AD-4056 05	6 OFFIC MINIC	E OF TH	E COMPI	ROLLER	(NAVY) SIS PAC	WASHIN	GTON DO	OR AID	ING MAN	F/G 9/ AGEME	2 TC(U)	×	/
				Antonio an antonio antonio ant						integration	-		
				dente and a second	A Black	ennañaar River an River anger Higherneger		Activitions.	annillaraa		HELLER PROPERTY.	al and the second s	
	inne inne	generation Termination Termination Termination		HELE AL					A AND IT	- 40- 1000			Ì
	27. (************************************						END Date Filmed 8 - 78 DDC						
a M													



MINIGAP

I

I

I

I

1

I

1

1

e 1 7

USER'S GUIDE

	TABLE OF CONTENTS	PAGE
1.	General	1-1
2.	Structure of Report Requests	2-1
3.	Parameters	3-1
4.	Syntactical Requirements	4-1
5.	Samples	5-1
	APPENDIX - Development of Input File	A-1
	INDEX	X-1

NTI S	White Section the
900	Buff Section
MANNOUNCED	
USTIFICATION	
Y SISTRIBUZION	AVAILABELITY CODER
NISTRICTION	AVAILABILITY CODES

. 78 07 11 078

1. Report No. BIBLIDGRAPHIC DATA 3. Recipient's Accession No. SHEET MGAP-UG-01 /DOD/DF 8/003 5. Report Date 4. Title and Subtitle or Hiding MINIGAP Generalized Analysis Package on 4-20-78 in analysis. USER'S MANUAL nagement Date of approval 8. Performing Organization Rept. No. heryl Masiello and Address 10. Project/Task/Work Unit No. Office of the Comptroller of the Navy \vee NA Office of Financial Analysis (NCD-5) 11. Contract/Grant No. Crystal Mall 2 Room 602 NA Washington, DC 20350 13. Type of Report & Period Covered 12. Sponsoring Organization Name and Address NA CAMGAP-UG-OJ NA 14. 15. Supplementary Notes For magnetic tape, see 16. Abstracts This document provides the necessary instructions for using MINIGAP. It is aimed at Interdata-knowledgeable users. It assumes that the data has been previously loaded into a MINIGAP database. The specifications of the data files are contained in the MINIGAP PROGRAMMER'S MANUAL. This manual contains samples of outputs generated by MINIGAP. Each sample output report is accompanied with the user-defined input file used to generate the report. The USER'S MANUAL and PROGRAMMER'S MANUAL should be supplied with each MINIGAP system. 20 Apr 78 17. Key Words and Document Analysis. 17a. Descriptors Thesaurus of Engineering and Scientific Terms and the 1964 COSATI Subject Category List not available. See Abstract 17b. Identifiers/Open-Ended Terms 17c. COSATI Field/Group 18. Availability Statement 21. No. of Pages 19. Security Class (This Report) Release Unlimited 46 UNCLASSIFIED 20. Security Class (This 22. Price Page UNCLASSIFIED THIS FORM MAY BE REPRODUCED FORM NTIS-35 (REV. 10-73) ENDORSED BY ANSI AND UNESCO. USCOMM-DC 8265-P74 N-403 450

The MINIGAP system allows a user to produce reports formatted to his needs from a given database. A master file, containing the data, and a driver file, used to specify how the data can be accessed, must already exist. These files must have been created in the required format. (see Programmer's Documentation Manual: Master file, Driver file). An input file containing the report parameters must be set up by the user to generate reports. This file is used to specify the structure of the report, the organization/s involved, the time period/s involved, the account/s involved, and how and where the report should be output.

The following section, "STRUCTURE OF REPORT REQUESTS" should enable the user to decide which report type (2, 4, 5 or 11) is necessary to generate the desired report. This section will also explain the general requirements and structure of the input file. It explains which "line types" are necessary for each report type, and in what order they must be entered in the input file.

The next section, "PARAMETERS" describes the key parameter words and their meanings. The formats required to enter parameter words, and the other "line types" of the input file are specified in the third section, "SYNTACTICAL REQUIREMENTS". There is a separate page in this section to describe each "line type". This also contains correct and incorrect samples for each "line type" used in the input file.

The last section contains a sample of an input file for each report type, and the corresponding report.

The user should create an input file to generate a report using the editor. The user should follow the structural and syntactical requirements (see STRUCTURE OF REPORT REQUESTS and SYNTACTICAL REQUIREMENTS). The user should set the background partition of the system to at least 167K. To run MINIGAP, the user types:

GAP (filename)

where (filename) is the name of the input file created by the user. The report/s and diagnostic messages will be output to logical unit #15, unless the parameter OUTPUT was assigned by the user (see PARAMETERS, OUTPUT). If it was assigned, the report/s will be output to that logical unit, and the diagnostic messages to logical unit #15. The user should adjust GAP.CSS so that the logical unit/s for output (11, 12, 13, 14 and 15) is/are assigned to the desired devices or files (see GAP.CSS, next page).

GENERAL

GAP.CSS

Pres.

	*	MINIGAP REPORT GENERATOR MAINTANENCEMASIELLO
in second	LO .BG.MINGAP.TS	к
	AS 1,01	••••••••••••••••••••••••••••••••••••••
-	*	ASSIGN 1 TO THE INPUT FILE
1	AS 2, MASTER.NRG	
	*	ASSIGN 2 TO THE MASTER DATA FILE
ļ	AS 3, FILE.2	OUEDLAN DEDARM & INITE
	*	UVERLAYRUPARM & INITLZ
	AS 4, FILE.4	OVERIAY REPART
	AS S.FUE.A	OVERENT - REPORT
	*	OVERLAYREPØØ4
	*	LU 6 MAY BE ASSIGNED FOR TRACES
	AS 7, DRIVER.NRG	
	*	ASSIGN 7 TO THE DRIVER DATA FILE
ł	AS 8, FILE.7	
	*	OVERLAYREPØØ5
	AS 9,FILE.8	
	AS 10.FTIF 9	OVERLAT REFUT
	*	OVERLAYREPØ11
	AS 14, TER1:	
	*	OUTPUT FOR REPORT
	SCR GAP.SCT	
	AS 15, GAP.SCT	
	*	OUTPUT FOR DIAG. MESSGS.
	ST	
	*CAII	

..



1200

I

I

1

[]

Π

[]

Π

Π

[]

-

1

1

1



•.

STRUCTURE OF REPORT REQUESTS

There are four different general report structures used with MINIGAP. The first, generated by REPØØ2, contains accounts and account computations in the rows, with a column for each organization. The entire report is for one time period. The next report type, generated by REP004, is the reverse of the type 2 report. The accounts and computations are in the columns, and the rows represent the organizations. The third report is generated by REP005. Each column contains one time period or a calculation involving time periods. The accounts and account computations are in separate rows. The entire report is for one organization. The last report, generated by REP011, has a separate column for each time period, or time period calculation. Each row contains data for one organization, and the entire report is for one account, or account calculation.

An input file used to generate a report must specify the report type, the contents of the rows and the columns, and how the data will be output. Each report type requires slightly different input.

The first line of each report request must contain the report type (2, 4, 5, 11). This should be followed by all of the key parameters (see next section, PARAMETERS) the user wishes to specify. These are followed by a line of special characters, to denote the end of the parameter specifications, and then, the report title. The time period/s involved is/are on the next line/s. For all report types except report type 2 the next lines specify the column contents, followed by the column titles. The column definitions are not specified for report type 2. The remaining line/s of the report are used to specify the account/s involved. These lines may also specify underlining, paging, etc. However, formatting specifications are meaningless for type 4 and type 11 reports.

MINIGAP can handle requests for more than one report at a time although each string of input data for each report must contain all the information necessary for that report. However, when report requests are strung together in one input file, for one MINIGAP run, the parameter words need not be redefined. If one of the reports specifies a given value for a parameter word, it will retain that value for all succeeding reports, unless specifically overridden in the succeeding reports. (This assumes that the succeeding reports are in the same input file, and therefore, the same MINIGAP run.)

2-2

STRUCTURE OF REPORT REQUESTS, CONT.

The following pages describe the line types necessary to generate a given report. The input file for a given report must contain the specified line types, in the specified order, as instructed by the following pages. Since the input for each report type differs slightly, the structures are defined separately. The section, "Syntactical Requirements" should be consulted to determine the actual format of the line types. If more than one line of a line type may be used, the line type is enclosed in a box. Otherwise, the line type refers to one line. For the line type, "input parameters," the section "PARAMETERS" should also be consulted.

STRUCTURE OF REPORT REQUESTS, CONT.

REP002

I

[]

1

1

- 1. report type
- 2. input parameters
- 3. input end
- 4. report title
- 5. time period
- 6. Accounts, Computations, Formatting
- 7. account end

REP004

- 1. report type
- 2. input parameters
- 3. input end
- 4. report title
- 5. time period
- column specifications by account
- 7. column titles

--represents one or more lines with the same function

Syntax of each line type is described in "Syntactical Requirements".

.

STRUCTURE OF REPORT REQUESTS, CONT.

REP005

- 1. report type
- 2. input parameters
- 3. input end
- 4. report title
- 5. time periods
- time period end (only used if the number of time periods is less than the number of columns)
- Column specifications by time period
- 8. column titles
- 9. Accounts Computations, Formatting

10. Account end

REP011

- 1. report type
- 2. input parameters
- 3. input end
- 4. report title
- 5. time periods
- time period end (only used if the number of time periods is less than the number of columns)
- column specifications by time period
- 8. column titles
- 9. Accounts & Computations

ALCON .

10. Account end

--represents one or more lines with the same function

Syntax of each line type is described in "Syntactical Requirements".

2-5



I

1-----

1

1

[]

[]

[]

[]

[]

[]

[]

[]

[]

[]

[]

1



PARAMETERS

There are 17 parameter words presently being used. These may be set to a particular numerical value, with a particular meaning. The upper and lower bounds are stored for each parameter. If either of these boundaries are exceeded, or if the user doesn't specify a value for this parameter word, the default values are used. Since all of the parameter words have a default value, it is not necessary to specify any of these, unless desired. The four characters enclosed in parentheses beneath each word are the characters that must be used to specify the parameter in the input file.

The parameter words are specified after the first line (which specifies the report type). The following parameter words are now in use:

- *1. Month (Mont) This is used to specify the month number of the fiscal year for which data was used in the report. It will be used to print the heading of the report. This causes the time period of the report to be written on the report. The user should make certain that this agrees with the time period requested via the time period line type.
- 2. Year (Year) This is used to specify the fiscal year for which data was used in the report. (see month) Only the last two digits of the year should be specified.
- 3. Columns This is used to specify the number of columns in the report. It is not used for type 2 reports.
- 4. Lines This parameter is used to specify the number of lines (Line) in the column headings.
- 5. Accuracy (Accu) This may be equal to 0, 1, 2 or 3. It specifies the number of digits output to the right of the decimal point.
- 6. Spacing This is used to specify single (=1), double (=2) or (Spac) triple (=3) spacing.
- **7. Level 1 (Acti) This is used to specify the desired organization's rank at level 1 (the lowest level). (If it is set to zero, all the organizations which are members of the requested level 2 subtotal are output. If it is set to 20, only the level 2 subtotal is output.)

*If MONTH=1, the first month of the fiscal year will be printed in the heading. For example, in Fiscal Year 1976, the first month was July. However, in Fiscal Year 1977, the first month was October.

**If all of the "level" parameters are set to 20, the grand total of all the organizations is used. See "Organization Structure," page 3-5.

PARAMETERS, CONT.

*8. Level 2 (Comm)

Level 3

(Thir)

This is used to specify the level 2 group of which the requested organization is a member. (The combination of this number with the level 1 number must uniquely define the desired organization or subtotal.) If it is set to zero, all the level 1 organizations which are members of the requested level 3 subtotal are output. If it is set to 20, only the requested level 3 subtotal is output.

This may be used to specify a third level of organization. If this is set to 20, the third level of organization is ignored. Otherwise, it will output the organizations which are members of the level 3 subtotal, within the constraints of the level 1 and level 2 specifications (see: Parameters, level 1 and level 2, above).

- If this parameter is set to "1", the data is output Scale in units. If it is set to "1000", the data is output in thousands. If it is set to "1000000", the data is output in millions. These are the only acceptable values for this parameter.
- The page numbering will begin with the number assigned 11. Page (Page) to this parameter, incremented by 1. (Since the default value is zero, if this parameter is not set by the user, page numbering will begin with "l".)

This parameter is used to specify the maximum number of lines to appear on one page of a report. A new page, if necessary, will be started after the number of lines output equals the maximum number of lines (as specified with this parameter).

This parameter can be used to specify the logical unit from which all future input is read. However, this does not take effect until it has been read. The specification of a report type and the line containing this parameter must, minimally, be contained on the device assigned to logical unit #1. In addition, the file must be assigned in "GAP.CSS". The only available device numbers for this are 11, 12, 13 and 14.

*If all of the "level" parameters are set to 20, the total of all the organizations is used. See "Organization Structure," page 3-5.

10. (Scal)

*9.

12. Maxlines (Max1)

13. Input (Inpu)

PARAMETERS, CONT.

14. Output (Outp) The report itself will be output to the logical unit assigned to this parameter. If this parameter is not used, the report will be output to device #15, with all MINIGAP messages. The output file must be allocated and assigned in GAP.CSS to the device number assigned to OUTPUT. The only available device numbers are 11, 12, 13 and 14.

15. Width (Widt)

16. Length (Stub)

17. Commas (Punc) This parameter is used to specify the width of the columns. Each column will be the same width.

This parameter is used to establish the length of the row labels, in multiples of four (If LENGTH = 9, the row label will contain space for 36 characters).

If this parameter is set equal to 1, the numbers will be output with commas imbedded. If it is set to zero, the commas will be suppressed.



RESERVED PARAMETER WORDS

I

[]

. []

[]

[]

1

-

-

-

Nond	*Name of Parameter	Default	Value	Minimum
word	word	Default	Maximum	MINIMUM
Month	Mont	1	12	1
Year	Year	76	85	75
Columns	Colu	1	15	1
Lines	Line	1	8	1
Accuracy	Accu	0	3	0
Spacing	Spac	1	3	1
Level l	Acti	0	20	0
Level 2	Comm	0	20	0
Scale	Scal	1	1,000,000	1
Page	Page	0	1,000	0
Maximum lines	Maxl	60	1,000	1
Input	Inpu	1	32	1
Output	Outp	15	32	1
Width	Widt	8	16	1
Length	Stub	10	10	1
Commas	Punc	1	1	0
Level 3	Thir	20	20	0

This chart specifies the bounds of the parameter words, and their default value if not specified, or if the bounds are exceeded.

*These are the names used by the user in the input file.

SECTION 4. SYNTACTICAL REQUIREMENTS

1.

I

[]

[]

[]

[]

[]

- Report Type Input Parameters Input End Report Title Time Period 2.
- 3.
- 4.
- 5.
- 6. Time Period End
- 7. Column Specifications
- 8. Column Title
- Formatting
 Accounts
- 11. Computations
- 12. Account End

SYNTACTICAL REQUIREMENTS

This section describes the syntax required for the user input file. The section "STRUCTURE OF REPORT REQUESTS" explains the general requirements of the input file, and the required order of the items in the input file. The section PARAMETERS describes the function of the input parameters.

The syntax will be described in two manners. A verbal description of each line type is used together with a semi-formal grammatical representation of each line type as possible. Following the line type descriptions are samples of user-input files and copies of the reports generated by them.

The following page of definitions should be consulted to understand the grammatical representation of each line. Any line which begins with a semicolon will be disregarded. This enables the user to insert documentation in the report definition. A semi-colon may also be placed on a specification line -- anything following the semi-colon (on that line) will be disregarded.

SYNTACTICAL REQUIREMENTS, CONT.

ALPHA (BLANK) /A, B, C...Z/ (ALPHA) : BLANK : / / (BLANK) // (BLANK) (BLANK) (SEPARATOR, (,)) /STRING, INTEGER/ (FORMULA) (BLANK) /!/ (BLANK) (+, -) /NUMBER/ (BLANK) /Ø, 1, 2...9/ (NUMBER) /BLANK/ /'/ (STRING) /'/ (BLANK) (BLANK) /^, *, /, +, -, =/ (BLANK) /ALPHA, NUMBER/ (STRING) *FORMULA : INTEGER : NUMBER : QUOTE : ******SEPARATOR : STRING :

KEY

() encloses an optional set

// encloses a set of which at least one element is required

& may be used to allow definitions to continue on the next line

NOTE: None of these symbols are themselves used by a user creating an input parameter file, except as noted. They are merely being used in this manner to describe the grammar itself. In addition, any commas encountered in the grammatical description are not members of the set itself, unless otherwise noted.

*For every '(' used, a corresponding ')' must be used on the same line. The '(' and ')' are both members of an optional set in this line.

**The symbol '/' is a member of the required set in this line.

didin 12

Report Type

This should be the first line of any input file. It must contain an equation which sets a string equivalent to the number of the desired report type. The number may also be expressed as an arithmetic expression. The string should be on the left side of the equation, and the number on the right. *If the number is a constant, it must be preceded by an "!".

report type: (STRING) /SEPARATOR/ /FORMULA/

Correct

repo = !2 areport = (!5 - !3) type +!2 reportype = !2

The above lines will identify the report as a type 2 report. The insertion of blanks makes no difference in the line. A computation may be easily expressed, although a line which is easily clear to an observer is recommended. repo = 2 abc(!5-!3) 2=!report

The first line will treat "2" as a variable, not a constant. The second line will request report type 3, which is probably not the user's intention. The third line would consider "report" as a constant, and would be senseless.

Incorrect

Note also that the preliminary string on the left side of the equation is optional.

*The only time that a variable could be used would be when it has already been defined. Since the report type line must be the first line of the report generation input, a variable would only be previously defined if the input file contained lines for generating at least one other report preceding this one. Using a variable would make the report type line harder to understand, so is not recommended.

Input Parameters

The input parameters are specified consecutively, starting in the second line. These are in the form of equations, the right side containing a constant (number preceded by an '!'), parameter variable, or arithmetic expression, and the left side containing at least the first four characters of the parameter word. The parameter word may always be accessed by using its first four characters.

input parameter:

: (BLANK) /the first four letters of & a parameter word/ (STRING) (BLANK) & /=/ (BLANK) /FORMULA, the first & four letters of a parameter word/ & (STRING)

Correct

WIDTh = !8 ;define width ACCU = !100 SCALe = (!10 * ACCU)

The width parameter will define the column width equal to 8 characters. The wording following the semi-colon will be disregarded. Although the syntax in the line defining the accuracy is correct, 100 will exceed the maximum bounds for this parameter, and the default value will be used. The third example illustrates the use of an arithmetic formula to define the parameter. Incorrect

colwidth = 8 ACCUracy--!5 SCALe = /*ACCU +!10

The first line does not contain the first four letters of any parameter on the left side. In addition, a constant is used which is not preceded by an '!'. The second line would be correct if the '--' were replaced with '='. The '=' is required to equate the two sides. The third line does not contain a valid arithmetic expression. If the '/*' were eliminated, the statement would make sense. However, if (accu

+ ! 10) is not a valid value for the scale parameter, a default value will be used.

Input End

The line following the input parameters denotes the end of the input parameters. The only requirement for this line is that the first non-blank character in this line is one of the 19 special characters (as listed below). The content of the line does not matter, as its only purpose is to denote the end of the input parameter list.

*input end: (BLANK) /^, *, /, +, -, =,), (,],[, ., ,, ', :, ;, ?, %, !, \$/
 (input end, STRING)

Correct

**end of list
 /stop/
====

Each of these lines will correctly denote the end of the parameter list. This line must be the line immediately following the input parameter list. The first non-blank character must be a special character, as defined above. In these lines, the first non-blank characters are, respectively, 't', '&', and 'r'. None of these characters are included in the special character list.

Incorrect

the end!!!!

& stop now.

report title

*This set includes a comma, left and right parentheses, left and right brackets, and a slash as special characters.

Report Title

I

-

[]

[]

The next line in the input file is assumed to be the report title. Since all characters and symbols may be used in the title, anything is syntactically correct. Only the first 36 characters are used for the title. Any blanks in the title will be output as is (the entire line may be blank).

report title: the first 36 characters in this line are treated as the title.

Danie de

Time Period

1

-

The next line/s in the report will specify the time period/s. Where multiple time periods may be used, it is incorrect to specify more time periods than columns. The first 8 characters of the line must contain a valid time period name (8 characters, including blanks, are required). The next character (in column 9) must be a blank, 'C', 'L', 'M', 'Q', or 'P'. These characters are defined as follows:

blank or 'C'	use cumulative data					
'L'	use data for the period requested, but					
	from the base year					
'M'	use monthly data					
'Q'	use quarterly data					
'P'	use data for the period requested, but					
	from the previous year					

These definitions are based on the time period pointers stored in the first record of the master file. Check with programmer for up-to-date definitions.

If the data is to be 'spread' over a period of time, the letter 'S' should be placed in column 20. (i.e., a year-end total could be 'spread over 12 months.)

If an incorrect time period is specified, the MINIGAP run will stop, and an error message will be printed.

5129-31 10

TIME PERIOD END

The charts in "STRUCTURE OF REPORT REQUESTS" show which report types may contain more than one time period (5 & 11). If more than one time period may be used, but there are fewer time periods than the number of columns, this line must be inserted after the last time period is specified. This line must be entered exactly as is.

time period end: /Ø999/

Correct

Incorrect

Ø999

anything else.

This line should not be entered if only one time period is allowed, or if the number of time periods in a multiple-time-period report equals the number of columns. Since MINIGAP 'keys' on this line, it should not be used except where specified by the documentation.

1000

The sequence of the remaining items in the user input file differs according to the report type. The charts in "STRUCTURE OF REPORT REQUESTS" must be consulted to determine what items are required, and in what order. Any formatting specifications may now be entered, positioned according to the user's desires.

I

1.

[]

[]

[]

[]

1

.

COLUMN SPECIFICATIONS

The column specifications are dependent upon order. The first line in this group will define the first (leftmost) column, the second line will define the second column, etc. These specifications are expressed in terms of an equation, which requires the '=' sumbol between the two sides. The left side will contain a string, which will be set equivalent to the right side, and can be used subsequently to replace the terms on the right side. If the columns will contain account data, account codes may be used on the right side. Any of the arithmetic operators $(^{,*},+,-,)$ may be used in the computation on the right side. Any constants must be preceded by an exclamation point. Any previously defined variables (including the parameter words), may be used on the right side. If the columns are specified by time, the time periods may be included (instead of the account codes) in the computation on the right side. The time periods on the right side must be represented by a letter of the alphabet. The first time period requested (as above) may be accessed by the letter 'A', the second time period, by the letter 'B', etc. One column specification line should be defined for each column desired. The number of columns desired should have been specified using the parameter 'COLUMN'.

column specification: /STRING/ (BLANK) /=/ /FORMULA/

Correct

column1 = A-B c2 = (1100/1120) * !100 col3 = c2 + !100

The first line will subtract the data for time period 'B' from the data for time period 'A', and put the result in the column defined. (In this case, the column defined would be the leftmost column, since this is the first line of column specifications.) The report must use time period data for the columns for this line to be correct. The second line is correct if '1100' and '1120' are account codes, and the accounts are entered in the columns for this report. This will set column 2 to a percentage (as directed by the equation). The third line will take the data to be output to column 2, add 100 to it, and store the result in column 3. Note that these three lines should not occur in the same input file, since none of the report types use both account data and time period data in the columns.

A-B A= (1100/1120 * !100 colu = Z

The first line does not contain a left side, or the '='. The second line contains a symbol for a time period on the left side (these may occur only on the right side). In addition, the formula in this line contains a '(', but not a ')'. The third line uses an input parameter word on the left side. The letter 'Z' should not be used, since there will never be that many time periods. (maximum number of columns = 15).

Incorrect

4-11

Column Title

The column titles must always follow the column specifications. The titles will contain as many lines as specified with the LINE parameter. The complete title (all lines) for one column must be on one line of the input file. The lines of the title should be separated by an '0' at the end of each title line. The number of characters in any line of the title should not exceed the specified column width. If a line is to be left blank, an '0' is still needed to signify the end of that line. However, there must be at least one blank specified for that line, or it will not be printed as a line. The number of '0's (and the number of lines) on a column title input line should not exceed the number of lines specified with the line parameter. The '0' is not needed to end a line of the column title if the number of characters in the column title is equal to the column width. Each line of the title will be centered; this may be overridden by inserting blanks, as desired, in the lines of the column title.

Assume LINE = !4 and WIDTH = !8 for the following examples.

Correct

Incorrect

cum@amount@yr end@1976

cum amount yr end 19760

This will generate the following title:

Although this is syntactically correct, it will not generate the same title as the 'correct' example. The title would be output as follows:

cum amount yr end 1976

cum amou nt yr en d 1976

FORMATTING

There are three types of formatting specifications. If the first four characters in a line are 'PAGE', a new page of the report will be started before any more lines are output. If the first four characters are '----', a single hashed line will be generated for that row, under the row labels and under each column. If the first four characters are '====', a double hashed line will be generated for that row, in the same manner as the single hashed line.

formatting: /PAGE, ----, ====/ (BLANK)

Correct

PAGE

1

[]

These lines must each start in column 1, and are the only correct lines of formatting. These may be inserted on any lines after the time period specifications, (or after column titles, as appropriate). After a formatting specification line, no lines are output to the report until the formatting has been done.

15 MA

Accounts

The lines used to specify accounts require strict formatting. The first four columns must contain the 4 character account code. The next column must be left blank. The sixth column may contain one digit, used to express the number of spaces the row labels should be right-justified in multiples of 4 (i.e., if the digit = 3, 12 spaces will be inserted to the left of the row labels). The next two columns may be used to specify vertical tabbing. Any blanks contained in columns 7 and 8 will be treated as zeroes. The number of lines skipped will equal the 2 digit number which the user inserts in these two columns.

accounts: /four character account code/ (H(VV))

where H= an optional l digit number representing horizontal tabbing in multiples of four

VV= 2 digit number representing the number of vertical tabs, also optional

Correct

1130 5 2

This line directs MINIGAP to output the data for account 1130, tabbing 2Ø spaces (5 * 4 spaces) to the right, and inserting 2 blank lines before this line is printed.

Incorrect

11305 2

The fifth column should be left blank, and this would direct MINIGAP to output 20 blank lines before printing this line. (Outputting 20 blank lines is permissable, but may not be what is intended by the user.)

COMPUTATIONS

All computations (except column computations which are expressed in the column specification lines) must be preceded by a 'COMP' statement. This line must contain 'COMP' in the first four columns. If any tabbing is required, it should be specified in the same manner and same columns as tabbing for accounts. (see previous page, 'Accounts'.)

The actual computation must be contained on the next line. The format used for computation specifications is similar to the format used for column specifications. However, a title for the computation (to be used as a row label, in the same manner as the account names) can be specified by enclosing the title in single quotes, following at least one blank after the computation.

computations--1: /COMP/ (H(VV))

> VV= 2 digit number representing the number of vertical tabs, also optional

computations--2: /STRING/ (BLANK) /SEPARATOR/ /FORMULA/ (QUOTE)

Correct

Incorrect

COMP 1 2 var = 8200 - 8230 'cost variance'

COMP

var2 = 8400 - 8430 'price variance'

COMP 2 2 nuvar = var2 - var 'new variance'

Each of the above lines calculates an account computation. The numbers '8200', '8230', '8400' and '8430' are account codes. If the numerical value for these numbers was desired, they would have been preceded by an '!'. Note that the 'string' on the left side of the first and second equations has been used to replace the right side of the equations for use in the last equation. var = 8200 - 8230 'cost var'

COMP var2 = var* !10.5 'calc var'

COMP 2 1Ø nu var + oldvar

The first line is incorrect, because it must be preceded by a 'COMP' statement. The second set of lines may be incorrect on some machines. If the '!10.5' is replaced with '!105/!10', no syntax error will be generated, and the result will be the same on all machines. (Some machines may not be able to compute equations containing real numbers.) The third set of lines does not contain a valid arithmetic statement. If a 'STRING' was set equal to the sum, the line would be correct. In addition, there would be only one line of vertical tabbing, since the 2 digit number must be contained in columns 7 and 8.

4-15

Account End

The last line following account, computation and formatting lines is the same as the line type "time period end". This must be the last line of input for report types 2, 5 and 11. This line is required at the end of <u>each</u> report generation sequence for these reports.

account end: /ø999/

Correct

Incorrect

٠.

Ø999

anything else

See "time period end" for further information.

SECTION 5. SAMPLES

I

I

trans

1

[]

ÎÌ

[]

[]

[]

[]

[]

[]

[]

[]

[]

1

14.4

n -3

SAMPLE 1 INPUT FILE FOR TYPE 2 REPORT

REPORTYPE=102 OUTPUT=!14 ACCURACY=!Ø SCALE = !1 PUNCTUATION=!1 JUSE COMMAS **;ALLOW 28 CHARS. FOR ROW LABELS** STUB=17 START WITH PAGE 1 PAGE= ! ØØ COMMAND=16 . WIDTH=!12 . . FYEAR AGREES WITH TIME PERIOD YEAR= ! 76 ;MONTH AGREES WITH TIME PERIOD MONTH=!12 ********* SAMPLE OF TYPE 2 NRG 76120 8200 1 1 8210 1 8220 1 8230 1 8240 1 8250 1 FORMATTING ==== 8260 8205 1 1 COMP 1 DD=(8215*!116)/!10 'ELECTRICITY MBTU' 8225 1 8235 1 8245 1 8255 1 FORMATTING ==== 8265 0999 ;END OF REPORT

5-2 Black

5-3

SAMPLE 1 REPORT GENERATED BY TYPE 2 INPUT FILE

.

a . T

DATE:03/20/78 PAGE 1 NCD-5 REPORT GENERATOR SAMPLE OF TYPE 2 FOR PERIOD ENDING 30 JUNE 1976

ACCOUNT		PWCPERLH	PWCPERLC	PWCPERLP
8200	FUEL OIL COST	644,850	30,737	675,587
8210	ELECTRICITY COST	3,019,186	155,726	3,174,912
8220	COAL COST	Ø	ø	Ø
8230	NATURAL GAS COST	Ø	Ø	ø
8240	PROPANE COST	504,588	28,892	533,480
825Ø	STEAM COST	Ø	Ø	ø
8260	TOTAL FUEL COST	4,168,624	215,355	4,383,979
8205	FUEL OIL MBTU	264,387	12,805	277,192
	ELECTRICITY MBTU	1,235,412	63,417	1,298,829
8225	COAL MBTU	Ø	Ø	ø
8235	NATURAL GAS MBTU	ø	ø	ø
8245	PROPANE MBTU	109,002	6,746	115,748
8255	STEAM MBTU	ø	ø	Ø

8265	TOTAL FUEL MBTU	1,608,800	82,968	1,691,768

5-4

..

SAMPLE 1 .MESSAGES OUTPUT TO UNIT 15

a . 3

*****FPDØØ1***** SYMBOL TABLE STORAGE BEGUN *****FPDØØ1*****159 ACTIVITY NAMES, UICS, KEYS *****FPDØØ1***** 52 FPD ACCOUNT SYMBOLS, NAMES *****FPDØØ1***** SYMBOL TABLE STORAGE COMPLETE *****COMPIL***** REPORTYPE=!02 *****FPDREF***** REPORT # 1, REPORT TYPE 2 *****COMPIL***** OUTPUT=!14 *****COMPIL***** ACCURACY=!Ø *****COMPIL***** SCALE =!1 *****COMPIL***** PUNCTUATION=!1 JUSE COMMAS FALLOW 28 CHARS. FOR ROW *****COMPIL***** STUB=!7 **;**START WITH PAGE 1 *****COMPIL***** PAGE=!00 *****COMPIL***** COMMAND=!6 *****COMPIL***** WIDTH=!12 *****COMPIL***** YEAR=!76 FYEAR AGREES WITH TIME P MONTH AGREES WITH TIME *****COMPIL***** MONTH=!12 *****COMPIL***** ************ ****GETDAT***** NRG 7612 FY76 JUN C *****COMPIL***** DD=(8215*!116)/!10 'ELECTRICITY MBTU'

*****FPDREF***** END OF REPORT PROCESSING

5-5

SAMPLE 2 INPUT FILE FOR TYPE 4 REPORT

.

REPORTYPE=104 COLUMNS=15 LINES=!Ø2 ACCURACY=!00 SCALE =!1 COMMAND=!Ø THIRD=!1 ACTIVITY=!20 OUTPUT=!14 WIDTH=!10 PUNCT=!ØØ SPACING= ! Ø1 YEAR=176 MONTH=!12 SAMPLE OF TYPE 4 NRG 7612C C1=8205 C2=8215 C3=8215*!116/!10 C4=8235 C5=8265 FUEL@MBTU@ ELECEKWHE ELECOMBTUR NAGEMBTUE TOTAL@MBTU@

;PRINT 5 COLS. ;2 LINES OF HEADINGS ;NO DECIMAL PTS. ;IN UNITS ;FOR ALL LEVEL 2 GROUPS ;FOR LEVEL 3, GROUP 1 ;FOR SUBTOTALS ;SEPARATE REPORT FROM MESSAGES ;COLUMN WIDTH ;NO COMMAS ;SINGLE SPACE ;DATE OF DATA

FEND OF PARAMETERS TITLE OF REPORT NAME OF DATA TYPE ACCOUNTS

CHANGE KWH TO MBTU

COLUMN TITLES

SAMPLE 2 REPORT GENERATED BY TYPE 4 INPUT FILE

.

DATE:04/10/78 PAGE 1 NCD-5 REPORT GENERATOR SAMPLE OF TYPE 4 FOR PERIOD ENDING 30 JUNE 1976

ACTIVITY	FUEL MBTU	ELEC KWH	ELEC Mbtu	NAG Mbtu	TOTAL Mbtu
PWCNORFP	4644415	439671	51ØØ184	27Ø894	10015492
PWCPENSP	64Ø68	109098	1265537	2805866	4135574
PWCGRLKP	12718	106406	1234310	2931262	4178289
PWCSANDP	1431177	441949	51266Ø8	9557Ø1	7990128
PWCSANFP	295284	203808	2364173	2225788	4885244
PWCPERLP	277192	111968	1298829	Ø	1691768
PWCGUAMP	133256	274008	3178493	Ø	3311747
PWC SUBP	1161416	128273	1487967	ø	2649383
PWC TOT	8019526	1815181	21056096	9189511	38857616

.

SAMPLE 2 MESSAGES OUTPUT TO UNIT 15

****FPDØØ1***** SYMBOL TABLE STORAGE BEGUN *****FPDØØ1*****159 ACTIVITY NAMES, UICS, KEYS ****FPDØØ1***** 52 FPD ACCOUNT SYMBOLS, NAMES ****FPDØØ1***** SYMBOL TABLE STORAGE COMPLETE

****COMPIL***** REPORTYPE=!04 ****FPDREP***** REPORT # 1, REPORT TYPE 4 *****COMPIL***** COLUMNS=!5 ****COMPIL***** LINES=!02 ****COMPIL***** ACCURACY=!ØØ *****COMPIL***** SCALE =!1 *****COMPIL***** COMMAND=!Ø ****COMPIL***** THIRD=!1 ****COMPIL***** ACTIVITY=!20 *****COMPIL***** OUTPUT=!14 ****COMPIL***** WIDTH=!10 ****COMPIL***** PUNCT=!ØØ *****COMPIL***** SPACING=!01 *****COMPIL***** YEAR=!76 + ***COMPIL***** MONTH=!12 *****COMPIL***** , *****GETDAT***** NRG 7612 FY76 JUN С * ***COMPIL***** C1=8205 * ***COMPIL***** C2=8215 *****COMPIL***** C3=8215*!116/!10 * ***COMPIL***** C4=8235 * ***COMPIL***** C5=8265 *****RDTITL***** FUEL@MBTU@ *****RDTITL***** ELECOMBTUD * ***RDTITL***** ELEC@MBTU@ *****RDTITL***** NAG@MBTU@ *****RDTITL***** TOTAL@MBTU@

;PRINT 5 COLS. ;2 LINES OF HEADINGS ;NO DECIMAL PTS. ;IN UNITS ;FOR ALL LEVEL 2 GROUPS ;FOR LEVEL 3, GROUP 1 ;FOR SUBTOTALS ;SEPARATE REPORT FROM ME ;COLUMN WIDTH ;NO COMMAS ;SINGLE SPACE ;DATE OF DATA ;END OF PARAMETERS

ACCOUNTS

CHANGE KWH TO MBTU

;COLUMN TITLES

* ***FPDREP***** END OF REPORT PROCESSING



SAMPLE 3 INPUT FILE FOR TYPE 5 REPORT

REPORTYPE=15 FREPORT TYPE LINE FPARAMETER LINES WIDTH=!Ø9 COLUMNS=!Ø3 LINES=14 LINCOUNT=!ØØ MAXLINES=166 ACCURACY=!Ø SCALE =!1000 PAGE=!ØØ OUTPUT=!14 COMMAND=!9 ACTIVITY=!20 THIR=!1 SPACING=!Ø1 YEAR=!Ø MONTH= ! Ø3 ********* SAMPLE OF TYPE 5 FREPORT TITLE NRG 7503C FIME PERIOD (A) FIME PERIOD (B) NRG 7TØ3CUMU FIME PERIOD END 0999 C1=A **;COLUMN SPECIFICATIONS** C2=B C3=A-B CUM@AMT@1ST QTR@1975@ COLUMN TITLES CUM@AMT@1ST QTR@197T@ @ @ @VARIANCE COMP 1 **;COMPUTATION** DD=8200/8260*!100 'PERCENT FUEL OIL OF TOTAL' 8200 1 **;**ACCOUNTS 8210 8220 8230 8240 FORMATTING ==== 8260 0999

5-9

SAMPLE 3 REPORT GENERATED BY TYPE 5 INPUT FILE

DATE:03/20/78 PAGE NCD-5 REPORT GENERATO SAMPLE OF TYPE 5 FOR PERIOD ENDING 30 (AMOUNTS IN THOUSANDS	1 R SEPTEMBER 1975)			
PWC TOTAL ACTIVITIES		CUM AMT 1ST QTR 1975	CUM AMT 1st gtr 197t	VARIANCE
PERCENT	FUEL OIL OF TOTAL	3Ø	16	14
8200 FUEL OIL COS 8210 ELECTRICITY 8220 COAL COST 8230 NATURAL CAS 0 8240 PROPANE COST	T COST COST	5,613 10,802 0 2,100 55	3,123 14,18Ø Ø 2,239 14Ø	2,490 -3,378 0 -139 -85
826Ø TOTAL FUEL C	DST	18,726	19,951	-1,225

---- T

.

SAMPLE 3 MESSAGES OUTPUT TO UNIT 15

****FPDØØ1***** SYMBOL TABLE STORAGE BEGUN ****FPD001*****159 ACTIVITY NAMES, UICS, KEYS *****FPDØØ1***** 52 FPD ACCOUNT SYMBOLS, NAMES ****FPDØØ1***** SYMBOL TABLE STORAGE COMPLETE *****COMPIL***** REPORTYPE=!5 FREPORT TYPE LINE ****FPDREP***** REPORT # 1, REPORT TYPE 5 *****COMFIL***** WIDTH=!09 PARAMETER LINES ****COMPIL***** COLUMNS=!03 ****COMPIL***** LINES=!4 ****COMPIL***** LINCOUNT=!00 *****COMPIL***** MAXLINES=!66 ****COMPIL***** ACCURACY=!Ø ****COMPIL***** SCALE =! 1000 *****COMPIL***** PACE=!00 *****COMPIL***** OUTPUT=!14 ****COMPIL***** COMMAND=!9 *****COMFIL***** ACTIVITY=!20 *****COMPIL***** THIR=!1 ****COMPIL***** SPACING=!01 ####COMPIL ##### YEAR=!Ø *****COMPIL***** MONTH=!03 ****COMPIL***** ********** ****RDPARM***** PARAMETER SPECIFICATION ERROR YEAR ALLOWED MINIMUM= 75 ALLOWED MAXIMUM= 85 SPECIFIED VALUE= Ø STANDARD DEFAULT, 76, USED, EXECUTION CONTINUING *****GETDAT***** NRG 7503 FY75 SEP С ****GETDAT***** NRG 7TØ3 FY7T SEP С ****COMPIL***** C1=A COLUMN SPECIFICATIONS *****COMPIL***** C2=B ****COMPIL***** C3=A-B ****RDTITL***** CUM@AMT@1ST QTR@1975@ **¡COLUMN TITLES** ****RDTITL***** CUM@AMT@1ST QTR@197T@ *****RDTITL***** @ @ @VARIANCE ****COMPIL***** DD=8200/8260*!100 'PERCENT FUEL OIL OF TOTAL' ****FPDREP***** END OF REPORT PROCESSING

REPORTYPE=!11 OUTPUT=!14 COLUMNS= ! Ø4 LINES=103 ACCURACY=103 SCALE =! 1000 PAGE=!Ø COMMAND= ! 02 WIDTH=!8 SPACING= ! Ø1 YEAR= ! 78 MONTH= 107 STUB=19 ********** SAMPLE OF TYPE 11 NRG 77Ø3C NRG 7612C NRG 7512C 0999 C1=A C2=C COL3=B VAR=A-B @3Ø DEC@1976@ @3Ø JUN@1975@ @3Ø JUN@1976@ @COST VAR@C1-C3@ COMP 8200/8205 'FUEL OIL COST/MBTU' 0999

SAMPLE 4 INPUT FILE FOR TYPE 11 REPORT

٠

;SEND THE REPORT TO L.U. 14
;3 LINES IN COLUMN TITLES
;3 DECIMAL PLACES
;NUMBERS IN THOUSANDS
;ALL ORGANIZATIONS IN DIVISION 2
;SINGLE SPACE
;ROW LABELS UP TO 36 CHARS.

FINDICATES END OF GIVEN TIME PERIODS

SAMPLE 4 REPORT GENERATED BY TYPE 11 INPUT FILE

DATE:04/10/78 PAGE 1 NCD-5 REPORT GENERATOR SAMPLE OF TYPE 11 FOR PERIOD ENDING 30 APRIL 1978 (AMOUNTS IN THOUSANDS)

FUEL OIL COST (MDTH	30 DEC	30 JUN	30 JUN (COST VAR
FUEL UIL CUSI/MBIU	1976	1975	1976	01-03
NARMO PENSACALA	19 200	Ø ØØØ	30 049	-10 849
NTTC PENSACOLA	9.138	0.000	7.117	2.021
PWC PENSACOLA, HSG	0.000	0.000	Ø.255	-0.255
PWC PENSCACOLA, CONS	Ø.172	0.000	Ø.Ø77	0.095
NARF PENSACOLA	12.319	0.000	17.552	-5.233
NETPDC ELLYSON FIELD	0.000	0.000	0.000	0.000
NRDC PENSACOLA	0.041	0.000	0.034	0.007
NAS PENSACOLA	12.036	0.000	8.764	3.272
PWC PENSACOLA, HSG	0.412	0.000	0.000	Ø.412
PWC PENSACOLA, SHIP	Ø.237	0.000	0.220	0.017
PWC PENSACOLA, PERF	53.555	0.000	64.068	-10.513
******************************	======			=====

..

SAMPLE 4 MESSAGES OUTPUT TO UNIT 15

1

.

[]

		-					
****FPD001*****	STMBUL TABL	E STURA	SE BEGUN	CVC			
****FPDØØ1*****	52 EDD ACCO	NAMES!	DICS, M	MEC			
**************	SYMBOL TARL	E STORA	SE COMPL	FTF			
	STREET THE	L Stonn	52 00m 2				
*****COMPIL****	REPORTYPE=!	11					
****FPDREF****	REPORT #	1, REP(DRT TYPE	11			
****COMPIL****	OUTPUT=!14				SEND THE REP	DRT TO L.	.IJ.
*****COMPIL****	COLUMNS= 104						
*****COMPIL*****	LINES=103				3 LINES IN C	DLUMN TIT	TLE
****COMPIL*****	ACCURACY=!Ø	13			13 DECIMAL PL	ACES	
*****COMPIL*****	SCALE = 100	Ø			INUMBERS IN TH	HOUSANDS	
*****COMFIL*****	PAGE=!Ø						
****COMPIL****	COMMAND= 102				FALL ORGANIZA	FIONS IN	DI
****CUMP1L*****	WIDTH= 18						
*****CUMP1L*****	SPACING= 101				ISINGLE SPACE		
****COMPTL*****	TEAR= 1/8						
****CONFIL*****	STUB=19				POU LAPPIS UP	TO 24 CH	AD
*****COMP11 *****	*********	*			THOW LADELS OF	10 55 61	11711
****GETDAT*****	NRG 7703	FY77	SEP	C			
****GETDAT****	NRG 7612	FY76	JUN	č			
*****GETDAT****	NRG 7512	FY75	JUN	С			
****COMPIL*****	C1=A						
****COMPIL*****	C2=C						
*****COMPIL*****	COL3=B						
*****COMPIL*****	VAR=A-B						
****RDTITL*****	@3Ø DEC@197	60					
*****RDTITL*****	@30 JUN@197	50					
*****RDIIIL*****	030 JUN0197	61					
****KUIIIL*****	CUSI VAREC	1-030	COCT /M				
****COMFIL*****	820018202 .	FUEL UIL	LUSI/R	1610			
***** FPDREP*****	END OF REPO	BT PROCE	SSINC				
4							
11							
			•				
· m							

TA.

DEVELOPMENT OF MINIGAP INPUT FILE

The following questions should be answered before attempting to develop an input file for a report:

1. What report type is desired (2, 4, 5 or 11)? See "Structure of Report Requests" to determine which report type to use.

2. What time period/s is/are involved? This is specific to your data.

3. What organization is/are involved? This is specific to your data. (See "Parameters," Level 1, Level 2 and Level 3, and determine what values these parameters should contain.)

4. What account/s is/are involved? This is specific to your data.

5. Are any computations necessary? If so, what are they?

Now, you are ready to create a MINIGAP input file. Consult "Structure of Report Requests" to determine the line types necessary, and their order, for the chosen report type. Consult "Parameters" to decide which, if any, parameters are necessary, and what values they should be assigned. Consult "Syntactical Requirements" to determine the exact format to be used for each line type.

It may also be helpful to check the sample input file for the desired report type, in the last section, "Samples".

Account end, see Line type. Accounts, see Line type. Accuracy, see Parameter words. ACTI, see Parameter words. ALPHA, see Syntax key.

BLANK, see Syntax key. Column specifications, see Line type. Column title, see Line type. Columns, see Parameter words. COMM, see Parameter words. Commas, see Parameter words. Computations, see Line type. Constant, a number preceded by an exclamation point.

Development of Input file, A-1. Diagnostic messages, 1-1. Driver file, 1-1.

Formatting, see Line type. FORMULA, see Syntax key.

GAP.CSS, 1-2. General, 1-1.

Input, see Parameter words. Input end, see Line type. Input parameters, see Parameters. INTEGER, see Syntax key.

Length, see Parameter words. Level 1, see Parameter words. Level 2, see Parameter words. Level 3, see Parameter words. Line type, a line with a specific syntax and meaning, used to describe the user input file. Account end, 4-16. Accounts, 4-14. Column specifications, 4-11. Column title, 4-12. Computations, 4-15. Formatting, 4-13. Input end, 4-6. Report title, 4-7. Report type, 4-4. Time period, 4-8. Time period end, 4-9. Lines, see Parameter words.

Master file, 1-1. Maxlines, see Parameter words. Month, see Parameter words. NUMBER, see Syntax key. Output, see Parameter words. Page, see Parameter words. Parameter word, a word referenced by a specific set of characters, with a specific meaning, which the user can specify to define the report generation process; redefining, 2-2. syntax, 4-5. words: Accuracy, 3-2. ACTI, 3-2. Columns, 3-2. COMM, 3-3. Commas, 3-4. Input, 3-3. Length, 3-4. Level 1, 3-2, 3-5. Level 2, 3-3, 3-5. Level 3, 3-3, 3-5. Lines, 3-2. Maxlines, 3-3. Month, 3-2. Output, 3-4. Page, 3-3. Punc, 3-4. Scale, 3-3. Spacing, 3-2. Stub, 3-4. THIR, 3-3. Width, 3-4. Year, 3-2. Parameters, 1-1, 3-1/3-5, see Parameter words. Partition size, 1-1. PUNC, see Parameter words. QUOTE, see Syntax key. REPØØ2, description, 2-2. samples, 5-3/5-5. structure of input, 2-4. REP004, description, 2-2. samples, 5-6/5-8.

structure of input, 2-4.

INDEX

INDEX, cont.

Consec.

REPØØ5, description, 2-2. samples, 5-9/5-11 structure of input, 2-5. REPØ11, description, 2-2. samples, 5-12/5-14. structure of input, 2-5. Report type, 2-2, see Parameter words.

Samples, 5-1/5-14. REPØ02, 5-3/5-5. REPØ04, 5-6/5-8. REPØ05, 5-9/5-11. REP011, 5-12/5-14. Scale, see Parameter words. SEPARATOR, see Syntax key. Size, see Partition. Spacing, see Parameter words. STRING, see Syntax key. Stub, see Parameter words. Syntax key, 4-3.

THIR, see Parameter words.

Variable, any string of alpha-numeric characters, which is not an account code, a constant, or a parameter word.

Width, see Parameter words.

Year, see Parameter words.

.