been entered as follows:

```
1_ : adult adj education or adult adj education-programs
RESULT      80
2_ : 1 and (financial adj support or tax adj support or fees)
RESULT      26
3_ : 2 and (rural adj areas or rural adj education)
RESULT      11
```

The total search could have also been entered all in the same search statement:

```
1_ : (adult adj education or adult adj education adj programs) and
(financial adj support or tax adj support or fees) and
(rural adj areas or rural adj education)
RESULT      11
```

The result is exactly the same for all three entry formats.

The best way to validate the fact that the logic of a search statement is being interpreted correctly by the system is to enter it once with all the keywords in the same statement and look at the result, then break the search down into separate statements, AND and OR these statements together, and see if the result is the same.

6.2.4 EXAMPLES OF POSITIONAL FREE TEXT LOGIC

Referring back to the discussion of the structure of the Dictionary File for a given database in Chapter II, Section 1.3.2, we learned that this Dictionary File contains all the positional information for each term that is listed, indicating the exact position of that term in the document. Figure 2 displayed the Dictionary File for the title of a sample document.

Thus it is possible for searchers to request very precise positional relationships between keywords.

There are three search operators which may be used when the position of terms is important: 36

- SAME** Terms are to be in the same paragraph--i.e., requires that the terms have the same document number and the same paragraph label when they are looked up in the Dictionary File.
- WITH** Terms are to be in the same sentence--i.e., requires that the terms have the same document number, the same paragraph label, and the same sentence number when they are looked up in the Dictionary File.
- ADJ** Terms are to be adjacent to one another--i.e., requires that the terms have the same document number, same paragraph label, same sentence number, and consecutive word numbers when they are looked up in the Dictionary File.

Our sample title "Negotiating Skills for Police Labor Relations" could then be retrieved with the following entries:

```
negotiating same police (terms have same
negotiating same police same relations paragraph label)

negotiating with labor (terms have same
negotiating with labor with relations sentence number)

negotiating adj skills (terms have consecutive
negotiating adj skills adj police word numbers)
```

The positional search operators may also be combined together in the same search statement or combined with any of the other standard Boolean operators (AND, OR, NOT, XOR)--e.g.:

```
negotiating adj skills with police
police adj labor adj relations with negotiating
negotiating adj (skills or relations)
(negotiating adj skills) and (police adj labor)
```

Note that parentheses are used when positional operators and standard Boolean operators are used together in the same statement, but that it is not necessary to use parentheses with combinations of the positional operators only. However, the order of the positional operators in the statement when more than one is being used is important. Restrictions on the order in which these positional operators can be used together are discussed in Section 6.2.5 below.

Although the above examples have been directed toward retrieving a sample title, the same procedures are also applicable when free text searching on the abstract paragraph or any other searchable text portions of a document.

6.2.5 RESULT LEVELS PRODUCED BY LOGICAL OPERATORS

There is a restriction on the order in which logical operators can be used in a search statement. When searches are processed, the resulting

strings of document numbers that qualify for the specified entry terms are merged according to the operator applied to the terms. The degree of precision of the merged result strings may decrease depending on the operator that is used.

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Therefore, the result strings will differ in their degree of preciseness. The most specific level is the word level, and the most general level is the document level. Table 3 shows the hierarchy of operators and the level of the result of a logical operation:

TABLE 3
HIERARCHY OF LOGICAL OPERATORS

<u>HIERARCHY (HIGH TO LOW)</u>	<u>RESULT LEVEL (SPECIFIC TO GENERAL)</u>
ADJ	WORD
WITH	SENTENCE
SAME	PARAGRAPH
AND	DOCUMENT
OR	DOCUMENT
XOR	DOCUMENT
NOT	DOCUMENT

The system always checks the level of the result string for each operation. Thus, before a result string of an operation can be further processed using a new operator, the system must find that the level of the result string of the second operator is on a level equal to or lower than the level of the previous operator.

Given these restrictions, searchers must be careful when referring back to earlier statement numbers that may contain logic that produced result strings on a lower level than that of the next operation.

For example, referring back to the retrieval of the sample title "Negotiating Skills for Police Labor Relations", this search sequence would be incorrect:

```
1 : police with labor
RESULT          97
```

```
2_ : 1 adj relations .
```

```
E1405 SYNTAX ERROR, ADJ FOR SENTENCE LEVEL. REENTER QUERY AFTER
STATEMENT NUMBER.
```

2_:

In this case, the result string of the second operator ADJ is on a higher level than the level of the first operator WITH.

The error message indicated in the example above will always return when logical errors of this type are made in back referencing, indicating

the exact nature of the error by giving the operator and the result level to which it cannot apply. 38

Common sense will usually dictate the sequence in which you use the operators. The above entry doesn't really make logical sense--you have asked the system to find all documents that have the words police and labor in the same sentence. The system cannot then apply the ADJ operator to a sentence-level result.

6.3 PARAGRAPH QUALIFICATION

In Section 1.3, it was pointed out that the Dictionary File for each database contains the significant words from all searchable paragraphs of descriptor fields, titles, and abstracts.

Thus, when a keyword is entered in a search, documents that contain that keyword anywhere within any of the searchable paragraphs of the document will return.

Fortunately, searchers may achieve more precise retrieval results by requesting that the keyword/s they enter be in a specific paragraph or paragraphs within a document. This process is called paragraph qualification, and it is extremely important in searching all databases.

6.3.1 THE PARAGRAPH QUALIFICATION PROCEDURE

The procedure for designating and labeling specific paragraphs of information for each document within a database was discussed in Section 1.1. As a result of this loading procedure, the user may qualify any search entry by typing in the keyword or keywords followed immediately by a paragraph label enclosed between two decimal points. This indicates to the system that the user wants only documents that contain this keyword in that specific paragraph--e.g.:

```
1_ : negotiating.ti.
```

This entry will return documents that contain the word negotiating in the title of the document.

6.3.2 ENTRY FORMAT FOR PARAGRAPH QUALIFICATION

The paragraph qualifier is to be placed immediately after the keyword to which it is to apply, preceded and followed by decimal points. Do not space between the keyword and the qualifier.

If the same qualifier is to apply to more than one keyword, the entry format would be as follows:

```
1_ : (negotiating or labor).ti.
```

The stipulation for using the above format is that the terms to which the qualifier applies must be in an OR, ADJ, or WITH relationship. If the same qualifier is to be applied to terms in an AND or NOT relationship, the qualifier must be attached to each term separately:

1_: negotiating.ti. and skills.ti.

not:

1_: (negotiating and skills).ti.
E1410 QUALIFIER FOR DOCUMENT LEVEL OPERAND. REENTER QUERY AFTER
STATEMENT NUMBER

The error message here indicates that you have tried to attach a qualifier to a document level logical operation.

6.3.3 MULTIPLE PARAGRAPH QUALIFICATION

The searcher may qualify a keyword to more than one paragraph at a time--e.g.:

1_: negotiating.ti,ab.

In this case, the system will look for the word negotiating in both the title and the abstract paragraphs. Note that the two paragraph labels are separated by a comma and no spaces. This procedure may be used with any number of individual paragraph labels.

This capability is especially useful for databases such as CJDS which has two descriptor paragraphs (DE or ID). If a keyword is to be found as a descriptor or index term but the user does not care whether it has major or minor emphasis, the searcher can enter:

1_: textbooks.DE,ID.

6.3.4 NEGATIVE PARAGRAPH QUALIFICATION

It is also possible to request that a keyword not be present in a certain paragraph or paragraphs by using the appropriate paragraph label preceded by two decimal points instead of one--e.g.:

1_: negotiating..ti.

This entry tells the system that the user wants to find all documents that contain the term negotiating anywhere except in the title.

This process is called negative paragraph qualification, and may be particularly useful when searching for a single word which may have multi-meaning or which may be both a subject word and an author name. For example if you are interested in documents which contain the term lawless in a subject context, it is necessary to eliminate those documents which contain the term lawless in the author paragraph by entering a negative paragraph qualification as follows:

1_: lawless..au.

This procedure will restrict output to those documents in which the term lawless has a subject connotation.

6.3.5 QUALIFICATION WITH STATEMENT NUMBERS ("AFTER THE FACT QUALIFICATION") 40

Paragraph qualifiers may be attached to statement numbers as well as keywords, so long as the statement number represents keywords in OR, WITH, or ADJ logical relationships. Qualifiers may not be attached to statement numbers that represent a document level result--AND statements, NOT statements, or LIMIT statements.

For example, you may enter this search:

1_: negotiating or labor
RESULT 200
2_: 1.ti.
RESULT 50

However, you may not enter this search:

1_: negotiating and labor
RESULT 64
2_: 1.ti.

E1410 QUALIFIER FOR DOCUMENT LEVEL OPERAND. REENTER QUERY AFTER
STATEMENT NUMBER

The error message indicates that you have tried to attach a qualifier to a statement number that represents a document level result.

This capability of "after the fact qualification" is a very powerful system feature and can save much time at the online terminal. Note this example:

1_: negotiating adj (skills or techniques) with police adj labor
adj (relations or programs)
RESULT 27
2_: 1.ti.
RESULT 5

This very long and complicated search entry need not be re-entered if the user decides after seeing the results that he would like to restrict the search to the titles only.

6.3.6 NON-QUALIFIED KEYWORDS MAY PRODUCE IRRELEVANT RESULTS

Keeping in mind that the Dictionary File for a given database contains all the terms from all the paragraphs that have been designated searchable for that file, it is obvious that the failure to make use of the paragraph qualifiers in searching frequently results in a high percentage of irrelevant citations.

The probability of retrieving irrelevant citations is particularly high when entering keywords that may have multiple meanings. If, for example, you have a request for "values of police" and you enter the term VALUES with no paragraph qualification, you will get back an article entitled "Management By Objectives" because the abstract of the citation

contained the following sentence:

"The values of this particular technique for budgeting need further evaluation."

The word VALUES appears here, but the citation is irrelevant to this particular request. The searcher could have avoided this problem by qualifying the term VALUES to the subject descriptor paragraphs--e.g.:

1_ : values.DE, ID.

6.4 AUTHOR SEARCHING

Author names are directly searchable on the bibliographic database.

The names of authors for a document are always in a separate paragraph labeled AU. This paragraph will contain the names of one or two authors. If there are more than two authors, the name of the first author will appear followed by the phrase "and others."

6.4.1 AUTHOR NAME ENTRY FORMATS

The individual parts of the author name (last name, first name or initial, second name or initial, etc.) are entered separately for that database:

a
abacus
adams
-
-
aid
-
arthur
-
-
zebra
zebras
-
-
zernoff
-

Therefore, when searching for an author name, the user must invert the name and request that the last name be adjacent the first name or initial by using the ADJ operator:

smith adj john

smith adj j

The searcher may have many alternatives for entry of the author name in a search.

For example, to locate all citations by John Robert Gray, the possible search entries would be:

gray	(retrieves any gray)
gray adj john	(retrieves Gray, John)
gray adj j	(retrieves Gray, J)
gray adj j adj robert	(retrieves Gray, John Robert)
gray adj j adj r	(retrieves Gray, J. R.)
gray adj john adj r	(retrieves Gray, John R)

Perhaps the most useful and common format to remember when searching for authors would be:

1_ : gray adj (j or john)

Note: it is not possible to enter:

1_ : gray adj j\$

The entry of the truncated initial J will not pick up all J. Grays because the truncation restriction discussed in Section 6.5.2 means that the letter J truncated will retrieve only the first 100 terms in the Dictionary File beginning with J, including all subject terms from titles and abstracts, etc., that begin with J as well as just personal names.

Nor is it possible to get around the truncation restriction by entering the initial J\$ (truncated) with a qualification to the AU paragraph.

1_ : gray adj j\$.au.

The truncation must be resolved by the system before the paragraph qualification will operate.

Users are cautioned to try all the possible combinations that might be useful to insure complete retrieval of an author's papers.

Searchers are also reminded to use paragraph qualification with any author searches when the last name only is being entered if that name might also appear as a subject term in other parts of the document:

1_ : wood.au.

However, it is not necessary to qualify an author entry when first names or initials are being attached using the ADJ operator:

1_ : wood.au. adj eileen

It is extremely unlikely that these two words would be next to each other in that order in any other place in the document.

6.5 THE TRUNCATION FEATURE

The truncation symbol (\$) may be attached to any keyword or keyword stem to indicate to the system that all terms in the Dictionary File beginning with that word or stem are to be automatically included in the search statement.

The truncation symbol (\$) should be placed immediately after the keyword or stem with no spaces separating it from the keyword--e.g.:

43

police\$

In response to this truncated entry, the system will look for all entries in the Dictionary File for that database that begin with the 6 letters p o l i c e. For example, if police\$ is entered as a keyword, the search will cover all those controlled vocabulary terms from the CJDS thesaurus that begin with police, such as POLICEMAN, as well as other forms of the word such as POLICED, POLICEWOMAN, etc., that are found in other searchable paragraphs.

Keeping the diverse content of the Dictionary File in mind, searchers must be careful not to truncate word stems that could produce many irrelevant forms. For example, this entry:

l_: pupil\$

might logically be entered if the user was interested in all those terms having to do with pupils as a synonym for students. As a shortcut to entering all the separate thesaurus terms beginning with the letters p u p i l such as PUPIL-PERSONNEL, the searcher could enter the term pupil\$ truncated. However, if this truncation is entered, it would search not only the many terms that do relate to pupils as students but also to the pupil as an anatomic part of the eye--e.g., these entries in the Dictionary File would be included:

pupillary
pupillary-dilation

A user interested in pupils as students would probably not appreciate receiving a printout containing articles discussing pupillary dilation!

6.5.1 CHARACTER RESTRICTIONS WITH TRUNCATION

In order to avoid situations like the one above in which the unlimited truncation of the stem pupil\$ retrieved unrelated documents, searchers may place a character restriction on truncations, specifying the maximum number of characters that are to follow the stem or word being truncated--e.g.:

pupil\$1

In this case, the system would search for those entries in the Dictionary File that contain the 5 letters p u p i l and only 1 other character, so that the search would include pupil and pupils but not pupillary or pupillary-dilation.

This character restriction feature is especially useful when you are looking for both the singular and plural forms of a term but not for other variations.

The searcher may restrict truncated entries to any number of characters--44
e.g.:

infant\$3

This entry would retrieve all documents containing the terms INFANT, INFANTS, INFANT'S and INFANTILE but not INFANTICIDE, because the term INFANTICIDE contains more than 3 characters past the stem infant. Note, then, that the number 3 here means up to 3 characters after the stem, not that the term must have exactly 3 characters after the stem. Note also that the apostrophe in the possessive form INFANT'S counts as a character when free text searching.

6.5.2 TRUNCATION LIMITATIONS

The \$ placed immediately after a keyword will search only up to the first 100 entries in the Dictionary File that begin with that keyword or stem.

If the searcher enters a truncated term that will generate more than 100 different word forms, the system will interrupt with a message indicating the overflow--e.g.:

l_: educ\$

E1417 TOO MANY WORDS FOR EDUC. QUERY ACCEPTED WITH WORDS AND
COUNTS FOR TERM ONLY AS BEFORE THE OVERFLOW.

RESULT 3465

The result given is only for the number of documents which contain the first 100 of the terms generated by the truncation.

Remember that it will take the system considerably longer to process searches that contain truncated terms that will generate a large number of individual keywords. Truncations should always be restricted with a character limitation whenever possible to avoid long delays and many irrelevant citations. If you are looking only for the singular and plural forms of a term, you should always enter the term with the truncation and a character limit of 1.

Truncation is an extremely valuable system feature, but it should be used with discretion.

6.6 THE ROOT FEATURE

There is a special operator called ROOT which asks the system to display for the user a list of all the entries in the Dictionary File that begin with a particular word or stem.

Once the user is in SEARCH MODE, the ROOT operator may be used as follows: The word ROOT is entered first, followed by a space and then the keyword or stem which is to be rooted:

l_: root infant

In response to this entry, the system will print out all the terms in the Dictionary File that begin with the letters i n f a n t, but there

will be no final result statement. This is the main difference between the ROOT procedure and the similar truncation procedure. The ROOT produces only a display; the truncation does not produce a display but only a final result statement.

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An obvious advantage of using the ROOT procedure is to discern the many various forms of a term as it may appear in the Dictionary File. The ROOT display may provide the user with good clues for additional keyword forms to include in a search, or, more importantly, may remind the searcher of the irrelevant terms that may result from an unrestricted truncation.

If there are more than 100 terms generated by a ROOT operator, the system returns the same overflow message given in response to an overflow truncation.

6.7 MAXIMUM SIZE RESTRICTIONS FOR SEARCH STATEMENTS

A single search statement can be no longer than 234 characters, including spaces. Any backspace used in the process of correcting typing errors also counts as a character.

A single search statement may occupy multiple lines on the terminal, as long as the total character count doesn't exceed 234. The number of characters which the user types on one line will depend on the terminal type he is using. The user need not be concerned about the maximum number of characters per line, because the terminal will automatically return the carriage to the next line when the user has reached the end of the previous line. The user should just continue to type, even though the carriage may automatically return in the middle of a keyword, etc.

If the user enters a search statement that is longer than 234 characters, the system will return the following message:

```
E1404 QUERY TOO LONG. REENTER QUERY AFTER STATEMENT NUMBER
```

Since there is a restriction of 234 characters per single search statement, longer searches with many keywords will have to be split up into several statements. There is no restriction of the number of statements that can be used to enter a single intellectual inquiry, nor is there a maximum number of keywords that can be entered per search.

There is essentially no limit to the number of statements that are possible since the system will generate up to 999 search statements during an online session.

6.8 THE RESULT STATEMENT

The result given in response to each search entry represents the total number of unique documents in the database that contain the term or combination of terms after the necessary logical operations have been performed.

6.8.1 "KEYWORD NOT IN DICTIONARY" MESSAGE

The following message will return in response to any keyword that

is not listed in the Dictionary File for the database that is being searched: 46

```
KEYWORD NOT IN DICTIONARY
```

This message will always be preceded by the actual term that was not found and, if this is the only term in the search statement, a result of 0--e.g.:

```
l_: zebra
```

```
ZEBRA    KEYWORD NOT IN DICTIONARY
RESULT   0
```

In response to this message, the user should always check to see that the keyword is spelled correctly. If the spelling is correct, then this message means that the keyword is not in any of the searchable paragraphs of any of the documents in that database.

If an invalid keyword is entered in a statement in an "OR" relationship with other terms that are valid, the processing will continue on the other terms and a result given for them--e.g.:

```
l_: zebra or cats or dogs
```

```
ZEBRA    KEYWORD NOT IN DICTIONARY
RESULT   50
```

In this case, even though the keyword ZEBRA was not in the Dictionary File, there were entries for the other two keywords in the file.

If an invalid keyword is entered in a statement containing any other logical operators (AND, NOT, WITH, ADJ, etc), processing of the entire statement will be discontinued and a result of 0 returned:

```
l_: zebra and cats and dogs
```

```
ZEBRA    KEYWORD NOT IN DICTIONARY
RESULT   0
```

Special note: When the system returns the message KEYWORD NOT IN DICTIONARY, if the term that was not found was longer than 20 characters, the system, for expediency, will reprint only the first 20 characters of the term in the message--e.g.:

```
l_: psychophysiological-disorders adj criminals
```

```
PSYCHOPHYSIOGOLIC-DI    KEYWORD NOT IN DICTIONARY
```

The term psychophysiological-disorders was spelled wrong here, and the message returned for this reason, not because the system did not, in fact, read all 27 characters of the total term.

SECTION 7
THE ..PRINT COMMAND

The ..PRINT command requires the system to display the results of a search statement immediately on line at the terminal. After entering a search statement and learning how many documents qualify, the user can have any number of those documents printed by entering the ..PRINT command. The searcher may choose to see only one document, a small sample of documents, or all documents that qualified for his/her search.

7.1 COMPLETE ..PRINT STATEMENT

If the searcher wishes to enter the ..PRINT command in a complete statement, all the following elements must be included:

```

..PRINT      s      xx,yy,zz/doc=n
             (statement (specific (document/s
             number)    paragraphs) requested)

```

Indicated below are the various rules for each element with a description of the several options available to users.

7.1.1 STATEMENT NUMBER

A single statement number must be specified directly after the ..PRINT command, separated by a space, as illustrated in the following example:

```

1_ : adult-education and financial-support
RESULT      50

2_ : ..print 1 xx,yy/doc=n

```

7.1.2 SPECIFYING PARAGRAPHS

The searcher must specify the particular paragraphs of the documents which are to be displayed. As discussed in Section 1.1, each document is separated into various paragraphs which are given specific labels. Figure 1 gives the paragraph breakdown for the legal reference database, indicating the appropriate paragraph label for each unique type of information within a citation. The various options for specifying paragraphs for printing are listed in Table 4.

TABLE 4
OPTIONS FOR SPECIFYING PARAGRAPHS

all	All the available paragraphs for documents in the particular database will be displayed.
ti	The 2-character paragraph labels may be specified individually or collectively separated by commas and no spaces; the labels can be entered in any order. Only the paragraphs requested will be displayed.
au,ti	
bibl	Displays a predetermined set of default paragraphs, either as assigned by the BRS System (see Appendix V), or as arranged by individual password-holder (see Section 24.4.2) via the ACCT profile option.
bibl,td,ab	Displays the default paragraphs plus any other paragraph label/s as stipulated.

Therefore, the complete ..PRINT command could be entered in several forms depending upon the searcher's need for specific parts of the document:

```
..print 1 all/doc=n
```

In the above example, the user has requested that the document/s in statement 1 be displayed in full paragraph format.

```
..print 1 ti/doc=n
```

In the above example, the searcher wishes to scan the titles only of the document/s retrieved in statement 1.

```
..print 2 ti,au,an/doc=n
```

In the above example, the user wishes to have the title/s, author/s, and accession number/s displayed for the document/s retrieved in statement 2.

```
..print 1 bibl,de,id/doc=n
```

In the above example, the user has requested that the default paragraphs plus the major and minor descriptors be displayed for the document/s in statement 1.

The user must make a paragraph selection every time the ..PRINT command is entered with a new statement number.

Consult the CJDS paragraph label(Appendix VIII)to check precise paragraph labels.

7.1.3 REQUESTING DOCUMENTS

Finally, the searcher must indicate the number or range of documents to be displayed. The various doc= options are listed in Table 5.

TABLE 5
OPTIONS FOR REQUESTING DOCUMENTS

doc=all	All documents in the list (result) will be displayed without stopping.
doc=1	Only the first document in the list will be printed.
doc=1-10	The first ten consecutive documents in the list will be displayed; the hyphen indicates consecutive documents.
doc=20	The twentieth document in the list will be printed.
doc=1,5,12	The first, fifth and twelfth documents will be printed; the comma separates non-consecutive documents; no more than 25 non-consecutive documents can be requested at one time.

The paragraph labels may be entered in any order by the searcher; however, the system will display the records in standard database format. Note that each document is numbered when displayed on line; the document/s most recently added to the database will be printed first.

When the system has completed printing the requested document/s, the message END OF DOCUMENTS is transmitted. To obtain the next document in the same paragraph format, the searcher can simply depress the carriage return key which will prompt its display automatically.

7.2 DEFAULT TO SEARCH MODE

If all possible documents retrieved as the result of a particular statement have been displayed, the system message is END OF DOCUMENTS IN LIST. When the last document has been printed, the system will revert to search mode automatically as illustrated below:

```
3_ ..print 1 bibl/doc=146
   146
   AU GOOBER, IVAN J.
   TI NEW YORK'S EXPERIENCE IN POLICE LABOR RELATIONS
   LO NEW YORK CITY
   PD 78
   R0601 *END OF DOCUMENTS IN LIST

   BRS - SEARCH MODE - ENTER QUERY
   3_:
```

7.3 ERRORS MADE IN COMPLETE ..PRINT STATEMENTS

If an error is made anywhere in ..PRINT commands, an appropriate error message will be returned by the system:

```
..print 1 an, au,ti/doc=1-3
E4510 * A PARAGRAPH DOESN'T EXIST.
```

(The user left a space between the paragraph labels an and au)

```
..print 1, an,au,ti/doc=1,5,10
0506 * QUERY NUMBER MUST BE FOLLOWED BY A BLANK.
```

(The user inserted a comma after the statement number)

```
..print bibl/doc=5
E0503 * THE QUERY NUMBER MUST BE NUMERIC.
```

(The user omitted the query number (statement number) with the complete ..print command)

```
..print 2 all/doc=1-5,10,15
E0510 * ONLY TWO DOCUMENT NUMBERS CAN BE ENTERED WITH THIS
DOC-COMMAND.
```

(The user cannot include both consecutive and non-consecutive document ranges in the doc= element)

```
..print 2 ti,so,de,an/doc=1,5,10
E4510 * A PARAGRAPH DOESN'T EXIST.
```

(The user requested a paragraph label which does not exist for the database)

```
..print 4 all/doc=1-7
E0504 * THE QUERY NUMBER IS TOO LARGE.
```

(The user requested a non-existent statement to be printed; only statements 1 and 2 were outstanding)

7.4 ..PRINT MODE

If the searcher simply enters the command `..PRINT` and not the complete, shortcut `..print` statement with all elements indicated, the system assumes that the most recent (highest outstanding statement number) is to be displayed.

System messages prompt the user to specify paragraphs and documents:

```
1_ (police adj education or police adj programs) and fees
RESULT 38

2_: 1 and (rural adj areas or rural adj education)
RESULT 2

3_: ..print
BRS PRINT MODE --SPECIFY PARAGRAPHS_ : ti,de,id

R0521 * SPECIFY DOCUMENTS
doc=1
1
TI
```

In the above example, the system would display documents from statement 2 by default. To anticipate the second system prompt, the user can respond with the requested documents as follows:

```
3_: ..print
BRS PRINT MODE -- SPECIFY PARAGRAPHS_ : ti,de,id/doc=1
```

SECTION 8 THE ..LIMIT COMMAND

The `..LIMIT` Command is an optional command that may be used if the document list created by a previous search statement is to be further refined by asking the system to check for specific standard information such as language, dates, publication type, etc.

This type of information is called formatted field information, and it is always in separate paragraphs within the document.

8.1 FORMATTED FIELD DATA

The formatted field data which may be used to further refine a search result varies by database.

Searchers can refer to the paragraph breakdowns for each of the CJDS databases (Appendix VIII) to determine which paragraphs are limitable on that file. The designation limit is present in the User Function column for these paragraphs (see Figure 1).

The general procedure for limiting a search result is discussed in this section. The user must refer to the database-specific search guides to determine the content of the formatted fields for each file and the application of the `..LIMIT` command to each file.

8.2 THE LIMIT PROCEDURE

After a search has been performed and a result statement returned, the user types in `..LIMIT`. Note in this sample terminal sequence on the Agency Contract database:

```
R0201 ENTER COMMAND
_: ..search
BRS-SEARCH MODE-ENTER QUERY
1_: police adj education and financial adj support
RESULT 20
2_: ..limit
BRS-LIMIT MODE-ENTER STATEMENT NUMBER, FIELD NAME AND CRITERIA
2_:
```

We see here that the system responds to the `..LIMIT` command with the message:

```
BRS-LIMIT MODE-ENTER STATEMENT NUMBER, FIELD NAME AND CRITERIA

and then automatically regenerates the same statement number.
```

8.3 LIMIT STATEMENT PARAMETERS

The user may now enter a limit statement according to the following instructions:

The limit statement must always contain these four parameters, in this order and separated by spaces:

1. The statement number of the search result to be limited.
2. The field name (paragraph label) of the formatted field which the user wants to search.
3. The limit operator indicating that the information in the formatted field is to be equal to, less than, etc., the specification in parameter 4. The available limit operators are listed in Table 6 below.
4. The criteria--the actual data which is to appear in the particular formatted field in question.

TABLE 6
LIMIT OPERATORS*

<u>Operator</u>	<u>Symbol</u>	<u>Meaning</u>
eq	=	equal to
ne		not equal to
lt	<	less than
gt	>	greater than
wl		within limits of
ol		outside limits of

*Searchers may enter either the 2-letter operator or the symbol for that operator.

8.4 SHORT CUT LIMIT STATEMENTS

To save entry time at the terminal, all the limit criteria may be entered in a single command--e.g.:

```
..limit/1 qm eq 15000
..limit/1 pd gt 67
..limit/1 pt=b
```

Note that the basic ..LIMIT command is to be followed by a slash and no spaces and then the statement number, the paragraph label, the limit operator, and the criteria.

8.5 SAMPLE LIMIT STATEMENTS

The possible entries for parameters 2 and 4 (Section 8.3) depend on what database the user is searching. The example that follows demonstrates one of the more common limit statements.

8.5.1 LIMITING TO PUBLICATION DATE

```
2_ : ..limit/1 pd gt 70
```

The appropriate field name to use when limiting to dates is always pd or td. Here the searcher uses the limit operator gt to limit the search to documents with a publication year greater than 1970.

Note that only the 2 digits 70 rather than 1970 are entered. This procedure is standard across all databases.

8.6 MULTIPLE LIMITATIONS

It is possible to limit to more than one field of information in a single limit statement by using the standard Boolean operators.

For example, if the searcher (in the Agency Contract database) wants to limit a result to those jurisdictions with median family income less than \$10,000 and with a termination date of 1980, the following limit statement could be entered:

```
2_ : ..limit/1 if lt 10000 and td eq 80
```

8.7 ERRORS MADE IN LIMIT STATEMENTS

When errors are made in the limit statement, the system returns an error message indicating which of the four parameters is incorrect. For example (error is circled):

```
2_ : ..limit/1 dt eq 80
E2602 NAME FIELD NOT IN FORMATTED FIELD FILE
```

(Here the user mistyped the field name td)

```
2_ : ..limit/1 eg 80
E2603 TEST VALUES SHOULD BE PRECEDED BY OPERATORS OR MINOR
CONNECTORS ONLY.
```

In this case, the user had entered the operator eq as eg by mistake, and it was not recognized by the system as a valid limit operator)

If the information in the last parameter (the criteria) is entered incorrectly, there will be no error message but usually a result of 0--e.g.:

```
2: ..limit/1 pg eq 16
RESULT 0
```

Because the result system is unaware that the end of the range for population group is 15, it scans the formatted field for the wrong match and produces a 0 result.

8.8 RETURNING TO SEARCH MODE AFTER THE LIMIT COMMAND

After a ..LIMIT operation has been performed, the system will automatically return to search mode generating the next statement number:

```
BRS-SEARCH MODE-ENTER QUERY
1: police adj education and financial adj support
RESULT 146
```

```
2: ..limit/1 pd gt 73
RESULT 59
```

```
BRS-SEARCH MODE-ENTER QUERY
3:
```

SECTION 9 THE ..SAVE COMMAND

The ..SAVE command enables the user to have a search statement stored by the system for future processing.

A query may be saved for recall at some time later in the same day (a temporary save), for processing on a future day (a permanent save), or for processing on a different database.

9.1 TEMPORARY SAVES

The ..SAVE command may be used for storing inquiries to be processed at a later time during the same day.

This procedure might be useful when the searcher has just completed a long entry but is called away from the terminal for a long delay before he has a chance to print any of the documents. It is also the method the same search can be processed against other online databases without requiring re-entry. This latter function is discussed in more detail in Section 11.1.

Each query to be saved must be labeled with a different four-character code to identify it for later processing. The only restriction on the content of this code is that at least one of the four characters must be alphabetic.

The ..SAVE command and the label chosen by the user should be entered at the end of each intellectual search that the user wants to store.

9.1.1 PROCEDURE FOR TEMPORARY SAVES

The user types in:

```
..save xxxx (where xxxx is the 4-character label chosen
             by the user to identify that query)
```

The system responds with the message:

```
I4651 QUERIES HAVE BEEN SAVED. RETURN TO CONTINUE
```

All statement numbers outstanding at the time the command was entered have now been saved. Once a query has been saved, the system will hold it all day so that the user can call it up for processing at any time on any of the online databases with the procedure explained in Section 11.1. Even a system failure will not wipe out queries that have been saved.

The terminal sequence reproduced in Figure 6 demonstrates the use of the ..SAVE command:

FIGURE 6
USE OF THE ..SAVE COMMAND

```
BRS-SEARCH MODE-ENTER QUERY
1_ : police adj education and financial adj support
RESULT      20
2_ : 1 and rural adj areas
RESULT      10
3_ : ..save educ
I4651 QUERIES HAVE BEEN SAVED. RETURN TO CONTINUE
```

In this sample search, the user has asked that his search on police education and financial support be saved. He chose the four-character label educ to help him identify the content of the query. Each user can develop his own system for labeling searches to be saved, so long as the label doesn't exceed four characters.

9.1.2 THE REPLACE FEATURE

If the user enters a ..SAVE command with a label that he has already used previously that day for a different search, the system will respond with a message indicating the duplication:

```
E4656 NAME IN USE. ENTER 'REPLACE' OR ANOTHER NAME
```

In response to this message, the user may either enter the word replace, in which case the new query will replace the old one that was first assigned the label, or the user may re-enter the ..SAVE command with a different label for the new query.

9.2 PERMANENT SAVES

It is possible via the ..SAVE command to have a search stored permanently by the system so that the user may call it up for reprocessing at any time during the year.

This procedure may be useful for storing demonstration searches, frequently requested search topics, etc.

9.2.1 PROCEDURE FOR PERMANENT SAVES

The label for the permanent saves is also to be four characters in length, but it must be placed in parentheses and preceded by the letters ps. For example:

```
..save ps(educ)
```

The user must be responsible for keeping a list of all the labels for his permanent saves so that he can use those labels to call them up for reprocessing at any time.

SECTION 10 THE ..CHANGE COMMAND

The ..CHANGE command enables the user to have access to different online databases without first signing off the system and then signing in again to a new database.

At any time during a sign on session, the user may type in:

```
..change
```

and the system will always respond with this message:

```
R0102 ENTER DATABASE NAME: _:
```

The name of any available online database can be entered at this point.

If errors are made here, the same messages discussed in Section 4 may be encountered.

When the user changes from one database to another, all the previous input made while signed into the first database will be automatically erased.

If the user wants to have any of his previous search statements held over for processing on the new database, he must employ the ..SAVE command discussed in Section 9 before using the ..CHANGE command to switch databases.

10.1 SHORTCUT CHANGE PROCEDURE

Knowing that once the ..CHANGE command has been entered the system will ask for the database name next; the user can combine his two instructions together as follows:

```
..change/cbib
```

The database name is separated from the ..CHANGE command with a slash and no spaces.

10.2 CONNECT TIME STATISTICS AND CURRENCY STATUS

Each time the user changes from one database to another, the system automatically prints the online time that has elapsed since accessing the most recent database:

```
..change/cbib
CONNECT TIME      00:05
```

```
BRS/cbib/1979-OCT80
```

```
BRA-SEARCH MODE-ENTER QUERY
```

```
L_:
```

The connect time is always indicated in hours and minutes (HH:MM). In this example, the user spent 5 minutes in the previous database before signing in to the bibliographic database.

The system also reconfirms the new database choice and provides the online currency status. In this example, the searcher is accessing the bibliographic database which is online from 1979 and, at that time, updated through October 1980.

NOTE: If the user has entered a ..COST command during the search, the elapsed connect time will be indicated from the ..COST command rather than the last ..CHANGE. See Section 22, for details.

SECTION 11 THE ..EXEC COMMAND

The ..EXEC command notifies the system that the user wants to have a query that he had previously saved executed against the database to which he is currently signed on.

The previously saved queries can be called up by typing in:

```
..exec xxx (where xxxx is the label assigned by the user
           to the query that has been previously saved)
```

The system will then sequentially display all the search statements contained in that query, process them and five new result statements for the current database, after which the user can type in the ..PRINT command to see the documents or can further refine the query by adding new search statements or deleting others.

Searchers may use the ..EXEC command to pull out incomplete profiles which have been saved in previous sessions earlier in the day and complete the processing on the same database.

Perhaps the most frequent use of this ..EXEC command is to have a previously saved search processed on a new database (see Figure 7).

11.1 EXECUTING PREVIOUSLY SAVED SEARCHES

The sample terminal sequence reproduced below in Figure 7 illustrates the use of the ..EXEC procedure.

FIGURE 7
EXECUTING A PREVIOUSLY SAVED SEARCH

```
ENTER DATABASE NAME _ : cbib
*SIGN-ON 14.07.37 12/01/80
BRS/CBIB/1979-NOV80
BRS-SEARCH MODE-ENTER QUERY
1_ : stress and (therapy or psychotherapy)
RESULT 152
2_ : ..save stre
QUERIES HAVE BEEN SAVED.
2_ : ..change/cctr
```

```

CONNECT TIME      00:01
BRS/CCTR/1979-NOV80
BRS-SEARCH MODE-ENTER QUERY

  1: ..exec stre
BRS-Search MODE
000001 STRESS AND (THERAPY OR PSYCHOTHERAPY)
RESULT      990
NO MORE QUERIES - EXECUTION ENDED.

```

In the example in Figure 7, the search was entered first on the CBIB database. The user then saved that profile with the label STRE, changed over to the Agency Contract database (CCTR) and used the ..EXEC command to pull out that same profile for processing against the new database.

The unique aspect of this procedure in the BRS system is that all statements from the stored search are executed and printed out at the time of the ..EXEC recall command. The searcher can then print the documents resulting from any one of these individual statements as well as the final result statement or can use these statements to continue building the search where the EXECuted strategy left off. Thus it is possible to build a basic search strategy in one database, change to another and add to the strategy new thesaurus terms, indexing codes, etc., that may be specific to the new file.

SPECIAL NOTE: Searchers are reminded here that although the system does permit you to save a search profile formulated for one database for automatic reprocessing against any other databases, the keywords in that profile may not be valid across all databases.

In the majority of searches, the problem of vocabulary incompatibility will require that a search profile be significantly altered from one database to another.

11.1.1 THE ..EXEC COMMAND MUST BE ENTERED AT STATEMENT 1

In order to execute a previously saved search, the ..EXEC command must be entered when no other search statement numbers are outstanding. If other search statements are outstanding at the time you want to execute a saved search, you must first use the ..PURGE command to erase outstanding statements before typing in the ..EXEC command.

Since most saved searches usually begin with statement 1, the system cannot call up and execute this search if there is a higher statement number outstanding. The error message that will return when ..EXEC is entered in these cases is always:

```

E1321 STORED QUERY NUMBER NOT HIGHER THAN LAST.
ENTER NEW COMMAND

```

SECTION 12 THE ..PURGE COMMAND

The ..PURGE command is used to delete outstanding search or limit statements and the document lists (the RESULT) produced by those statements.

Although the system will generate up to 999 statement numbers, users should avoid having a large number of statements outstanding at any one time. All statement numbers that are not purged by the user and the document lists produced by those statements must be held in the system memory, occupying valuable online storage space.

Thus, all users should "PURGE" statements that are no longer being used or that have been saved for either temporary storage or offline processing. Also, if a searcher enters a search and is not satisfied with the results or makes many errors in the search statement, the statement number/s should be purged immediately.

The ..PURGE command can also be used to cancel offline printing and search statements any time during the day of original entry, or to cancel stored SDI profiles at any time. Finally, the ..PURGE command may be used to delete temporary or permanent save search labels.

12.1 PURGE PROCEDURE

The various options of the ..PURGE command are listed below in Table 7:

TABLE 7
..PURGE COMMAND OPTIONS

..purge	The immediately previous statement number will be purged.
..purge 1	Statement 1 will be purged.
..purge 1-10	Consecutive statement 1 through 10 will be purged.
..purge 1,5,9	Selective, non-consecutive statements 1,5, and 9 will be purged.
..purge all	All outstanding statement numbers will be purged.
..purge Q0005	Specific offline ..PRINTOFF and ..SEARCHOFF statements will be purged if entered during the same operational day of the original entry; specific ..sdi profiles can be purged at any time.
..purge stre	A temporary save search label will be purged.
..purge ps(educ)	A permanent save search label will be purged.

NOTE: It is not possible to purge both consecutive and non-consecutive statement numbers at the same time (..purge 1-5,7,9); not is it possible to purge multiple offline statements. Each query number (identification number) must be entered separately (..purge Q0005 not ..purge Q0005-Q0007 or ..purge Q0005,Q0007).

When the ..PURGE command is used to cancel outstanding statement numbers, the system will respond with the message:

QUERIES HAVE BEEN PURGED.

and will automatically return the user to search mode. Note that the message is always QUERIES (plural) even if only one statement number has been purged.

When the ..PURGE command is used to cancel offline statements (..SEARCHOFF, ..PRINTOFF, and ..SDI), a special system message will be transmitted to verify the query number and reconfirm the cancellation. This procedure is described in Section 17.6

12.2 PURGED QUERIES CANNOT BE RECALLED OR REFERENCED AGAIN

Once purged, queries cannot be recalled for further processing and no further reference to any of the purged statement numbers is possible.

Keeping this in mind, be sure not to purge statement numbers that are part of a final search statement that you want to save--e.g.:

1 : police adj education or adult adj education adj programs
RESULT 80

2 : financial adj support
RESULT 96

3 : 1 and 2
RESULT 20

4 : ..purge 1-2
QUERIES HAVE BEEN PURGED.

4 : ..save educ
QUERIES HAVE BEEN SAVED RETURN TO CONTINUE

In this example, the user purged statements 1 and 2 and then saved statement #3. Since statement 3 refers back to statements that no longer exist, it will not now be possible for the user to ask this saved search to be re-executed.

If the user had saved the search first, he could have then used the purge to erase the statement numbers so that the next search could start with statement #1.

For example:

1 : police adj education or adult adj education adj programs
RESULT 80

2 : financial adj support
RESULT 96

3 : 1 and 2
RESULT 20

4 : ..save educ
QUERIES HAVE BEEN SAVED.

4 : ..purge all
QUERIES HAVE BEEN PURGED.

1 :

The system will automatically default the searcher to search mode so that new search statement may be entered.

To purge temporary saves:

..purge stre

To purge permanent saves:

..purge ps(educ)

While it is not as important to purge temporary saves because they are only stored for one day, users should be sure to keep track of their permanent saves and purge them at such time that they are no longer of any use.

Please be aware that the ..PURGE command will not erase any searches that have been saved, either for temporary, permanent, or offline searching or printing purposes. The use of the ..PURGE command in the second example above is merely to wipe the online slate clean of statement numbers so that each new intellectual search can begin at statement #1.

SECTION 13
THE ..SET DETAIL COMMAND

The ..SET DETAIL command is an optional command that allows the user to tell the system what type of statistical information he wants to have printed in response to search statements. There are two options:

1. ..SET DETAIL=OFF
2. ..SET DETAIL=ON

13.1 SET DETAIL=OFF

If the ..SET DETAIL=OFF option is in effect, the system will return only the number of documents that qualify for the search statement as a whole; statistics for individual keywords within the statement will not be printed.

Example:

```
1_: (police adj education or adult adj education adj programs
    and financial adj support)
RESULT      20
```

The ..SET DETAIL=OFF option is the default condition assumed by the system if the user doesn't enter either of the set detail options.

Thus if the user would like to get individual keyword statistics in response to all his search statements, he should enter the ..SET DETAIL=ON command in response to the first statement number generated by the system in SEARCH MODE.

13.2 SET DETAIL=ON

If the user types in:

```
1_: ..set detail=on
```

in response to the first statement number generated in SEARCH MODE, the system will give a result statistic for each individual keyword in the search statement as well as a final result statement for the search statement as a whole.

Figure 8 demonstrates the use of the ..SET DETAIL=ON option. In the example given, the user had originally set the detail on to see individual keyword statistics for his first search on adult-education. He then set the detail off so that he would get only a final result statement for his next search on nursing skills.

Searchers should be aware that with set detail=on the system will print all the terms generated by a truncated term and give individual statistics for each one. This same display would be given in response to a ROOT, as discussed in Section 6.6. The important difference is that the ROOT operator does not produce a final result statement and set detail=on does.

FIGURE 8
USE OF THE ..SET DETAIL=ON COMMAND

```
RO201 ENTER COMMAND:
_: ..search
BRS-SEARCH MODE-ENTER QUERY
1_: ..set detail=on
1_: (police adj education or police adj education adj programs
    and financial support)

POLICE/EDUCATION                64 DOCUMENTS
POLICE/EDUCATION/PROGRAMS       15 DOCUMENTS
FINANCIAL SUPPORT                40 DOCUMENTS
RESULT                           20 DOCUMENTS

2_: ..set detail=off
2_: negotiating adj skills
RESULT      3
3_:
```

With this in mind, it might not be practical to set the detail=on when the keyword statement contains many truncated terms or a term that when truncated will generate a large number of individual terms. In these cases, the user would have to wait a considerable length of time while all the individual result statistics printed out.

Once this command has been entered by the user, it is valid for the entire sign on session unless it is changed or unless the user changes databases during the session. It is not necessary to type the desired set detail condition before every keyword statement.

SECTION 14
THE ..DISPLAY COMMAND

The ..DISPLAY command requires the system to display the contents and results of a given statement number or numbers. If the user enters ..DISPLAY, the entire logical formulation of a query and the results for that query will be printed. The ..DISPLAY command is useful to review a final statement without referring back to earlier statement numbers that compose the statement. If the set detail=on, the display will indicate all individual keywords within the statement as well as the final result. If the user had not activated the set detail=on, the display will only indicate the content of the statement and the final result statistic. A display can be requested at any time, but it is perhaps the most useful to make the request just before entering ..PRINT in order to have a concise search formulation summary to deliver to the patron with the list of citations. The ..DISPLAY command can also be used to review stored queries without actual re-execution; this capability enables searchers to display temporary and permanent savesearches, stored SDI profiles, printoff statements and searchoff statements.

14.1 DISPLAY FORMAT OPTIONS

The following format options are available for entering the ..DISPLAY command:

TABLE 8
..DISPLAY COMMAND OPTIONS

..display	The statement immediately previous will be displayed.
..display 1	Statement 1 will be displayed.
..display 1-3	Consecutive statements 1 through 3 will be displayed.
..display 1,3	Non-consecutive statements 1 and 3 will be displayed.
..display all	All statements outstanding at the time will be displayed.
..display Q0005	Specific offline (..printoff, ..searchoff, or ..sdi) statements will be displayed.
..display stre	A temporary savesearch will be displayed.
..display ps(educ)	A permanent savesearch will be displayed.
..display type(ps)	A list of all permanent saves will be displayed.
..display type(sdi)	A list of all Q numbers for stored SDI profiles will be displayed

..display type(so) A list of all Q numbers for the searchoffs entered for the last 15 days will be displayed.

..display type(po) A list of all Q numbers for the printoffs entered for the last 15 days will be displayed.

NOTE: It is not possible to display both consecutive and non-consecutive statement numbers at the same time (..display 1-3,5,8); nor is it possible to ..DISPLAY multiple offline statements. Each query number (identification number) must be entered separately (..display Q0005 not ..display Q0005-Q0007 or ..display Q0005,Q0007).

Figure 9 demonstrates the use of the ..DISPLAY command when used to recapitulate outstanding statement numbers:

FIGURE 9
USE OF THE ..DISPLAY COMMAND

```

1_ : police adj education or police adj education adj programs
RESULT      6738

2_ : financial adj support or tax adj support or fees
RESULT      5092

3_ : 1 and 2
RESULT      217

4_ : ..display all
      1 POLICE/EDUCATION OR ADULT/EDUCATION PROGRAMS
RESULT      6837

      2 FINANCIAL/SUPPORT OR TAX/SUPPORT OR FEES
RESULT      5092

      3 1 AND 2
RESULT      217

      ****END OF DISPLAY****

```

Note that the system automatically returns the searcher to search mode, repeating the statement number.

To ..DISPLAY an offline statement query number or a saveseach label, a similar system response is generated:

```
5_: ..display stre
BRS - SEARCH MODE
STRESS AND (THERAPY OR PSYCHOTHERAPY)
5_:
```

Again, the system reverts the user to search mode.

SECTION 15
THE ..TIME COMMAND

The ..TIME command permits the user to ask for the connect time at any point during the online session.

As discussed in Section 10, the elapsed database connect time is automatically displayed whenever the user changes from one database to another. The ..TIME command enables the user to obtain the connect time per individual search within the same database without signing off and on again or changing databases. Figure 1.0 demonstrates the use of the ..TIME command:

FIGURE 10
USE OF THE ..TIME COMMAND

```
ENTER DATABASE NAME_:
SIGN-ON      09.36.51

BRS/CBIB/1979-NOV80

BRS - SEARCH MODE - ENTER QUERY
1_: police adj education or police adj education adj programs
RESULT      6738

2_: financial adj support or tax adj support or fees
RESULT      5092

3_: 1 and 2
RESULT      217

4_: ..print 3 bibl/doc=1-20
    (all 20 citations are printed online)

      END OF DOCUMENTS

_: ..time
   CONNECT TIME      0:05      HH:MM****

4_: ..purge all
   QUERIES HAVE BEEN PURGED

1_: dyslexia and behavior adj (therapy or modification)
RESULT      3

2_: ..time
   CONNECT TIME      0:07      HH:MM****
```

In the above session, the user has accessed the CBIB and performed his/her first search on police education, printing all 20 citations online. Then the searcher asks for ..TIME and learns that the connect time for that search (including the printing time for the 20 citations) was 5 minutes.

NOTE: The time which returns in response to the ..TIME command is cumulative from the last database change.

Online connect time statistics are always given in hours and minutes, rounded to the nearest half minute.

As noted in Chapter 2, Section 22, if the ..TIME command is used in conjunction with the ..COST command, a cumulated time cannot be requested. Consult Section 22 for suggested procedures.

SECTION 16
THE ..OFF COMMAND

The user may sign off the system at any time by typing in:

..off

The system will respond with the connect time, time of day, and date as follows:

```
..off
CONNECT TIME    0:07    HH:MM****
*SIGN-OFF      18.23.16    09/02/77
```

SECTION 17
THE ..SEARCHOFF COMMAND

In addition to its online search capabilities, BRS has a complete offline search processing system which enables users to enter a profile online during the operational day and request that the profile be saved by the system and processed against an additional specified time segment of that database (the database accessed when the request was made) after the online system shuts down that same evening.

The BRS command which is used to make requests for offline searches is ..SEARCHOFF. When this command is entered, the results of the specified statement will be processed offline and the output mailed to the user the following morning. This ..SEARCHOFF command and all the user specifications that must follow it are discussed in detail below.

17.1 FORMAT OF THE ..SEARCHOFF STATEMENT

At the end of a search profile which is to be saved for offline processing, the searcher enters the command ..SEARCHOFF. This command must always be followed by a set of five basic parameters, indicating the particular statement to be processed, what paragraphs are to be printed for each document, what years of the database are to be searched, how many documents are to be printed, and information that will identify for the searcher whom the search is being processed for.

The format of the offline statement with the five mandatory parameters is illustrated below:

```
..searchoff      s  xx,yy,zz/doc=N/yr=N/id=abcde
(statement      (paragraph(docu-(years (identification)
 number)        selection) ment searched)
                range)
```

Note that the ..SEARCHOFF command resembles the basic format of the ..PRINT statement. The statement number must be entered immediately after the ..SEARCHOFF command, followed by the paragraph selection. Then the remaining three parameters can be entered in any order separated by a forward slash (/). A description of each of the five parameters is indicated below.

17.1.1 ..SEARCHOFF STATEMENT PARAMETERS

1. Statement Number

Users must insert a statement number directly after the ..SEARCHOFF, ..PRINTOFF, or ..SDI commands to indicate the specific statement from which results are to be processed.

The parameter is formatted as follows:

```
..searchoff s
```

where s may be any single number (either one or two-digit). This parameter must be entered directly after the searchoff command separated by a space.

```
1_: police adj education and financial adj support
RESULT      148
```

```
2_: 1 and policewoman adj education
RESULT      5
```

```
3_: 1 and (female or women).
RESULT      5
```

```
4_: ..searchoff 1 au,ti/doc=all/id=smith,j;criminal justice
```

2. Paragraph Specification

Directly after the statement number, the user specifies what paragraphs are to be printed for each document. There are three basic options:

To see the entire document:

```
all           All paragraphs available for documents in this
                database, including the abstracts, will be printed.
```

To see only specific paragraphs:

```
au,ti        Only the author and title paragraphs will be printed.
```

To request the standard "default" paragraphs:

```
bibl         The set of default paragraphs pre-determined by
                BRS or the user via the AMIS system for that data-
                base will be printed. The standard system offline
                defaults for all BRS databases are listed in Appendix V.
```

```
bibl,ab      The set of default paragraphs plus other requested
                paragraph label/s for that database will be printed.
```

3. Document Request

In this parameter, the user specifies the number of documents that are to be printed offline. The three options are:

To have all documents printed:

doc=all

Since the searcher will not know ahead of time how many documents will be produced by the offline search at the time of online entry, this option will be the most common.

CAUTION: The maximum number of documents which will be printed by the system is 1,000 per year or segment processed.

To have a specified maximum number of documents printed:

doc=1-100

A maximum of 100 documents will be printed, regardless of how many actually qualified for the search (the user can substitute any numbers here.)

To have non-consecutive documents printed:

doc=1,27,53,71

The first, 27th, 63rd and 71st documents will be printed. (Note: the user can request no more than 25 non-consecutive documents at one time.)

4. Years Processed

This parameter contains the year/s of the database which are to be searched offline. Following the YR= parameter, the user can enter one of many year specifications:

To search a single year only:

yr=75 or yr=1975 The single year 1975 will be searched.

To search consecutive years:

yr=6975 The consecutive years 1969-75 will be searched.

To search non-consecutive years:

yr=70,75 The two years 1970 and 1975 will be searched.

5. Identification

The searcher may use this last parameter to identify the patron for whom the search is being processed. This parameter may contain up to 233 characters.

The information entered in this parameter will be printed on the front of each unique offline search and is used to sort the multiple offline requests made from a single BRS password in the same day.

This parameter is not to be used to enter the address to which an offline printout is to be mailed. All offline requests made by each password-holder will automatically be assigned the password and mailing address stored by the system, and it is to this address that all offline output will be sent. Searchers in each institution are responsible for returning the offline search results to the patron who requested it. BRS does not mail offline output directly to the patron.

There are no specific requirements for what type of information can be entered in this parameter. A typical entry might be as follows:

id=smith, john;criminal justice dept,room 301;374-5000

An alphabetic sort will be performed on the first 15 characters of this parameter (or up to the first semicolon, whichever occurs first) so it is suggested that the patron's last name be entered first. In this way, when the package of offline output from a given day arrives, the searcher can quickly locate the prints for a particular patron by looking for his/her name in alphabetical order in the stack.

The purpose of including the semicolon (;) between different elements of the information--i.e., the name, the department, the telephone number--is to produce a multi-line address on the front of the printout. The semicolon in this parameter creates a carriage return in the offline print program so that the address will be printed as three lines:

SMITH, JOHN
CRIMINAL JUSTICE DEPT, ROOM 301
374-5000

If the semicolons are omitted, the address on the cover sheet of the printout will appear on one line as follows:

SMITH, JOHN CRIMINAL JUSTICE DEPT, ROOM 301 374-5000

The semicolons must, however, be counted as contributing to the total of 233 characters that are permissible within the ID parameter.

17.2 SAMPLE SEARCHOFF STATEMENTS

..searchoff 4 all/yr=6971/doc=all/id=smith,john;criminal justice dept

..searchoff 1 au,ti/doc=1-100/id=smith,john/yr=all

..searchoff 5 bib1/id=komoroffsky; 262-1234/doc=1-50/yr=70

```
..searchoff 10 bibl,ab/yr=1975/id=public administration dept/doc=all
..searchoff 5 all/doc=1-150/yr=all/id=ref. dept.; sociology; ext.233
```

17.3 ERRORS IN SEARCHOFF STATEMENTS

If an error is made anywhere in the ..SEARCHOFF statement, the system will return a message indicating which specific parameter is incorrect and asking the user to resubmit the data. At this point, the user need re-enter only the incorrect parameter--it is not necessary to re-enter the entire statement.

If the searcher omits any of the five mandatory searchoff parameters (statement number, paragraph, years, document name and identification), the system will respond with a message requesting the missing parameter:

```
4: ..searchoff 2 bibl/yr=7475/doc=1-50
SPECIFY IDENTIFICATION
id=smith;public administration dept
```

17.4 LABELING OF OFFLINE QUERIES

If any offline statement (..SEARCHOFF, ..PRINTOFF, ..SDI) is entered correctly, the system will acknowledge that the request has been saved and automatically assign an identification number:

YOUR OFFLINE QUERY HAS BEEN SAVED UNDER THE NAME OF Q0001

These numbers will be assigned sequentially to each password beginning with Q0001 for the first saved query and continuing up to Q9999. The numbers will not begin with Q0001 for each new day but will accumulate over the months until Q9999 is reached. In this way, each query entered under a password will always be tagged with a unique identification number which can be used to request reprocessing should it be lost or to purge it before processing takes place (see instructions in Section 17.6).

17.5 OPTIONAL SEARCHOFF STATEMENT PARAMETERS

There are three optional parameters which may be included in searchoff statements in any order separated by a forward slash (/):

17.5.1 SEARCH STRATEGY

The user has the option of suppressing the reprinting of the search strategy on searchoff requests. The following optional parameter may be included in the searchoff statement if the original search strategy is not to be printed with the search results:

```
ss=n
```

For those databases which require more than one year or segment to be processed offline the searcher can specify the search strategy is to be printed only once by entering the ss parameter with the letter O (not the number 0) as follows:

```
ss=0
```

If neither of these ss parameters is entered in the searchoff statement, then the strategy entered online will be repeated with each offline segment or year. This is preferable for those searchers who want to see which terms in the strategy are appropriate across all the back years of a database.

17.5.2 SORT

Searchers may request that the results of the offline printing be sorted on any paragraph contained in the documents. For example, documents printed offline may be sorted alphabetically by author name, journal title, language, etc.

This parameter is formatted as follows:

```
sort=xx
```

where xx is the 2-character paragraph label.

The sort is performed on the first 50 characters of the requested paragraph in the documents printed offline. The paragraph by which the output is to be sorted must have been included in the paragraph parameter:

```
..searchoff 1 ti,au,in/yr=all/doc=all/sort=au/id=green-ss=0
```

The sort can be performed on only a single paragraph. Note that the parameter may be included in any order in the ..SEARCHOFF statement following the statement number and paragraph selection.

17.5.3 NOMAIL

Searchers may request that the results of the offline search processing be held in the system for printing online the next day by including the optional nomail parameter. Nomail instructs the system not to print and mail the search results implemented with the standard ..SEARCHOFF command. Instead, users have the PRINTHOLD capability of displaying online the results of offline searches the very next day by inserting the nomail parameter within the ..SEARCHOFF statement.

Furthermore, the user may choose to print all or only a selected number of the documents resulting from the offline search. Searchers can verify the exact number of documents retrieved, review the strategy, display some records online and still request that the balance be printed offline and mailed.

17.5.3.1 PRINTHOLD FORMAT

The NOMAIL parameter may be included at any point in the ..SEARCHOFF command after the statement number and paragraph selection:

```
..searchoff 1 all/yr=all/nomail/doc=all/id=green
```

```
YOUR OFFLINE QUERY HAS BEEN SAVED UNDER THE NAME OF Q0002
```

The offline results will be held for printing on the next day only. Friday's offline search results will be held for printing on Monday, after which they cannot be recalled for either printing or mailing.

17.5.3.2 PRINTHOLD PROCEDURE

The following day the user must sign in to a special database labeled HOLD.

The system will respond with the message ENTER Q NUMBER. After the user enters the identification number (query number) for the search that is to be printed, the system automatically displays a table listing the number of documents that resulted from each segment of the offline file requested:

```
ENTER DATA BASE NAME_: hold
ENTER Q NUMBER
q0002
```

Note: After entering the first printhold query number, the user can request additional query numbers by entering ..PRINT Q0003.

TABLE 9
OPTIONS FOR PRINTHOLD PRINTING

all	The total number of documents resulting from <u>all</u> years searched offline will print online without interruption.
me75	The total number of documents in the <u>specified segment</u> will be printed.
doc=1-10	The first 10 <u>consecutive</u> documents in the document range will be printed; any range regardless of segment may be indicated.

(Table 9 continued on next page)

doc=1,12,15	The first, the twelfth, and the fifteenth documents in the document range will be printed.
mail doc=all	Requests all documents be <u>printed offline</u> that evening and mailed to the searcher.
mail doc=5-121	Requests a specified range of documents be <u>printed offline</u> that evening and mailed to the searcher.

The searcher may enter different printhold request options as determined by the number of retrieved documents or patron's requirements:

```
ENTER PRINTHOLD REQUEST
me75
00001 POLICE AND VICE SQUAD AND STRESS
RESULT 27
```

```
AU STRICKLAND, W. J. AND OTHERS
TI IMPACT OF JOB ASSIGNMENT ON ABILITY TO DEAL WITH STRESS
JC AM REV OF STRESS. 112. 2. p181-99. AUG 75.
.....(all 27 citations are printed online)
ENTER PRINTHOLD REQUEST
mail doc=28-138
```

In the above example, some citations are printed online for the patron with the balance printed offline and mailed to the searcher.

The paragraphs specified in the original ..SEARCHOFF statement will determine which paragraphs will be printed when the documents are displayed the next day. If the searcher has requested au,ti,jc in the online ..SEARCHOFF statement, then only the au,ti and jc paragraphs will be printed from the documents the following day (as illustrated in the above example). It is not possible to change the paragraph printing specifications the following day in the PRINTHOLD file.

The search strategy will be printed as a preface when the all or specified segment (me76) response is given by the searcher to the ENTER PRINTHOLD REQUEST message unless the ss=n parameter was inserted in the original ..SEARCHOFF statement.

If the ss=n parameter has been included in the ..SEARCHOFF statement and there are zero results from the offline files, the following message will appear when the searcher tries to print the results the next day:

```
NO PRINTHOLD DATA FOUND.
```

Searchers are encouraged to let the search strategy be displayed by default. If the original searchoff statement included the ss=n parameter, the search strategy will not be displayed when the searcher entered "all" in response to the ENTER PRINTHOLD REQUEST. Its display might remind the searcher to verify the date or to have repeated the search using a free text phrase.

17.6 PURGING OFFLINE SEARCH STATEMENTS

Should it be determined at some time later in the day that a particular offline request should be cancelled (e.g. mistake was discovered in the profile or the patron changes his mind), the searcher may purge the offline statement by simply entering:

```
..purge qxxxx
```

where q indicates to the system that this purge is for an offline statement (to differentiate from a statement number that may be outstanding online at the time) and xxxx is the 4-digit identification number that was assigned to the query by the system when it was entered.

A special system message is printed in response to all user requests to purge previously entered searchoff, printoff and sdi statements. The purpose of the message is to verify the query number that the user wants to purge and provide the opportunity to cancel the purge request in the event that the user entered the wrong number.

Note the following sequence:

```
BRS-SEARCH MODE-ENTER QUERY
1: police assignment and stress
RESULT      249
```

```
2: ..searchoff 1 au,ti,jc/yr=all/doc=all/id=smith
YOUR OFFLINE QUERY HAS BEEN SAVED UNDER THE NAME OF Q0001
```

```
..purge q0001
QUERY 0001 SEARCHOFF
ID=SMITH
```

```
RETURN TO CONFIRM DELETE OR ENTER NEW COMMAND TO ABORT
```

```
CR
14610 *SAVED QUERIES HAVE BEEN PURGED.
```

***Special Note:** Although the actual search results (the list of citations) will be for the highest numbered statement outstanding at the time the ..SEARCHOFF statement is entered, all other statements outstanding at the time will also be searched offline.

Thus, if you have statements outstanding that are in no way related to or part of the final profile you want processed offline, you should be sure to purge those statement numbers (see Section 12) before entering the ..SEARCHOFF command.

SECTION 18 THE ..PRINTOFF COMMAND

The ..PRINTOFF command is to be used when the searcher has performed a search online, received a result that is too large to be displayed at the online terminal (or the searcher simply does not have the time to print the result at the terminal), and wants to have that list of citations printed offline in the evening at the BRS Computer Center and mailed to him/her the following morning.

The ..PRINTOFF command does not activate the offline searching system but merely saves the result from a search the user has performed online and prints these citations on the high-speed printer that evening.

18.1 FORMAT OF THE ..PRINTOFF STATEMENT

The format of the ..PRINTOFF statement is exactly the same as that for the ..SEARCHOFF statement discussed in Section 17, with the exception that the user does not specify the number of years of the database to be searched-- e.g.:

```
..printoff s      xx,yy,zz/doc=n/id=abcd
                (statement (paragraph (document (identification)
                number)      selection)  range)
```

At the end of the online result statement which is to be printed offline, the user enters ..PRINTOFF, followed by four basic parameters indicating the particular statement to be processed, what paragraphs are to be printed for each document, the number of documents to be printed, and the patron identification details.

Again the ..PRINTOFF command follows the basic format of the ..PRINT and ..SEARCHOFF statements. The statement number must be entered immediately after the ..PRINTOFF command, followed by the paragraph selection. The remaining two parameters can be entered in any order separated by a forward slash (/).

The same options exist for the content of these two parameters as described in Section 17. Note, however, the distinctions in the DOC=parameter:

```
doc=51-150      Since the user knows ahead of time exactly how
                 many citations qualified for his/her search, the
                 searcher may specify the actual number. In this
                 case, the user has printed documents 1 through 50
                 online and wants to have the balance printed
                 offline.
```

```
doc=1,50,75     In this case, the user wishes to have non-consecutive
                 documents printed offline, that is obtain a sampling
                 of the retrieved documents. The first, fiftieth and
                 seventy-fifth document will be printed offline.
```

18.2 OPTIONAL PRINTOFF STATEMENT PARAMETER

There is one optional parameter which may be included in ..PRINTOFF statements:

SORT

The optional sort parameter is also applicable to the ..PRINTOFF statement (see Section 17.5.2), when the offline printing is to be sorted by a particular paragraph contained in the documents.

This optional parameter can be included at any point in the printoff statement:

```
..printoff 1 bib1/doc=11-125/id=smith/sort=so
```

18.3 PURGING PRINTOFF STATEMENTS

Printoff requests are also automatically assigned a unique identification number by the system, and this number may be used to purge the ..PRINTOFF statement following the same procedure discussed in Section 17.6.

SECTION 19 THE ..SDI COMMAND

The BRS system has a completely automatic SDI feature which permits searchers to enter a profile online and then request that it be held by the system for automatic reprocessing against each new update to a database.

With no further intervention from the searcher, these stored SDI profiles will be processed at the BRS Computer Center at the beginning of each month, and the output mailed to the searcher.

19.1 FORMAT OF THE ..SDI STATEMENT

To register a profile for the SDI service, the searcher enters the command ..SDI immediately after the profile, followed by three parameters indicating the statement number, the paragraphs to be printed for each document, and the patron identification, e.g.:

```
1_: regular-class-placement
RESULT      720
```

```
2_: physically-handicapped
RESULT      1109
```

```
3_: 1 and 2
RESULT      26
```

```
4_: ..sdi 3 all/id=teacher, i.m.
YOUR QUERY HAS BEEN SAVED UNDER THE NAME OF Q0015
```

Note that the format of the SDI statement follows ..SEARCHOFF and ..PRINTOFF statements (see Sections 17 and 18), without the requirement to include a parameter specifying the number of documents to be printed. The statement number must be entered immediately after the ..SDI command, followed by the paragraph selection. After entering a forward slash (/), the ID= details should be included.

A 4-digit query number generated by the system will automatically be assigned to identify each SDI profile stored. This 4-digit number (Q0015 in the above example) is required to purge SDI requests at any time during online interaction using the same procedure discussed in Section 17.6.

19.2 OPTIONAL ..SDI STATEMENT PARAMETERS

There are two optional parameters which may be included in ..SDI statements:

1. SORT

The optional SORT= parameter is also applicable to the ..SDI statement (see Section 17.5.2) when the offline printing is to be sorted by a particular paragraph contained in the documents.

2. EXPIRATION

The EXP= parameter is unique to the ..SDI command and may be included to indicate the expiration date of the sdi profile. The EXP= parameter stipulates the date at which the profile is to be cancelled, and is entered in the format:

exp=yy~~mm~~

where YY is the 2-digit year and MM, the numbered month of expiration.

The following example illustrates the ..SDI statement format when all optional and required parameters are included:

```
..sdi 3 bibl, de,id/sort=au/id=teacher, i.m./exp=7909
```

Note that after the statement number and paragraphs have been included, the parameters can be entered in any order separated by a forward slash (/).

SECTION 20 THE ..EDIT COMMAND

The ..EDIT command is used to modify existing SDI profiles online at any time.

After an SDI profile has been entered into the system for automatic reprocessing, searchers have the option of adding new terms, deleting old terms, incorporating a ..LIMIT statement or respecifying the offline printing paragraphs with the ..EDIT procedure which changes the profile immediately.

20.1 INITIATING THE EDIT PROCEDURE

To activate the edit procedure, the ..EDIT command must be used in the database (or database update file) in which the original SDI profile was created. After entering the ..EDIT command, the system will respond with the instruction ENTER Q NUMBER. The searcher must then type the query number which was assigned to the profile following its original entry with the ...SDI command.

In the following example, a CBIB sdi profile modification is described:

```
BRS - SEARCH MODE - ENTER QUERY
  1: ..edit
  ENTER Q NUMBER
  q0015
  ENTER EDIT REQUEST
```

The system will reply with the message ENTER EDIT REQUEST, to which the user has the following instruction options:

TABLE 10
EDIT REQUEST OPTIONS

<u>Instruction</u>	<u>Meaning</u>	<u>Function</u>
L	list	The statements which make up the profile as currently stored are listed for review.
C	change	Terms may be added or deleted from any statement by indicating the statement number to be changed, followed by the appropriate new terms when queried by system.
D	delete	Entire search statement/s can be deleted from the profile. Subsequent statements will not be renumbered.

I	insert	New search statements may be inserted into the profile in the appropriate position. Subsequent statements <u>will be</u> renumbered.
L CON	list control	The "control" details of the profile (the original paragraph printing specifications and the ID information) will be listed.
SAVE		Instructs the system to save the modified profile.
END		Instructs the system to end the editing procedure and return to search mode.

20.2 THE EDIT PROCEDURE

After the user has activated the edit mode for a particular Q number and has received the ENTER EDIT REQUEST system message, any of the above options may be requested. Indicated below are several examples illustrating the interactive process of system prompting messages and user instructions:

In response to the L instruction, the system will list the existing query at any time during the editing procedure, and prompt the user for another instruction:

```
ENTER EDIT REQUEST
 1
00001 REGULAR/CLASS/PLACEMENT
00002 TRAINING ACADEMY
00003 1 and 2
```

```
ENTER EDIT REQUEST
```

In response to the C instruction when the user has indicated a specific statement number to be changed (as noted below), the system will confirm the instruction by prompting the user for the new or modified terms with the message ENTER QUERY:

```
ENTER EDIT REQUEST
c 1
```

```
ENTER QUERY
regular adj class adj placement or assignment
```

```
ENTER EDIT REQUEST
```

To insert another statement 3, the user enters the I instruction with the specific statement number. Following the system message confirmation ENTER QUERY, the user can enter the new statement 3:

```
ENTER EDIT REQUEST
i 3
```

```
ENTER QUERY
physical adj fitness
```

To review the revised profile, the user may wish to repeat the L instruction:

```
ENTER EDIT REQUEST
 1
00001 regular/class/placement or assignment
00002 physical fitness
00003 agility test
00004 1 and 2
```

As noted above, the profile reflects the modifications and the previous statement 3 is automatically renumbered to 4.

To complete the strategy changes, the user must change statement 4 to incorporate the additional search statement:

```
ENTER EDIT REQUEST
c 4
ENTER QUERY
1 and (2 or 3)
```

To verify the offline printing specifications, the user requests a list of the control information. The system will display the paragraph and id parameters as originally entered.

```
ENTER EDIT REQUEST
l con
```

```
P=ALL
ID=TEACHER, I.M.
```

To change the paragraph specification, the C instruction is entered followed by the revised paragraph selection:

```
ENTER EDIT REQUEST
c p(an,ti,au,in)
```

To modify the id information, the C instruction is entered followed by the revised id details:

```
ENTER EDIT REQUEST
c id(searcher, 1.m.)
```

After the user has made the modifications, the instruction SAVE should be requested which will be confirmed by the system:

```
save
SAVED
```

```
ENTER EDIT REQUEST
```

To terminate the editing procedure, the user enters the END instruction and is returned to search mode automatically;

```
ENTER EDIT REQUEST
end
```

```
BRS - SEARCH MODE - ENTER QUERY
1_:
```

At a later time, the searcher may review the revised strategy again for possible modification:

```
BRS - SEARCH MODE - ENTER QUERY
1_: ..edit
```

```
ENTER Q NUMBER
q0015
ENTER EDIT REQUEST
1
```

```
00001 REGULAR/CLASS/PLACEMENT OR ASSIGNMENT
00002 PHYSICAL FIRNESS
00003 AGILITY TEST
00004 1 and (2 or 3)
```

The searcher can delete statements 2 and 3 from the existing profile by entering the following D instruction:

```
ENTER EDIT REQUEST
d 2,3
```

To confirm the revised profile, the searcher then requests a list:

```
ENTER EDIT REQUEST
1
```

```
00001 REGULAR/CLASS/PLACEMENT OR MAINSTREAM
```

Note that statements 2 and 3 have been deleted.

SECTION 21 THE ..USAGE COMMAND

The ..USAGE command permits the user to check system activity at any time during regular system operation.

The system will respond with a brief message indicating one of three levels--HIGH, ABOVE NORMAL, or NORMAL--as shown below.

```
BRS - SEARCH MODE - ENTER QUERY
1_: ..usage
NORMAL
```

If the anticipated search strategy requires long and complex statements or the retrieval of many highly posted terms, the ..USAGE capability provides the user with the option of awaiting a period when the system is less busy.

CONTINUED

1 OF 2

The searcher completes the modification by entering SAVE and END to return to search mode:

```
ENTER EDIT REQUEST
  save
SAVED
```

```
ENTER EDIT REQUEST
  end
```

BRS - SEARCH MODE - ENTER QUERY

NOTE: All editing instructions must be entered in abbreviated format as indicated in Table 10, e.g., L, C, D, I, L CON plus SAVE and END.

SECTION 22 THE ..COST COMMAND

The ..COST command provides the user with the option of obtaining an estimated cost for specific database searches. This optional feature can be used to keep a daily record of all online search topic costs or to give the patron an estimated cost of his/her actual search question.

22.1 ..COST PROCEDURE

Whenever the user enters the ..COST command, a line indicating the estimated cost of online connect hours, database royalties, communications plus a total for that database will be displayed:

```
BRS - SEARCH MODE - ENTER QUERY
  1: police assignment and stress
    RESULT      217
```

```
  2: ..cost
EST COST: OHR$...$.07 DB-ROY...$.00 COMM...$.04 TOTAL...$.11
```

BRS - SEARCH MODE - ENTER QUERY

The command can be entered at any time during search interaction. The online connect hour rate, communications rate, etc. are determined for each registered BRS password as implemented in the AMIS system described in Section 24. Regardless of the various BRS subscription levels, the cost details are calculated according to the individual password-holder's account record. After providing the cost information, the system will automatically revert to search mode.

NOTE: When the ..COST command is entered, the TIME is re-set to zero, and accumulated TIME from the beginning of database interaction cannot be requested subsequently. Therefore, if both the elapsed connect time and estimated cost are desired, enter the ..TIME command first followed by the ..COST command.

22.2 ..COST DATA FOR MULTIPLE SEARCHES

Because the connect time is re-set to zero whenever the ..COST command is used, cost information for multiple searches in the same database may be generated.

22.3 AUTOMATIC ..COST FEATURE

Each password-holder can request that cost information be provided automatically whenever the ..CHANGE or ..OFF commands are entered. This feature is handled via the AMIS system, as described in Section 24.4.8.

SECTION 23
BRS MESSAGE SWITCHING SYSTEM (MSGS)

The MSGS feature permits users to send online messages to the BRS Computer Center via terminal and to receive messages from the BRS staff.

If searchers have questions or problems that can be handled via terminal, the message switching system is the most efficient and cost-effective method. For example, to order a manual, check the status of new databases or register for a training session, the message-switching capability promptly transmits requests directly to the BRS Computer Center. The messages sent by the users to the BRS Center before 12:00 noon (EST) will be answered on the same day; messages received after 12:00 noon (EST) will be answered on the following morning.

The procedures for sending and receiving messages are extremely simple as described below:

23.1 ACCESS TO THE MESSAGE SWITCHING SYSTEM

To access the message switching system, the user enters the database name MSGS at any time while searching the BRS system - in response to the ENTER DATABASE NAME when initiating a search:

```
ENTER DATABASE
_: msgs
```

or, by entering the CHANGE command at any point during a terminal session:

```
_: ..change/msgs
```

23.2 RECEIVING MESSAGES

The MSGS system will respond indicating whether or not there are any messages pending for the user.

If no messages are pending, the system responds:

```
NO MESSAGES PENDING. ENTER END OR HIT CR TO CONTINUE
```

If END (or E) is entered, the user terminates interaction with the MSGS file and is prompted for a new database name:

```
_: end
```

```
CONNECT TIME          0:02 HH:MM****
```

```
ENTER DATABASE NAME _:
```

If a CR (carriage return) is struck, the user is asked if he/she wants to send a message:

```
_: (CR)
DO YOU WISH TO SEND MESSAGES (YES/NO)
_:
```

If messages are waiting to be displayed for the user, the system responds with the following:

```
XX MESSAGES PENDING. ENTER R TO RECEIVE OR HIT CR TO CONTINUE
```

If R is entered, the first message will be displayed. Once the message has been printed, it is purged from the system. If additional messages are pending, the system will repeat the above prompt. After all messages have been displayed, the system asks the user if he wants to send a message:

```
01 MESSAGES PENDING. ENTER R TO RECEIVE OR HIT CR TO CONTINUE
```

```
_: R
MESSAGE FROM BRS    11/10/78
```

```
SUSAN - TWO COPIES OF CJDS MANUAL WERE MAILED TO YOU TODAY.
CATHY ANDERSON. DO YOU WISH TO SEND MESSAGES (YES/NO)?
_:
```

Note that the date the message was entered on the system will automatically appear in the heading. All messages sent from the BRS Computer Center are stored until the following Monday evening; therefore, please check the MSGS file on a weekly basis if you are expecting a response.

If a CR is struck, the system will NOT display messages but will ask the user if he/she wishes to send a message as indicated above. The messages will remain in the system until displayed by the user or cancelled by BRS the following Monday night.

23.3 SENDING MESSAGES

To send a message to the BRS Computer Center, the user enters a YES (or Y) to the above system query which will elicit an instruction to enter a message of up to 12 lines. The system will generate a line number at the beginning of each line in the message. The user must hit the CR at the end of each line. When the message is completed, the user enters ..DONE (or ..D). Note: Remember not to include a question mark (?) in the text of any message; the ? is the line deletion character. Also, be sure to include name and address when necessary, as indicated below:

```

: y
ENTER MESSAGE. (MAX OF 12 LINES) ENTER ..D TO END
1: please send 2 copies of clds manual to susan smith, college (CR)
2: library, american college, college park, new york 12345. invoice (CR)
3: my account. thanks. susan smith. (CR)
4: ..done

```

The system will send the following instruction:

```
ENTER RECEIVING ADDRESS OR SEND OR CANCEL
```

The receiving address for all messages to the BRS Computer Center is BBRB.
To transmit the entered message, enter this receiving address and SEND:

```
: bbrb send
```

If the user decides not to transmit the message, the CANCEL instruction should be entered. When a message is transmitted, however, with the BBRB receiving address and SEND instruction, the system will respond with:

```
MESSAGE HAS BEEN QUEUED
CONNECT TIME 0:04 HH:MM****

```

SECTION 24 BRS ONLINE ACCOUNTING SYSTEM (ACCT)

When BRS automated the accounting and billing information for each registered BRS password, an individualized accounting database was made available online to each user.

The total online accounting system is called AMIS and consists of a unique record for each 6-character BRS password. This record contains usage statistics for the particular password holder as well as master record information such as offline mailing address, telephone number, terminal type, etc. which the user can update online at any time.

Although AMIS was designed to be a cost-effective and flexible system for the overall management of BRS service activity, its final implementation provided special benefits for the individual password holder. By interacting with AMIS, a user has access to detailed accounts of his activity on the BRS system on a daily, monthly or subscription basis. At the same time, each user can customize certain aspects of interactive searching by modifying his/her own master record: default printing paragraphs for any database to suit the individual searcher and password privacy codes which can be assigned and changed as required.

Each password holder's record is updated nightly with statistics from the current day's activity so that the usage statistics are always up-to-date. Online profile modification of such items as default paragraphs, offline mailing address and password privacy code become effective immediately.

24.1 ACCESSING AMIS

To access the AMIS online accounting system, the user can enter the database name ACCT at any time while searching the BRS system:

```
ENTER DATABASE NAME
: acct

```

The system will then request the user to specify one of five possible types of inquiry:

```
SPECIFY DATABASE NAME; TOTAL, ALL, MASTER OR PROFILE
```

Other instructions will follow as determined by the initial inquiry choice.

24.2 USAGE STATISTICS DATABASE NAME, TOTAL, ALL

In response to the system instruction, the user acquires the usage statistics for his/her password by entering:

```
database name - displays statistics for the specific 4-character
database name entered
```

total - displays statistics for the total usage across all databases

all - displays statistics for usage by individual database as well as a summary.

Therefore, if a user requires the total INSPEC usage, enter the database name which will generate the INSP database statistics:

SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE

insp

```

BRS USAGE  USER=SAMPLE  DATABASE=INSP    12/28/78
      ONHRS  OFFCIT  PRTCIT  SDICIT  OFFPG  PRTPG  SDIPG  DIRUN  OFFQS
L MO  0001.97  000000  000323  00000  00000  00146  00000  00000  00007
YTM   0025.35  000330  001341  00021  00160  00611  00017  00006  00070
MTD   0000.99  000000  000167  00003  00000  00075  00004  00002  00002
BIBL:  TI,AU,AN,SO

```

The system will also indicate the user-created bibl paragraph for that database if in effect.

To quickly learn total database activity regardless of specific files, enter the term TOTAL:

SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE

total

```

BRS USAGE  USER=SAMPLE  DATABASE=ALL    12/28/78
      ONHRS  OFFCIT  PRTCIT  SDICIT  OFFPG  PRTPG  SDIPG  SDIRUN  OFFQS
L MO  0009.13  000116  000611  00000  00050  00300  00000  00000  00012
YTM   0054.34  009784  003540  01450  02834  01479  00193  00017  00098
MTD   0004.29  000511  000304  00003  00137  00121  00004  00002  00009

```

This entry ALL will elicit a long summary by database of the password-holders usage statistics by individual file as well as provide a total summary.

Indicated below is a list and explanation of the abbreviations used in the statistical reports:

ONHRS - total number of online connect hours
OFFCIT - total number of citations resulting from searchoffs
PRTCIT - total number of citations resulting from printoffs
SDICIT - total number of citations resulting from stored sdi's
OFFPG - total number of pages printed for searchoffs
PRTPG - total number of pages printed for printoffs
SDIPG - total number of pages printed for stored sdi's

SDIRUN - total number of ski's processed that month
OFFQS - total number of query numbers processed
L MO - usage incurred in the particular category the previous month
YTM - accumulated monthly totals in each category since January
MTD - current accumulated usage in each category for current month

24.3 MASTER ACCOUNTING RECORD

Responding to the system instruction with the entry MASTER will prompt a display of the password-holder's master record:

SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE
master

```

USER ID: SAMPLE CONTRACT TYPE: SB
CONT BEGINS: 10/01/78 CONT ENDS: 09/30/79
ACCUM CJDS HRS: 1.52 ACCUM NON-CJDS HRS: 15.51
NON CJDS RATE: $25.00 MIN DOLLAR USAGE: $01500.00
ACCESS MODE: TL COMMUNICATIONS COST: $0005.00
MASTER BILL INDICATOR: N ORDER NUMBER: X6834
T#: T346 TELE: 1 3-4567890 TERM TYPE: T125
TYPE: USER MANUALS: 01
MARK REP: P. VAUGNAN S ANALYST: SUSAN SMITH
*****OFFLINE MAILING ADDRESS*****
SUSAN SMITH
COLLEGE LIBRARY
AMERICAN COLLEGE
COLLEGE PARK, NY 12345
*****BILLING ADDRESS *****
DIRECTOR
COLLEGE LIBRARY
AMERICAN COLLEGE
COLLEGE PARK, NY 12345

```

24.4 PROFILE UPDATING ITEMS

For the convenience of users, certain master record items can be modified online. Users are encouraged to check the master record and add or update any obsolete or missing data.

After entering the system response PROFILE, the AMIS system will display a list of elements which can be changed. The user selects the number corresponding to the change and enters the data as requested.

Listed below are examples of the updating procedures for the master record elements which can be modified online:

24.4.1 OFFLINE MAILING ADDRESS

master record. Having this information available will assist in identifying any terminal-related problems which may occur. To include this detail, the user responds with 3 to the system profile query and enters the appropriate information, using no more than 9 CHARACTERS:

3
 ENTER TERMINAL TYPE
 ti45
 PROFILE HAS BEEN UPDATED

24.4.4 TELEPHONE

In order to maintain an up-to-date centralized file of user information, BRS staff urge users to correct any telephone number details. After entering 4 in answer to the system profile query, enter the 3-digit area code, followed directly by a 7-digit telephone number. No slash mark, hyphens, spaces, etc. will be accepted:

4
 ENTER PHONE # IN FORM AAANNNNNN
 2121234567
 PROFILE HAS BEEN UPDATED

24.4.5 SEARCH ANALYST

To supplement the BRS headquarters file of user information, the name of the primary search analyst should appear in the master record. To include or modify this information, respond with 5 to the system profile query and enter the name with surname followed by a slash and the first name or initial:

5
 ENTER SEARCH ANALYST NAME IN FORM LAST/FIRST
 smith/susan
 PROFILE HAS BEEN UPDATED

24.4.6 END PROFILE

If the PROFILE portion of the AMIS system has been accessed inadvertently and the user does not wish to change any data, enter 6 to the system profile query. This response will terminate the profile interaction within the ACCT file without affecting the user's original master record:

6
 PROFILE TERMINATED
 SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE

24.4.7 PASSWORD PROTECTION FEATURE

The mailing address for offline prints is modified online by responding 1 to the system profile query and entering the new address details as prompted by the AMIS system.

SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE
 profile
 ENTER # CORRESPONDING TO CHANGE
 1: OFFLINE MAILING ADDRESS 2: PARA BIBL 3: TERMINAL TYPE
 4: TELEPHONE # 5: SEARCH ANALYST 6: END PROFILE
 7: PASSWORD 8: ONLINE COST

1
 ENTER NAME (38 CHARACTERS MAX)
 susan smith
 ENTER INSTITUTION (38 CHARACTERS MAX)
 american college
 ENTER ADDRESS (38 CHARACTERS MAX)
 college library
 ENTER CITY, STATE AND ZIP (38 CHARACTERS MAX)
 college park, ny 12345
 PROFILE HAS BEEN UPDATED

Each address line will contain a maximum of 38 characters. When the new address has been completed, the AMIS system will respond with a confirmation that the profile has been updated.

24.4.2 DEFAULT PARAGRAPHS

Users can establish their own default paragraphs according to their database needs. Thereafter, whenever that password-holder enters BIBL as the paragraph indicator with the ..PRINT, ..PRINTOFF, ..SEARCHOFF, or ..SDI commands in that particular database, the user's specified paragraphs will be displayed instead of the BRS system default paragraphs.

The user enter 2 to the system profile query followed by the database name and the two-character paragraph abbreviations separated by commas:

2
 ENTER DATABASE NAME
 cbib
 SPECIFY PARAGRAPHS
 ti,de,id
 PROFILE HAS BEEN UPDATED

24.4.3 TERMINAL TYPE

Because the terminal model may affect different aspects of searching, staff at the BRS Computer Center request that the terminal type be indicated in a user's

As a safeguard to possible misuse of a BRS system password, users can add an individualized password via the AMIS system. Subsequently, when dialing in to the BRS search system, a user must enter the BRS-issued 6-character password which has been established.

To include a security password, follow the procedure indicated below after responding with 7 to the system profile query:

```
SPECIFY NEW A-M-I-S PASSWORD (MAX 6 CHARS)
abc
PROFILE HAS BEEN UPDATED
SPECIFY DATABASE NAME, TOTAL, ALL, MASTER OR PROFILE
```

The AMIS password can contain any combination of alphabetic or characters, with a maximum of six characters acceptable.

Subsequently, the BRS dialing-in procedure will request both the system and the AMIS password:

```
SIGN-ON IS COMPLETE      11/14/78
ENTER A-M-I-S PASSWORD
ENTER YES IF BROADCAST MSG IS DESIRED
```

Both the system and AMIS passwords must be entered correctly before system access will be permitted.

To change the AMIS password, access the PROFILE portion of the ACCT file and specify a new password as follows:

```
7
ENTER OLD A-M-I-S PASSWORD
abc
SPECIFY NEW A-M-I-S PASSWORD (MAS 6 CHARS)
def
PROFILE HAS BEEN UPDATED
```

This method is also used to delete the AMIS security password from the system. When requested to specify a new A-M-I-S password, the user can simply depress the CR without entering any characters.

NOTE: The user is responsible for retaining the AMIS password.

24.4.8 ONLINE COST

To have the estimated online cost details automatically generated whenever a ..CHANGE or ..OFF command is entered, respond with 8 to the system profile query. This reply will prompt a system message asking whether automatic cost information is desired:

```
8
IS AUTOMATIC ONLINE COST DESIRED (Y/N)
y
PROFILE HAS BEEN UPDATED
```

Thereafter, whenever the password-holder enters the ..CHANGE or ..OFF commands, the estimated cost information will be provided for the database just accessed.

To delete this feature, repeat the above interaction with the Profile portion of the ACCT file and enter n (No) to the system query.

END