



NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

USER'S MANUAL FOR THE BATCH QUERY LANGUAGE

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BATCH QUERY LANGUAGE

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TO THE USERS

Whenever necessary, revisions and/or addenda to this manual will be issued by the Automated Information Division, Production Services Group. If you need additional information on the Batch Query Language or assistance in using it, contact the Chief, Information Systems Branch, AID.

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CHAPTER I. THE BATCH QUERY LANGUAGE

The Batch Query Language (BQL) is an English-like language that enables you to retrieve information from the Installations Data File (IDF). This language enables you to

- * select from the IDF one or more records that meet your specifications and print all or part of each selected record
- * determine how many records meet your specifications
- * determine how many different values are recorded in a given field or item in each record that meets your specifications
- * record data retrieved from the IDF on magnetic tape

The language can also be used to obtain information from so-called private files set up by other users to meet a particular need.* Using the Batch Query Language, you will formulate a series of statements, that is, a query that will direct the computer to perform the operations listed above. Most of the words that will comprise each statement are mnemonics. The rest are English words. The mnemonics specify computer operations, identify certain entities in the IDF, and express relations between grammatical units in statements.

* Such files will be established according to the standards of the Integrated Information System.

Four types of statements can be constructed, and some -- but not all -- are used in every query. In the order in which they must appear in a query, the four types and the functions of each are listed below.

<u>Type of Statement</u>	<u>Functions</u>
File statement	Specifies file to which query is directed
Output statement	Specifies whether output is a listing, total number of selected records, or total number of different values from selected records; also specifies data to be output & format of that data, equipment to be used, & type of paper needed for printouts
Special-purpose statement	Inserts such data as labels, TCS numbers, headings, etc., in output
Record selection statement	Specifies basis for selection of records

Each query must consist of at least one file and one output statement. If the query is directed to the IDF, it must also contain at least one record selection statement. Regardless of the number of statements in any given query, all will be submitted to the UNIVAC 494 computer system in the same transmission.

ON-LINE EQUIPMENT

When using the Batch Query Language, you will usually transmit queries to the UNIVAC 494 computer system via on-line teletypewriters or card readers located in your work area. This equipment includes

- * ASR and KSR Teletypes (Model 35)
- * Kleinschmidt Electronic Data Printers (Model 311), send-and-receive units
- * UNIVAC Data Communications Terminals (DCT 2000)

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You can elect to receive your output on any of the following devices:

- * ASR and KSR Teletypes
- * Kleinschmidt Electronic Data Printers, send-and-receive units and receive-only units
- * UNIVAC DCT 2000s
- * high-speed printers located in the computer room

You also have the option of recording your output on magnetic tape. If you direct the computer to record data on magnetic tape, your output will automatically be transmitted to the computer room.

THE INSTALLATIONS
DATA FILE

The Installations Data File (IDF) contains information derived from imagery and compiled by organizations responsible for imagery interpretation. This information concerns targets that have been designated by NPIC or COMIREX. The file is an outgrowth of the Target Brief File and of DIA's Uniform Photo Interpretation Reports (UPIR) File. In the IDF all information on a single target is stored in one record. At present there are about 30,000 records in this file. Each is identified by a machine reference number (MRN). This number is assigned to each record by the computer and will never be changed or assigned to another record. With the exception of MRN 1, the format -- not the contents -- of each record in the IDF is identical. Mission highlights for first- and second-phase reports are recorded in MRN 1; no other information is stored in this record.

A record consists of 14 sectors, each of which contains a specific type of information about an installation. All sectors are divided into fields, and all fields consist of one or more items. Thus, the format of each record is the following:

```

largest unit -----sector
                    field
smallest unit -----item

```

Fields may be non-repeating and repeating. (See APPENDIX A.)

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All sectors, fields, and items are identified by mnemonics. For example, each record contains a sector identified by the mnemonic, IBRIE. In the IBRIE sector a brief third-phase report is stored in a field identified by the mnemonic, BRI:. One of the items comprising this field is DATE, which contains the date of a particular third-phase report. Mnemonics such as these comprise part of the vocabulary of the Batch Query Language. All mnemonics pertaining to the IDF and the formats of related values are presented in the Format and Mnemonics for Records in the Installations Data File.

REPORT FORMAT TABLES

You will be concerned with report format tables whenever you construct output statements introduced by the word, REPORT. A REPORT statement always includes the mnemonic for such a table. A report format table is a set of instructions that directs the computer to output data in a specific format. The data can be output in printed form or be recorded on magnetic tape.

The tables you will probably use most frequently output data in a relatively simple, predetermined format. Each outputs data from one of the 14 sectors in an IDF record or from the IHIGH sector in MRN 1. Each indicates the following to the computer:

- 1) which sector, fields, and/or items from each selected record are to be output and
- 2) the format (typography) to be used in presenting this output; e.g., titles, pagination, spacing, proper arrangement of tabular material, and so on

Each report format table is identified by the mnemonic of the sector it outputs.

Report format tables that will arrange selected records in some other sequence and/or output them in some other format can also be designed. Tables of this kind will be designed and generated as you need them. Each will also be identified by a mnemonic. All report format tables are produced and stored in the computer by the Presentation Language Program.*

* See the User's Manual for Report Formatting.

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If the tables currently available do not meet your needs, you may wish to design a new table. For assistance in this matter contact the Chief, Information Systems Branch, AID.

ASSUMPTIONS

To use the Batch Query Language effectively and with some degree of proficiency, it is assumed that you

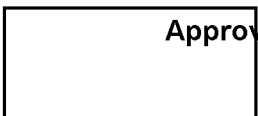
- * are familiar with the IDF, its structure, contents, and nomenclature
- * know how to operate a teletypewriter or a DCT 2000
- * are familiar with the remote access computer service now being used in

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* See Introduction to the Remote Access Computer Service published by AID. Copies are available from AID upon request.

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CHAPTER II. FILE AND OUTPUT STATEMENTS

FILE STATEMENTS

A file statement directs the computer to the file containing the information you need. This statement is always the first to appear in each query and is constructed in this manner:

FOR FILE [File]
[Mnemonic];

For example: FOR FILE IDF;

To direct your query to a private file recorded on magnetic tape, construct a file statement in this manner:

FOR FILE [File]
[Mnemonic],T;

If a private file is stored on a magnetic drum, use this format:

FOR FILE [File]
[Mnemonic],D;



OUTPUT STATEMENTS

There are four types of output statements: REPORT, COUNT, UNIT, and FORM. At least one of these must appear in each query. In most queries you will probably use only a REPORT or COUNT statement. Output statements always follow a file statement.

REPORT Statements

A REPORT statement indicates the following to the computer:

- * what data from each selected record is to be output and the format of that output; this is indicated by the mnemonic of a report format table (RFT)
- * on what device this data is to be output -- in your work area or in the computer room; this is indicated by a logical equipment number (LEN)

To have a single copy of your output printed in your work area, construct a REPORT statement in this manner:

```
REPORT [RFT Mnemonic] ON [LEN]
```

The LEN to be specified is that of the teletypewriter or DCT 2000 to which you want your output sent. To have your output transmitted to a high-speed printer in the computer room, always specify LEN 600. For example:

```
FOR FILE IDF;
REPORT IHEAD ON 600;
.
.
.
```

Output transmitted to teletypewriters is printed on paper that will accommodate 72 characters per line and is 5.5 inches long. It is always printed at six lines per inch. Output transmitted to DCTs and high-speed printers is also printed at six lines per inch. However, the paper is 14 inches wide, 11 inches long, and can accommodate 132 characters per line.

Close a REPORT statement with a semicolon unless it is the last in your query. If it is the last, close it with a period.

If you elect to have your answer printed at eight lines per inch or to have it printed on paper other than that described above, your REPORT statement will always be supplemented by a FORM statement and/or a UNIT statement. Both are described on the following pages.

If you want your output recorded on magnetic tape, omit the "ON LEN" portion of the REPORT statement. For example:

```
FOR FILE IDF;
REPORT IHEAD;
UNIT MAGTP,CABLE;
```

```
.
.
.
```

This query directs the computer to record the IHEAD sector of each IDF record on magnetic tape.

UNIT Statement

A UNIT statement should be used to indicate to the computer that one copy of your answer is to be printed at eight rather than six lines per inch or that your answer is to be recorded on magnetic tape. In the first case, LEN 600 must also be specified in the preceding REPORT statement. In the second case, your output will automatically be transmitted to the computer room. If used, a UNIT statement follows a REPORT statement.

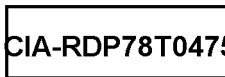
For one copy of your answer at eight lines per inch, the format of a UNIT statement is this:

```
UNIT RMPL,8
```

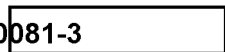


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For example:

FOR FILE IDF;
REPORT INOTE ON 600;
UNIT RMTL,8;

.
. .
. .

This query directs the computer to
1) transmit the INOTE sector of
each IDF record to a high-speed
printer in the computer room;
2) and print one copy of that data
at eight lines per inch.

To direct the computer to record your output on magnetic tape use
one of the appropriate UNIT statements listed below. Do not specify a
LEN in your REPORT statement.

For subsequent conversion
to paper tape for trans-
mission via cable
(APPENDIX B) UNIT MAGTP,CABLE

For binary representation
of data (APPENDIX B) UNIT MAGTP,BINTP

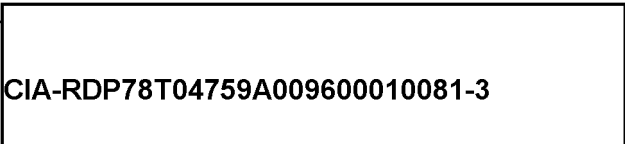
For Fielddata representa-
tion of data UNIT MAGTP,BCDTP

For example:

FOR FILE IDF;
REPORT IHEAD;
UNIT MAGTP,BINTP

.
. .
. .

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FOR FILE IDF;
 REPORT IOBJE;
 UNIT MAGTP,CABLE.
 .
 .
 .

Close a UNIT statement with a semicolon unless it is the last in your query. If it is the last, close it with a period.

FORM Statement

A FORM statement is used whenever you want copies of your output printed on one of the types of paper listed below. Your output must be transmitted to the computer room (LEN 600). If used, a FORM statement is placed immediately after a UNIT statement or after a REPORT statement if a UNIT statement is not used. In the table the letter b indicates a blank character position.

Code for Type of Paper (5 Chars)	Width (Inches)	Horizontal Character Positions	Length (Inches)
116bb	11	110	8.5
1468b	14	132	8.5
1471b	14	132	9.0
MATLb	14	132	14.0
MATLL	9	90	15.0
MATSb	14	132	10.0
MATXL	14	132	16.0
TTYLG	--	72	11.0

To direct the computer to print your output on one of the types of paper listed above, construct a FORM statement in this manner:

FORM [Paper Code]

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For example:

FOR FILE IDF;
REPORT INOTE ON 600;
FORM 116 ;

.
.
.

This query directs the computer to

- 1) transmit the INOTE sector of each record in the IDF to a high-speed printer in the computer room;
- 2) and print one copy of that data, six lines per inch, on paper identified by the code, 116.

Five character positions must be allotted for each paper code; allow blanks for unused positions.

A FORM statement can also be used to indicate that you want up to and including four copies (an original and three) of your output printed on one of the types of paper listed above. In this case, the format of a FORM statement is this:

FORM [Paper Code] [No. of Copies]

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For example:

```
FOR FILE IDF;
REPORT INOTE ON 600;
FORM MATXL,2;
.
.
.
```

This query directs the computer to

- 1) transmit the INOTE sector of each record in the IDF to a high-speed printer in the computer room;
- 2) and print two copies of this data, six lines per inch, on paper identified by the code, MATXL.

To have your output printed at eight lines per inch include a UNIT statement in your query. For example:

```
FOR FILE IDF;
REPORT INOTE ON 600;
UNIT RMTL,8;
FORM MATXL,2;
.
.
.
```

Close a FORM statement with a semicolon unless it is the last in your query. If it is the last, close it with a period.

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COUNT Statements

You may use a COUNT statement instead of a REPORT statement whenever you want the computer to

- (1) total the number of records that meet all your specifications, or
- (2) total the number of different values in a given field or item in records that meet all your specifications

Thus, the answer to a query that contains a COUNT statement will always be a single number rather than textual material. Answers can be transmitted to any of the devices listed in CHAPTER I. However, it will usually be more convenient to specify the LEN of an on-line teletypewriter in your work area.

To direct the computer to total the number of selected records that meet your specifications, construct a COUNT statement this way:

COUNT RECORDS ON LEN

To direct the computer to total the number of different values in any given field or item in each selected record, specify the phrase, COUNT VALUES FOR, the mnemonic of the sector in which the field or item is located, and then either the mnemonic for the field or the mnemonic for the field and the item in which you are interested.

COUNT VALUES FOR Sector, Field
Mnemonic, Mnemonic ON LEN

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Or:

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COUNT VALUES FOR [Sector] [Field] [Item] [Mnemonic] [Mnemonic] [Mnemonic] ON [LEN]

For example:

FOR FILE IDF;
COUNT RECORDS ON 621;
.
.
.

This query directs the computer to total the number of records you want selected from the IDF and print that total on LEN 621.

FOR FILE IDF;
COUNT VALUES FOR IDETE,DET:,AGEN ON 621;
.
.
.

This query directs the computer to total the number of different agencies that produced basic third-phase reports on selected IDF targets and to print the total on LEN 621.

If your query is directed to the IDF, a COUNT statement must always be used with one or more record selection statements. In any given query only one COUNT statement can be specified.

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CHAPTER III. RECORD SELECTION STATEMENTS

Record selection statements indicate to the computer which records you want selected from the file specified in your FOR FILE statement. You can specify that records be selected on any one of the following bases:

- (1) the location of targets with respect to a circle, polygon, or corridor on the surface of the earth; this pertains only to the IDF;
- (2) or the values recorded in given fields and/or items in each record;
- (3) or a combination of (1) and (2).

You must include at least one record selection statement in each query directed to the IDF. By including one or more of these statements in each query, you are in effect listing the conditions upon which records are to be selected. The maximum number of conditions you can include in a single query is twenty. Record selection statements are discussed in the order in which they must appear in a query.

RECORD SELECTION BASED
ON TARGET LOCATION

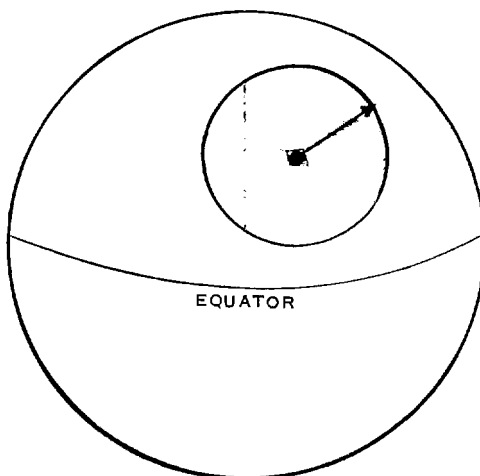
Statements that direct the computer to select records on the basis of the location of one or more targets are always introduced by the words, WITHIN or EXCEPT. WITHIN statements refer to targets located inside a given area; EXCEPT statements, to targets located outside a given area. The areas you select must not include the north or south pole. When defining areas for the computer, measure latitudes north and south from the equator and longitudes east and west from Greenwich Meridian.

The use of WITHIN and EXCEPT statements is optional and will depend entirely upon the sort of information you need. If used, a WITHIN statement is always the first record selection statement to appear in a query. An EXCEPT statement (if any) must follow a WITHIN statement.

In Relation
to a Circle

You may direct the computer to select records on installations on the basis of their location with respect to one or two circles on the surface of the earth. To define a circle

- (1) express the latitude and longitude of the center in degrees, minutes, seconds, and direction; if minutes and/or seconds are unknown, insert zeros in the unused positions;
- (2) express the radius of the circle in tenths of a nautical mile (nm); the radius must not exceed 999.9 nm.



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Given these values, the computer will select records for only those targets located

* inside one circle or

* inside one circle but outside a second circle

For the first option the format of your record selection statement will be this:

WITHIN CIRCLE [Latitude of Center] / [Longitude of Center] RADIUS [Radius Value].

Where applicable, use leading zeros with latitude and longitude values; separate latitude and longitude with a slash. There must be a single space between degrees and minutes, minutes and seconds, and seconds and direction. For example:

FOR FILE IDF;
REPORT IHEAD ON 600;
WITHIN CIRCLE 20 00 00 N/040 00 00 E RADIUS 2000.

This query directs the computer to

- 1) select IDF records on all targets located inside a circle having a radius of 200.0 nm and centered at the coordinates cited above;
- 2) print the IHEAD sector of each selected record on LEN 600 (in the computer room).

Note that the decimal point is not expressed in the nautical mile value.

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To direct the computer to select records on targets located inside one circle but outside a second circle, define each figure according to the instructions given above. The circles may or may not be concentric. The record selection statement defining the second circle will always be introduced by the word, EXCEPT. The format for this option is this:

WITHIN CIRCLE [Latitude of Center 1] / [Longitude of Center 1] RADIUS [Radius 1] ;

EXCEPT CIRCLE [Latitude of Center 2] / [Longitude of Center 2] RADIUS [Radius 2] .

For example:

```
FOR FILE IDF;
REPORT IHEAD ON 600;
WITHIN CIRCLE 20 00 00 N/040 00 00 E RADIUS 2005;
EXCEPT CIRCLE 21 00 00 N/039 00 00 E RADIUS 100.
```

- This query directs the computer to
- 1) select from the IDF records on all targets located inside the circle (radius - 200.5 nm) defined in the WITHIN statement but outside the circle (radius - 10.0 nm) defined in the EXCEPT statement;
 - 2) then print the IHEAD sector of each selected record on LEN 600.

Punctuation, spacing, and the conventions to be observed in expressing latitude and longitude values remain the same.

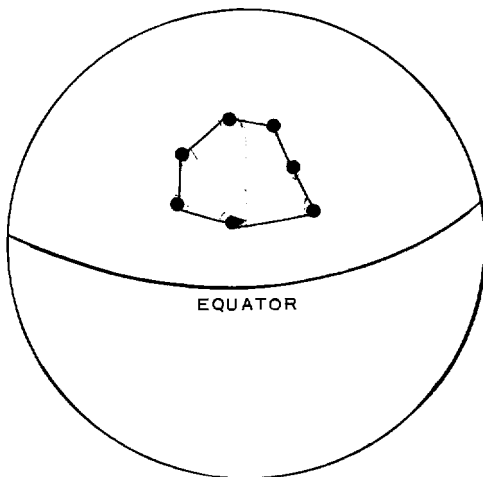
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In Relation to a Polygon

The computer can select records on installations on the basis of their location with respect to one or two polygons on the surface of the earth. Each side of this figure will be a line of constant direction or, if you prefer, a rhumb line. The polygon to be defined must not have more than eight sides. No included angle may be greater than 180 degrees. To define a polygon

express the geocoordinates of each vertex in degrees, minutes, seconds, and direction; if minutes and/or seconds are unknown, insert zeros in unused positions



Given these values, the computer can select records on those targets located

- * inside one polygon or
- * inside one polygon but outside a second polygon

For the first option the format of your record selection statement will be this:

```

WITHIN POLYGON [ Geocoordinates of Vertex 1,
                  Geocoordinates of Vertex 2,
                  .
                  .
                  .
                  Geocoordinates of Last Vertex. ]

```

For example:

```

FOR FILE IDF;
REPORT ILOCA ON 600;
WITHIN POLYGON 00 00 00 N/020 00 00 E,
                20 00 00 N/020 00 00 E,
                20 00 00 N/040 00 00 E,
                00 00 00 N/040 00 00 E.

```

- This query directs the computer to
- 1) select all IDF records on targets located inside the four-sided polygon defined above;
 - 2) then print the ILOCA sector of each selected record on LEN 600.

Where applicable, use leading zeros with latitude and longitude values; separate latitude and longitude with a slash. There must be a single space between degrees and minutes, minutes and seconds, and seconds and direction.

To direct the computer to select records on targets located inside one polygon but outside a second polygon, define both figures according to the instructions given above. The record selection statement defining the second polygon will be introduced by the word, EXCEPT. For example:

```
FOR FILE IDF;
REPORT IHEAD ON 600;
WITHIN POLYGON 15 00 00 N/019 00 00 E,
                18 00 00 N/021 00 00 E,
                16 00 00 N/022 00 00 E;
EXCEPT POLYGON 17 00 00 N/020 00 00 E,
                 17 30 00 N/021 30 00 E,
                 15 30 00 N/019 45 00 E,
                 16 00 00 N/020 00 00 E.
```

This query directs the computer to

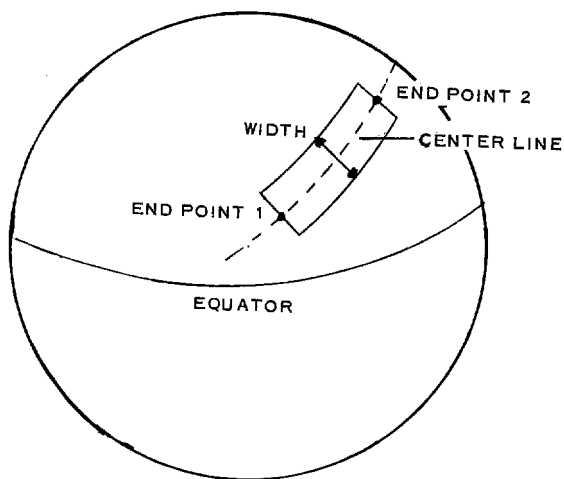
- 1) select from the IDF records on all targets located inside the triangle defined in the WITHIN statement but outside the quadrilateral defined in the EXCEPT statement;
- 2) then print the IHEAD sector of each selected record on LEN 600.

In Relation to
a Corridor

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The computer can select records on targets located inside a corridor on the surface of the earth. The center axis of the corridor will be a line of constant direction, i.e., a rhumb line. To define a corridor

- (1) express the geocoordinates of both end points of the center line in degrees, minutes, seconds, and direction; if minutes and/or seconds are unknown, insert zeros in the unused positions;
- (2) express the entire width of the corridor in tenths of a nautical mile; the width must not exceed 999.9 nm.



Given these values, the computer will select records on those targets located inside the corridor you have defined. To express these values in a record selection statement, use this format:

WITHIN CORRIDOR $\frac{\text{Latitude of End Point 1}}{\text{Longitude of End Point 1}}$,
 $\frac{\text{Latitude of End Point 2}}{\text{Longitude of End Point 2}}$
 WIDTH $\frac{\text{Total Width of Corridor}}$.

Note that no comma is placed after the longitude of end point 2. For example:

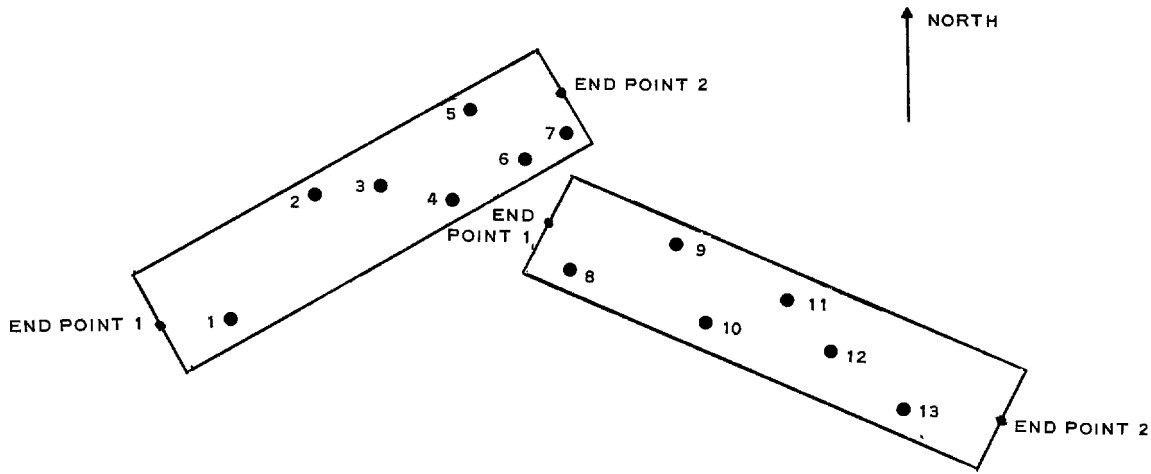
```
FOR FILE IDF;
COUNT RECORDS ON 621;
WITHIN CORRIDOR 21 07 05 N/091 25 10 E,
                35 00 00 N/095 00 00 E
WIDTH 600.
```

- This query directs the computer to
- 1) count all IDF records on targets located inside a corridor 60 nm wide, extending between the coordinates cited above;
 - 2) and then print the total number of records on LEN 621.

Where applicable, use leading zeros with latitude and longitude values. Separate latitude and longitude with a slash. There must be a single space between degrees and minutes, minutes and seconds, and seconds and direction.

A few words about the arrangement of records when a query contains a record selection statement introduced by WITHIN CORRIDOR. If you specified the mnemonic of an IDF sector in your REPORT statement, the computer will arrange records on targets inside the corridor in the sequence shown below, that is, from the west end to the east end. If the corridor is oriented in a north-south direction, records on targets inside the corridor will be arranged in a sequence that begins at the

first end point defined in your WITHIN statement. If you specify a report format table that contains a so-called sort instruction, the selected records will be arranged according to the instructions in the specified table, not in the sequence shown below.



In each corridor targets are marked in the order in which their respective records will be arranged, i.e., 1 through 7 and 8 through 13.

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In Relation to Two
Different Figures

Using WITHIN and EXCEPT statements, you can direct the computer to select records on targets located

- * inside one circle but outside one polygon
- * inside one polygon but outside one circle
- * inside one corridor but outside one circle
- * inside one corridor but outside one polygon

The general format for each statement is this:

WITHIN [CIRCLE, POLYGON
or CORRIDOR] [Definition of Figure];

EXCEPT [POLYGON or
CIRCLE] [Definition of Figure].

For example:

```
FOR FILE IDF;
COUNT RECORDS ON 100;
WITHIN CORRIDOR 21 07 05 N/091 25 10 E,
                35 00 00 N/095 00 00 E
                WIDTH 500;
EXCEPT CIRCLE 27 00 00 N/093 00 00 E RADIUS 100.
```

This query directs the computer to total the number of installations located

- 1) inside a corridor 50 nm wide and extending between the coordinates cited above, and
- 2) outside a circle centered at the coordinates cited above and having a radius of 10 nm; then print this total on LEN 100.

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RECORD SELECTION BASED ON
FIELD AND ITEM VALUES

You may also direct the computer to select records from the IDF on the basis of the values (contents) you specify for one or more fields and/or for one or more items in each record. Statements that direct the computer to select records on this basis are introduced by the words WHEN, OR, or AND. Each of these statements consists of three parts listed below.

1 The identification of the field and/or item in which you are interested.
A field is identified by its mnemonic and the mnemonic of the sector in which it is located.
An item is identified by its mnemonic and the mnemonics for the sector and field in which it is located.

2 The relation between the value you specify and the value actually recorded in the field and/or item of each record to be selected. This relation is expressed by one of these mnemonics:

EQ - equal to
GR - greater than
NL - not less than, i.e., greater than or equal to
NE - not equal to
NG - not greater than, i.e., less than or equal to
LS - less than

3 The value you specify. This value can pertain to targets (e.g., BE numbers) or to the records themselves (e.g., mission number, date of information). You can specify

- * a single value
- * a range of values

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* several alternative values, any one of which can be used as the basis for the selection of records

A range of values will consist of the first and last values or the lowest and highest, whichever is appropriate. Expressing a range indicates (to the computer) that you need those records that contain one or more values within the specified range, including the first and last values. Separate the two with a slash. For example:

2555/3555

Alternative values are expressed in this manner:

2500,3000,3500,4000

They are separated only by commas. Although expressed in one statement, each alternative value must be considered as one of the twenty conditions that can be included in a single query.

The first time you specify the value for a field in any record selection statement this construction must be used:

WHEN, OR Sector Field Field or AND Mnemonic, Mnemonic Relation Value

Then, in your next record selection statement you may specify additional values for a field in the same sector without repeating the sector mnemonic. The first time you specify the value for an item in any record selection statement the format of that statement will be this:

WHEN, OR Sector Field Item or AND Mnemonic, Mnemonic, Mnemonic Relation Value

Then, in your next record selection statement you may specify additional values for items in the same field and sector without repeating the field and sector mnemonics. However, this procedure for identifying succeeding fields and items is optional. You may find it easier and more convenient

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to specify the mnemonics for sector and field or the mnemonics for sector, field, and item in each statement.

If a record does not meet all conditions specified in your record selection statements, it will not be selected from the file. The mnemonics you specify for sectors, fields, and items in the IDF and the formats of their respective values are listed in Format and Mnemonics for Records in the Installations Data File.

WHEN Statement

A WHEN statement will be the first record selection statement to appear in your query unless you use a WITHIN statement. Both cannot be used in the same query. To specify the value for a particular field determine the format of the value and the mnemonics for the appropriate sector and field. Then specify sector and field mnemonics, relation mnemonic, and value in that order. For example:

```
FOR FILE IDF;
REPORT IOBJE ON 600;
WHEN IHEAD,COUN EQ UR.
```

This query directs the computer to

- 1) select IDF records on all targets in the USSR and
- 2) then print the IOBJE sector of each on LEN 600 (in the computer room).

```
FOR FILE IDF;
REPORT IOBJE ON 312;
WHEN IHEAD,MRN$ 2120/2130.
```

This query directs the computer to

- 1) select an IDF record or records identified by MRN 2120-2130, inclusive;
- 2) then print the IOBJE sector of each selected record on LEN 321.

Values for items in a particular field are specified in exactly the same manner, except that your statement must include the appropriate item mnemonic. For example:

```
FOR FILE IDF;
REPORT IBRIE ON 321;
WHEN IBRIE,BRI: ,DATE EQ 701111.
```

This query directs the computer to

- 1) select records on all targets described in brief third-phase reports dated 11 November 1970;
- 2) and print the IBRIE sector of each selected record on LEN 321.

Note the punctuation and spacing that must be observed in the examples cited above. Close the statement with a period if it is the last in your query. If it is not, close it with a semicolon.

OR Statement

An OR statement expresses an alternative to the conditions given in preceding and/or succeeding record selection statements. Thus,

```
WHEN condition A
OR condition B
OR condition C
```

means that the computer will select records on the basis of condition A or condition B or condition C. Because of its function, an OR statement will never be the first record selection statement to appear in a query. The format of an OR statement is identical to that of a WHEN statement.

For example:

```
FOR FILE IDF;
COUNT RECORDS ON 012;
WHEN IHEAD,COUN EQ VN,KN,KS;
OR COUN EQ CH;
OR CAT$ 80000/82000.
```

This query directs the computer to count the records on all targets

- 1) located in N. Vietnam, N. Korea, or S. Korea;
- 2) or located in China;
- 3) or assigned an IDHS category code from 80000-82000, inclusive;
- 4) then print the total number of records on LEN 012.

In this example alternative values are expressed for the COUN field and a range of values, for the CAT\$ field. Note that it was unnecessary to repeat the sector mnemonic, IHEAD, in each OR statement because the COUN and CAT\$ fields are located in this sector, the last to be specified in a preceding record selection statement.

AND Statement

If used in a query, an AND statement is treated (by the computer) as part of each preceding record selection statement. Only one AND statement can be used in a query, and with the exception of a USE statement, it will be the last explicit record selection statement to appear in a query. Thus,

```
WHEN condition A
OR condition B
AND condition C
```

means that records will be selected on the basis of conditions A and C or on the basis of conditions B and C.

The format of an AND statement is identical to that of WHEN and OR statements. For example:

FOR FILE IDF;
REPORT IREAD ON 030;
WHEN IHEAD,DELE EQ Y;
OR ILOCA,ELEV GR 2500;
AND IHEAD,COUN EQ CU.

This query directs the computer to print on LEN 030 the IREAD sector of each selected record on targets

1) appearing in annotated photos and located in Cuba;

or 2) located more than 2,500 feet above mean sea level and located in Cuba.

In the AND statement note that it was necessary to repeat the sector mnemonic, IHEAD. Although this mnemonic had been specified in a preceding statement, it was not the last to be specified.

USE Statement

Unlike the other types of record selection statements discussed so far, a USE statement directs the computer to select records from an entire file on the basis of a value or values recorded in the first selected record. A USE statement directs the computer to

- * select the first record that satisfies all conditions specified in your record selection statements;
- * use the field or item mnemonic specified in the USE statement and determine the contents actually recorded in that field or item in the first selected record
- * then search the entire file and select all other records having the same value(s) in the same field or item

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A USE statement consists of only the necessary sector, field, and/or item mnemonics but no values. Do not specify a repeating field. The statement is constructed in this manner:

```
USE [Sector] [Field] [Item]
   [Mnemonic] [Mnemonic] [Mnemonic].
```

```
USE [Sector] [Field]
   [Mnemonic] [Mnemonic].
```

For example:

```
FOR FILE IDF;
REPORT IHEAD ON 600;
WHEN IHEAD,MRN$ EQ 975;
USE ILOCA,ELEV.
```

This query directs the computer to

- 1) select the IDF record identified by MRN 975;
- 2) determine the value recorded in the ELEV field (in the ILOCA sector) of that record;
- 3) select all other IDF records having the same value in the same field;
- 4) and then print the IHEAD sector of each selected record on LEN 600.

In other words, this query directs the computer to print the IHEAD sectors of all IDF records on targets located at the same elevation as the target denoted by MRN 975.

If you elect to include a USE statement in your query, it will be the last statement in the query, not just the last record selection statement.

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COMPOUND RECORD
SELECTION STATEMENTS

Except for USE statements, the other types of record selection statements can be used to construct a compound statement. A compound statement is introduced by a WHEN, OR, AND, or a WITHIN-EXCEPT statement followed by one or more statements that specify other conditions. Each succeeding statement is identical to an AND statement except that the word, AND, is implied. Each condition in a compound statement must be satisfied before a record or records can be selected from the file. Thus, this represents a compound statement:

WHEN condition A
condition B
condition C

It directs the computer to select all records that satisfy conditions A and B and C. Records that do not meet all three conditions will not be selected from the file. In each compound statement all statements except the first are always indented five or more spaces from the left margin.

A single query can include more than one compound statement:

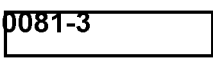
WHEN condition A] 1
condition B]
OR condition C] 2
condition D]

In this case records will be selected only if they satisfy conditions A and B or conditions C and D.

An AND statement can also introduce a compound statement. Although its construction is identical to that of other compound statements, this kind of compound statement actually becomes part of each preceding statement -- simple and/or compound.



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WHEN condition A

OR condition B
 condition C
 condition D

AND condition E
 condition F

These statements direct the computer to select records that satisfy conditions

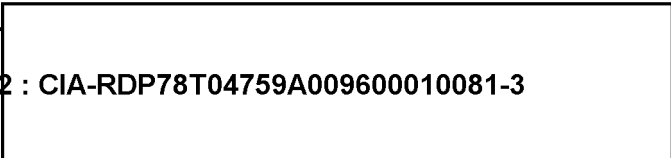
A and E and F
 or B and C and D and E and F

For example:

FOR FILE IDF;
 REPORT IHEAD ON 012;
 WHEN IHEAD,COUN EQ VN,KN,KS;
 CAT\$ EQ 80110;
 OR IHEAD,COUN EQ CH,UR;
 CAT\$ 70000/72000;
 AND IPHOT,PHO:,DATE GR 700115;

This query directs the computer to print on LEN 012 the IHEAD sector from each selected IDF record and to select records on the basis of one of two alternative sets of conditions:

- 1) targets located in N. Vietnam, N. Korea, or S. Korea;
and assigned IDHS category code 80110;
and observed on photography dated later than 15 January 1970;
and appearing in ground photos;
- or 2) targets located in China or the USSR;
and assigned an IDHS category code from 70000 through 72000, inclusive
and observed on photography dated later than 15 January 1970;
and appearing in ground photos.



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A compound statement can also consist of a WITHIN statement and an EXCEPT statement (if used) followed by one or more statements that specify other conditions. Thus, these statements represent a compound statement:

```

WITHIN figure 1
EXCEPT figure 2
           condition A
           condition B

```

This compound statement directs the computer to select records on all targets located inside figure 1 and outside figure 2 provided those records also satisfy conditions A and B. For example:

```

FOR FILE IDF;
COUNT RECORDS ON 105;
WITHIN CIRCLE 20 00 00 N/040 00 00 E RADIUS 2005;
EXCEPT CIRCLE 20 00 00 N/040 00 00 E RADIUS 1005;
           IHEAD,COUN EQ EG;
           CAT$ EQ 67000.

```

This query directs the computer to select records on all targets

- 1) located inside a circle having a radius of 200.5 nm and centered at the coordinates cited above;
 - 2) and outside a circle having a radius of 100.5 nm and centered at the coordinates cited above;
 - 3) and located in the UAR;
 - 4) and assigned IDHS category code 67000;
- then count the number of records meeting these conditions and print the total on LEN 105.

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FOR FILE IDF;
 REPORT IHEAD ON 600;
 WITHIN POLYGON 51 00 00 N/019 00 00 E,
 18 00 00 N/021 00 00 E,
 16 00 00 N/022 00 00 E;
 OR IHEAD,COUN EQ CH;
 CAT\$ EQ 67000.

This query directs the computer to print on
 LEN 600 the IHEAD sectors of records on all
 targets

- 1) located inside the triangle defined by the
 coordinates cited above;
- 2) or located in China and assigned IDHS
 category code 67000.

Note that lines 4 and 5 in this query are
 part of the WITHIN statement and must be
 indented at least five spaces from the
 left margin.

RESTRICTIONS

IDF Queries

If your query is directed to the IDF, record selection statements must
 include

* either at least one of these values:

COMIREX number
 BE number
 IDHS category code
 country code
 military district number
 NPIC number
 machine reference number

* or the values that define a circle,
 polygon, or corridor.

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The statements to which this restriction applies are

- a simple or compound statement introduced by WITHIN, WHEN, or OR
- one of the above followed by a simple or a compound statement introduced by AND

To omit one of these values is to direct the computer to search the entire IDF.

For example this type of query would preclude a search of the entire IDF:

- | | | |
|------------------------|------|--|
| 1 | WHEN | condition A
condition B — BE number |
| 2 | OR | condition C
condition D — IDHS category code |
| 3 | OR | condition E
condition F — COMIREX number
condition G |
| 1, 2, & 3
continued | AND | condition H
condition I |

Note that it was unnecessary to specify one of the mandatory values in the last compound statement because that statement is a continuation of statements 1, 2, and 3. This example would also preclude a search of the entire IDF:

- | | | |
|--------------------|------|--|
| 1 | WHEN | condition A
condition B |
| 2 | OR | condition C
condition D |
| 1 & 2
continued | AND | condition E — BE number
condition F |

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Despite the speed involved in digital computer operations, a search of the entire IDF requires several hours to perform. If you submit a query that does not specify one of the values listed above, you will receive a Teletype message indicating that you cannot transmit your query to the computer. If such a query is necessary, consult the Chief, Information Systems Branch, AID, who will endeavor to find some other means of satisfying your requirement.

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Repeating
Fields

If your query includes more than one compound record selection statement and in one of these statements you specify one or more repeating fields or items from repeating fields, you must specify the same field(s) or the same item(s) in each statement. To do this specify these fields or items in an AND statement or in a compound statement introduced by an AND statement. For example:

```
FOR FILE IDF;
REPORT INEGA ON 112;
WHEN IBRIE,BRI:,AGEN EQ NPIC;
    DATE EQ 700400;
OR IDETE,DET:,AGEN EQ NPIC;
    DATE EQ 700400;
AND IBRIE,PHO:,MISS EQ GA123; ← Items in PHO:
    FRAM 36/50. ← Repeating Field
```

The same query could also be constructed this way:

```
FOR FILE IDF;
REPORT INEGA ON 112;
WHEN IBRIE,BRI:,AGEN EQ NPIC;
    DATE EQ 700400;
    PHO:,MISS EQ GA123; ← Items in PHO:
    FRAM 36/50; ← Repeating Field
OR IDETE,DET:,AGEN EQ NPIC;
    DATE EQ 700400;
    IBRIE,PHO:,MISS EQ GA123; ← Items in PHO:
    FRAM 36/50. ← Repeating Field
```

This query directs the computer to select from the IDF records on all targets

- 1) described in a brief third-phase report produced by NPIC during April 1970 and based on GIANT NAIL mission 123, frames 36 through 50;

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[Redacted]

[Redacted]

- 2) or described in a basic third-phase report produced by NPIC during April 1970 and based on GIANT NAIL mission 123, frames 36 through 50;
- 3) then print the INEGA sector of each selected record on LEN 112.

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CHAPTER IV. SPECIAL-PURPOSE STATEMENTS

Special-purpose statements enable you to insert information that must or could appear in your output. This information includes items such as labels identifying each page of output, control system numbers, report numbers, lines of text for a preface, and headings. At present, there are two special-purpose statements, each of which will insert this type of information in your output. Both are described on the following pages. In each query you may include as many special-purpose statements as you need. When used, they always precede record selection statements and follow output statement(s).

CNTL STATEMENT

A CNTL statement directs the computer to insert one or more headings on a single line of each page of your output. Precisely what the content of each heading should be will depend on the contents of your output. Usually this statement will insert information such as defense classification, codewords, a control system number, and/or the caveat for the system or systems in which the output will be controlled. But it may be any statement you wish. For example, you may want to identify your output by inserting on each page a brief reference to the query that produced it.

The format of a CNTL statement is this:

CNTL [Line No.], [Heading 1: Position of 1st Character] / [Heading 1, [Heading 2: Position of 1st Character] [Heading 2],
... [Last Heading: Position of 1st Character] / [Last Heading]

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For example:

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CNTL 2,1/NUMBER OF AIRFIELDS ABOVE 7000 FT MSL IN CHINA - DEC 1970

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CNTL 2,65

All headings will be printed on the line you specify after the mnemonic, CNTL. The maximum number of positions on a given line depends on the type of paper you intend to use and therefore ranges from 72 to 132 positions. (See CHAPTER II.) To insert information on more than one line use a CNTL statement for each additional line. Close the statement with a semicolon unless it is the last in your query. If it is the last, close it with a period.

PREFACE STATEMENT

If your output is a document that requires a preface, you can use one or more preface statements to compose and insert that text. Use one PREF statement for each line to be inserted. Include these statements in your query only if you have detailed BQL instructions regarding your output, and those instructions indicate that you should do so. (See APPENDIX C.) The format of a preface statement is this:

PREF [No. of Spaces from Left Margin] [No. of Spaces from Right Margin] [Line To Be Printed Between Specified Margins]

Close the statement with a semicolon unless it is the last in your query. If it is the last, close it with a period.

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CHAPTER V. GUIDELINES FOR CONSTRUCTING QUERIES

Before constructing a query, determine

- 1) the kind of output you need: data from selected records? statistics about selected records or about the contents of these records?
- 2) whether you want your output to be printed or recorded on magnetic tape;
- 3) whether you want records selected on the basis of the location of targets with respect to a circle, polygon, or corridor;
- 4) whether you want records selected on the basis of values in fields and/or items;
- 5) whether you want your output printed at eight lines per inch or printed on special paper or whether you need more than one copy.

In each query statements must appear in this order:

file
output
special-purpose
record selection (except USE)
USE

FILE AND OUTPUT STATEMENTS

Each query must contain at least two statements: one file and one output statement.

Use a REPORT statement to get one copy of your output printed at six lines per inch on a teletypewriter, DCT 2000, or high-speed printer.

Use a REPORT and an appropriate UNIT statement to have your output recorded on magnetic tape.

If you want one or more copies of your output printed on special paper, supplement your REPORT statement with a FORM statement.

A COUNT statement may be used instead of a REPORT statement when you need statistical output. In a query directed to the IDF a COUNT statement should always be specified with one or more record selection statements. Only one COUNT statement can be used in any given query.

RECORD SELECTION STATEMENTS

Include one or more record selection statements in each query directed to the IDF.

The maximum number of conditions that can be specified in one query is twenty (20). If specified, each alternative value is considered as one condition.

If used, statements directing the computer to select records on the basis of geographic location will always be the first to appear in a query. In this case, the first statement will always be introduced by WITHIN; if used, the second statement will be introduced by EXCEPT. If you wish, you can then list one or more statements directing the computer to select records on the basis of values in fields and/or items.

If the statements mentioned in the preceding paragraph are not used, a WHEN statement will be the first record selection statement to appear in a query. A WITHIN and a WHEN statement cannot be used in the same query.

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The first time you specify a value for a field or item it must be identified by the mnemonics for sector, field, and/or item. You do not have to repeat sector and/or field mnemonics if they were specified in a preceding record selection statement and were the last to be specified. This procedure is optional.

Each query can contain only one simple or compound AND statement, which is part of each preceding record selection statement -- simple and/or compound.

If your query is directed to the IDF, record selection statements must include at least one of these values

- BE number
- COMIREX number
- IDHS category code
- country code
- military district number
- NPIC number
- machine reference number

or the definition of a circle, polygon, or corridor. The statements to which this restriction applies are

- a simple or compound statement introduced by WITHIN, WHEN, or OR
- one of the above followed by a simple or a compound statement introduced by AND

If you specify a repeating field or one or more items from a repeating field in one compound statement, the same repeating field and/or items must be specified in each compound statement.

SPECIAL-PURPOSE STATEMENTS

Use special-purpose statements to insert items such as identifying labels, report numbers, a preface, and headings.

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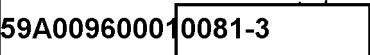
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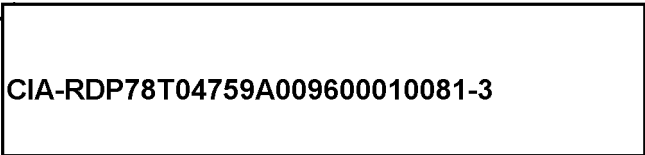
PUNCTUATION
AND SPACING

Place the first word in each statement at the left margin. If a statement requires more than one line, indent the overruns at least five spaces. Each introductory word or words is separated from the rest of the statement by one space. In compound record selection statements each statement except the first is also indented at least five spaces from the left margin.

Mnemonics, relation mnemonics, and values are usually separated from one another by one space.

Close each statement except the last with a semicolon. Close the last statement with a period.

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CHAPTER VI. SUBMITTING QUERIES ON TELETYPEWRITERS AND DATA COMMUNICATIONS TERMINALS

Queries can be transmitted to the UNIVAC 494 computer system via on-line teletypewriters or Data Communications Terminals located in work areas throughout the building. The teletypewriters you can use are the ASR and KSR Teletypes and Kleinschmidt Electronic Data Printers. Two types of Kleinschmidt printers are available. One can be used to transmit queries and receive output. The other prints output only and has no keyboard. Procedures for transmitting queries on all teletypewriters are identical. Regardless of whether you use a teletypewriter or a DCT 2000, all statements comprising one query are submitted in one transmission. Before using a teletypewriter, we recommend that you list your query on paper.

Initialization and turnoff procedures for teletypewriters and DCTs are explained in Introduction to the Remote Access Computer Service.

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TRANSMITTING QUERIES
ON TELETYPEWRITERS

Before transmitting a query on a teletypewriter, be sure that the computer system is available for use by pressing these keys in the order listed:

ALT
MODE

CTRL

+

SVC
Y

simultaneously

CTRL

+

BELL
G

simultaneously

If the system is available, you will receive this kind of message on the teletypewriter you are using:

102	0940	A RYE READY	000002
(LEN)	(Time)		(Number of Programs in the Queue)

If such a message does not appear, press

ALT
MODE

CTRL

+

EOT
D

simultaneously

A so-called RYE READY message will then be printed. If it is not, contact the Chief, Systems Programming Branch, AID for assistance.

You will receive no other messages from the computer system before you transmit a query.

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To transmit a query via a teletypewriter follow these procedures in the order listed. The LEN or logical equipment number you specify must be that of the teletypewriter, DCT 2000, or high-speed printer to which you want your output transmitted. Omit a LEN if your output is to be recorded on magnetic tape. R/L is an abbreviation for the RETURN and LINE FEED keys.

Press (ALT MODE) (CTRL) + (SMK A) simultaneously

Type BQL,LEN (of teletypewriter you are using) (R/L)
Your Component Code, Name, Extension (R/L)

Press (ALT MODE) (CTRL) + (SOS Q) simultaneously

Type Your query.
Press (R/L) at the end of each line except the last

Press (ALT MODE) (CTRL) + (EOT D) simultaneously

Shortly after you have transmitted a query to the computer system, your output will be printed by the teletypewriter, DCT 2000, or high-speed printer you have specified via a LEN. Or, your output will be recorded on magnetic tape.

TRANSMITTING QUERIES
ON PAPER TAPE

If you wish, you can use the ASR paper tape punch and reader unit to punch and transmit queries. Recording queries on paper tape is a time-saving measure since you can transmit frequently used queries without using the keyboard each time.

Punching Queries
on Paper Tape

The paper tape punch and reader unit is located on the left side of the ASR teletypewriter. Before punching a tape, you must convert the teletypewriter to a so-called local mode, that is, to an off-line status. Instructions for doing this appear on the control panel. After the conversion is complete, you will receive this message indicating that the ASR is in a local mode:

LR

Then,

- 1. Press these keys in the order listed:

ALT MODE
CTRL + SVC simultaneously
L

- 2. Turn the PUNCH button to ON.
- 3. Feed about six inches of tape through the tape gate by pressing and simultaneously holding these keys:

CTRL, SHIFT, REPT, P

Hold all these keys down until the desired amount of paper tape has been fed through the tape gate.

4. Follow the instructions given in the TRANSMITTING QUERIES ON TELETYPEWRITERS section in this chapter. A copy of your input will be printed by the teletypewriter you are using.
5. Tear off the punched paper tape. To identify your tape we recommend that you place a label and date in a conspicuous place at the beginning of the tape.
6. Press the RESET button to return the teletypewriter to on-line status. Turn the PUNCH button to OFF.

You are now ready to transmit your query via the ASR paper tape reader.

Transmitting Queries
Punched on Paper Tape

Be sure that the ASR Teletype is on line. To transmit your query via the paper tape reader follow these procedures:

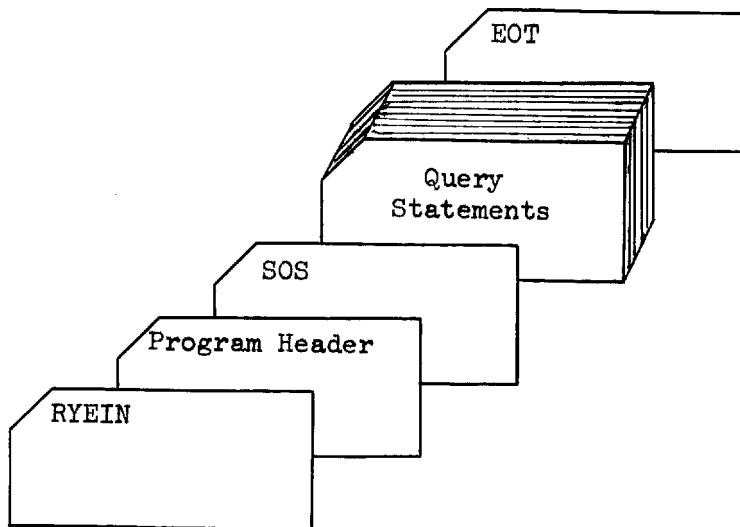
1. Press the square red button under the tape gate to release the gate.
2. Place the tape over the feed holes on the tape feed wheel; the narrower, unperforated margin must face the tape reader, not you.
3. Place the code holes of the first character to be read slightly behind the sensing pins.
4. Close and lock the tape gate by pushing it down. Press the READER ON button.

The tape will stop when the last punched character has been read. Press the square red button to release the tape.

TRANSMITTING QUERIES
ON A DCT 2000

If you elect to transmit your query on a DCT 2000, your punched card deck must include the control and data cards shown below. Instructions for punching control cards are given in the Introduction to the Remote Access Computer Service.

Punch each statement in your query on a separate card. Begin punching the statement in column 1 and proceed to the right. To punch a semicolon use a multiple 6-8-11 (minus sign) punch. An overrun (if any) of any statement should be punched on the next card; however, begin punching the rest of the statement in column 6 rather than column 1. If you are punching a compound record selection statement, begin punching the second and succeeding statements in column 6. Then arrange your deck in the sequence shown below.



APPENDIX A. GLOSSARY OF TERMS FOR THE BATCH QUERY LANGUAGE

CHARACTER	A single letter, number, or symbol; the smallest unit of information considered in this manual.
FIELD	A unit of information consisting of one or more items; every field is identified by a mnemonic.
FILE	A set of records.
FORMAT	The arrangement of data in a file, record, sector, field, or item; also refers to the arrangement of data that is input or output.
IDF	Installations Data File; a set of records on targets or installations; records contain data derived from imagery.
ITEM	A unit of information consisting of one or more characters; an item is identified by a mnemonic; when it is the only item in a field, an item has no mnemonic.

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APPENDIX A. GLOSSARY OF TERMS FOR THE BATCH QUERY LANGUAGE (CONTINUED)

MNEMONIC

A combination of letters or of letters and symbols used to identify a sector, field, or item; also used to specify some computer operations and the relation between a mnemonic and a value or values.

MRN

Machine reference number; assigned by the computer to each record in the IDF for identification purposes; will not be changed or transferred to another record.

ON LINE

The status of a piece of equipment when it is in communication with the UNIVAC 494 computer system in

QUERY

In this manual, a series of statements directing the computer to select from a file records that meet your specifications and print or record on tape all or part of each record.

RECORD

A unit of information consisting of one or more sectors; in the IDF each record is identified by a machine reference number.

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APPENDIX A. GLOSSARY OF TERMS FOR THE BATCH QUERY LANGUAGE (CONTINUED)

REPEATING FIELD

A field which is used as often as necessary, that is, repeated to record different values; all occurrences (i.e., instances) of the field are identified by the same mnemonic; consult a description of the file in which you are interested to learn which fields are repeating fields.

REPORT FORMAT TABLE

A set of instructions indicating (to the computer) which data is to be output and the format to be used in presenting this data; each table is identified by a mnemonic and each is stored in the computer.

SECTOR

A unit of information consisting of one or more fields; a sector is identified by a mnemonic.

VALUE

The contents of a given record, sector, field, or item; synonymous with entry and data.

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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE

BINARY REPRESENTATION OF DATA (BINTP) AND DATA
RECORDED FOR CABLE TRANSMISSION (CABLE)

DEFINITIONS

Tape File	The output produced by your BQL query.
Data Block	602D computer words: 20 items plus 2 block descriptor words; the last block in a file may contain fewer words.
Item	30 computer words (150 characters).
Internal file label	The first (header) or last (trailer) block of data on each reel of magnetic tape in the file; contains information pertaining to the file and is machine readable; the format differs from that of a data block.
External file label	That file information appearing on the reel on which the file is recorded; common external file labels are the stickers applied to tape reels and the handwritten notations on card decks.
EOR	End-of-reel; the termination indicator for intermediate reels of a multireel file.
EOF	End-of-file; the termination or point of completion of a quantity of data.

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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

SYMBOLS

A = alphabetic Fieldata character
N = numeric Fieldata character
Q = octal character; not in Fieldata
S = special Fieldata character
X = any Fieldata character
Z = alphanumeric Fieldata character

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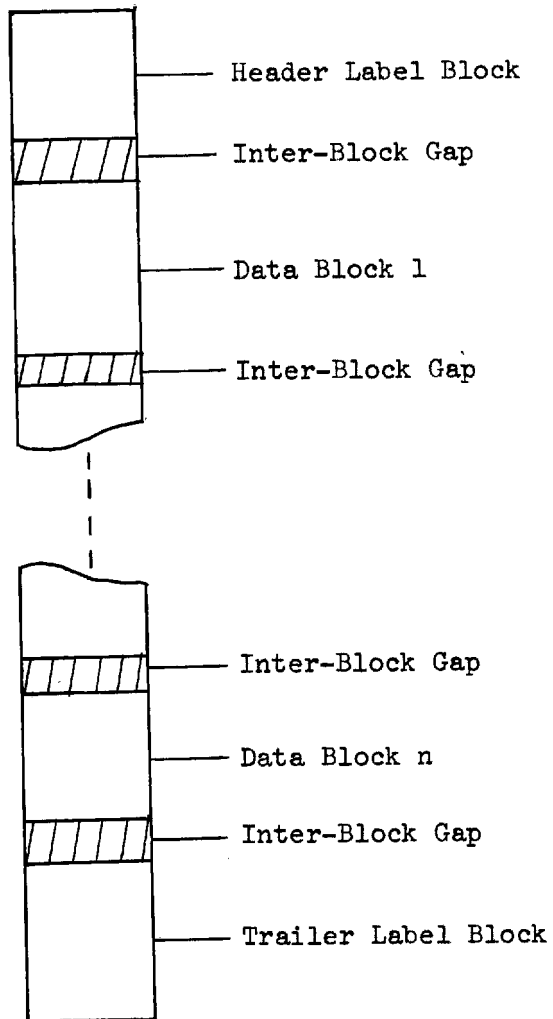
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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

REEL FORMAT



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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

HEADER LABEL BLOCK

The header label shown below will be placed on all reels of tape when output is represented in binary numbers or when output is to be transmitted by cable.

WORD			
0	7 3 7 3 7 3 7 3 7 3	} Initial Header Block	
1	7 3 7 3 7 3 7 3 7 3		
2			
3	File Name		
4			
5	Date Created	} Julian Date	
6	Reel Sequence No.		
7	Time Created		
8			
9	Reserved		
10			
11			
12	Retention Date		
13	No. Reel Pass-Write		
14	Physical Reel No.	} Fielddata	
15	Not Used		
16			
17			
18	For User's Information		
19			
20			
21			
22	7 3 7 3 7 3 7 3 7 3	} End Header Block	
23	7 3 7 3 7 3 7 3 7 3		

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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

Each header label will contain the fields listed below.

WORD 3 - FILE NAME (in Fielddata)

Coded: FFFFFFFFFFFFFFFF
Symbol: AZZZZZZZZZZZZZZZ
Example: TBMASTERWPICAAA

where F is a unique, descriptive name assigned to a file for purposes of communication in verbal references to the file and for internal program verification that the correct input file has been used.

WORD 5 - DATE FILE CREATED (in Fielddata)

Coded: YYDDD
Symbol: NNNNN
Example: 66326

where Y = year & D = day of year.

WORD 6 - REEL SEQUENCE NUMBER (in Octal)

Coded: RRRRR
Symbol: QQQQQ
Example: 00002

where R is the sequentially assigned reel number provided by the computer.

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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

WORD 7 - TIME CREATED (in Fielddata)

Coded: TTTTT
Symbol: NNNNS
Example: 1258+

where T is the starting time at which the reel was produced; time is provided by the computer's day clock.

WORD 12 - RETENTION DATE (in Fielddata)

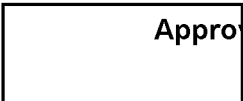
Coded: YYDDD
Symbol: NNNNN
Example: 66340

where Y and D are the year and day the tape may be released.

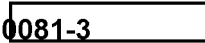
WORD 13 - NUMBER OF REEL PASS-WRITE (in Octal)

Coded: P P P P P
Symbol: Q Q Q Q Q
Example: 00032

where P indicates the number of times a given reel of tape has been mounted and initialized; magnetic tape write only.



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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

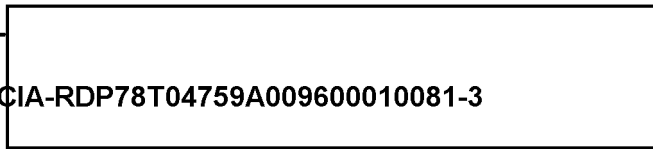


WORD 14 - PHYSICAL REEL NUMBER (in Fielddata)

Coded: RRRRR
Symbol: NNNNN
Example: 01288

where R denotes a number externally assigned to a reel of tape.

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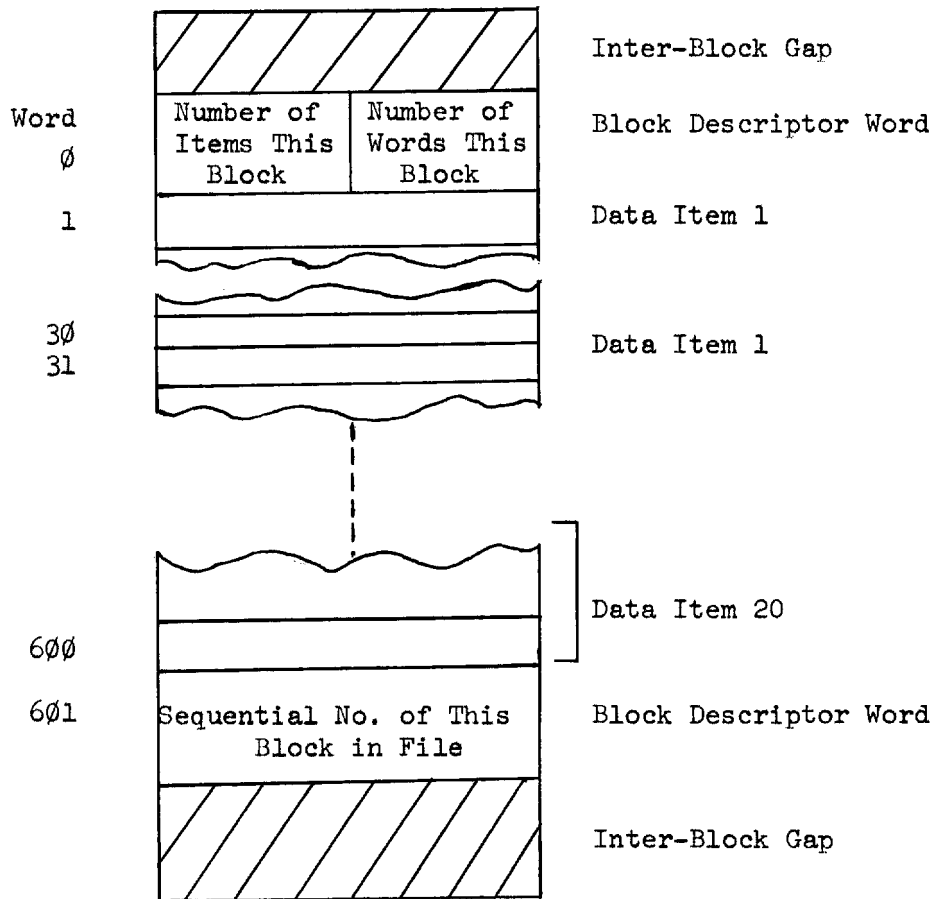


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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

DATA BLOCKS

Except for possibly the last, each data block in the file will have the format shown below. The last will have a similar format but might contain fewer data items.



APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

TRAILER LABEL
BLOCK

The 24-word trailer label on each tape reel will be preceded by a file mark (17₈) and will have the format shown below.

WORD			
	∅	7 5 7 5 7 5 7 5 7 5	} 75 ₈ = EOR, 76 ₈ = EOF
	1	7 5 7 5 7 5 7 5 7 5	
	2	No. Blocks This Reel	
	3		
	4	Item Count	
	5		
	6	Item Count-Cumulative	
	7		
	8	Reserved	
	9		
	10	Unused	
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22	7 5 7 5 7 5 7 5 7 5	} 75 ₈ = EOR, 76 ₈ = EOF
	23	7 5 7 5 7 5 7 5 7 5	

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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

The standard trailer label will contain the fields listed below.

WORD 2 - NUMBER OF BLOCKS THIS REEL (in Octal)

Coded: CCCCCCCCCC
Symbol: QQQQQQQQQQ
Example: 01273

where C is the number of data blocks on a given reel of tape.

WORD 4 - ITEM COUNT (in Octal)

Coded: MMMMMMMM
Symbol: QQQQQQQQQQ
Example: 0000025660

where M is the number of data items on a given reel of tape.

WORD 6 - CUMULATIVE ITEM COUNT (in Octal)

Coded: PPPPPPPPPP
Symbol: QQQQQQQQQQ
Example: 0000052520

where P is the number of data file items accumulated to the end of the tape.

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APPENDIX B. FORMATS OF OUTPUT RECORDED ON MAGNETIC TAPE (CONTINUED)

EXTERNAL FILE LABELS

External file labels will be produced on line by the computer and will contain the fields annotated in this illustration.

File Name	Date & Time (Fielddata)		
AAAAAAAAAAAAAAAA	DDMMYYTTTTS	CH UN	Channel & Unit Tape, Octal
		NNNNN	Physical Reel Number in Fielddata
		NNNNN	Number of Days File Must Be Retained
		NNNNN	Logical Sequence of Reel in File
		NNNNN	Job Number Assigned by Computer
		NNN	Requester's Component Code

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APPENDIX C. SETUP INSTRUCTIONS FOR DOCUMENTS PRODUCED BY THE
BATCH QUERY LANGUAGE

N O T I C E

Instructions for using the Batch Query Language
to produce documents and certain types of reports
will be published as these instructions are
developed.

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