

~~366376~~

~~21. S. G.~~

N.V. J. S. W.

C. T. S.

1.1. S. C.

~~27~~

$$\begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}_{n+1} = \begin{bmatrix} \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}_n$$

$$P \rightarrow \frac{Pe^{-\beta X}}{1 + e^{-\beta X}}$$

~~by~~ by P or $1-P$

$$L = \left(\prod_{i=1}^m p_i \right) \left(\prod_{i=n+1}^n (1-p_i) \right)$$

$$\frac{\partial^2 L}{\partial x_i \partial x_j} \quad 1-m$$

MP-1000 MBU Pnd. C.R.

10/9/84

Units

Plotter 7470 A

FLOPPY DISK drive 9825 A

CPU 512 K bytes

DISC winder . 132 Mb

VDU 2623 A

Hard copy Unit cum Printer 2635 A

$$\frac{2 \times e}{7e}$$

$$\left(\frac{1 \times e}{7e} \right)$$

$$20.0 \left[\begin{array}{l} 7.58 \times L - \\ 7.59 \times L - \\ 7.60 \times L - \end{array} \right]$$

~~File organization~~

Logical Units

Disk is divided into logical unit called volumes

~~1-30~~

16, 17, 18, 19, 20, 22, 23, 29, 30, 31
are on disk

16, 17 are for BASIC, others not available

18-19 - systems program.

10-11 - For Floppy disk drive

73 For ~~hard~~ hard copy printer

1 For terminal

25 for plotter

24 for cartridge in the disk.

A global directory name is UNIQUE.
i.e. If MBU exists on volume 23
on no other volume a global
directory MBU can be created.

To avoid having to specify the global
directory name, sub directory name etc.,
working Directory command can be used.

CI > WD ↵ Gives the current working
directory.

CI > WD # CLASS

will make CLASS as the working directory.

CI > WD # CLASS/CLASS2

will make CLASS2 as working directory.

2. Binding of hormone to receptors, in the presence of free ligand concentration given by diffusion eqn.,

$$\frac{2N}{(4\pi Dt)^{3/2}} e^{-x^2/4Dt}$$

Release (i) of function (ii) $\cos^2 \phi$

Express 14.6 ✓ error

Quick 19.6 ✓ error

Quick 22.6 ✓ one o.k., one (of f^m) error

Quick 24.6 of f^m ok ✓

Quick 26.6 ✓

4. Sinusoidal input & so far

$$\dot{B} = K_f (S_0 - B)(R_0 - B) - K_{-1} B$$

Q. 25.6 error, ✓

Q. 27.6 using HPCG ✓

+ Q. 27.6 DQEF2 ✓

Q. 30.6 HPCG, Q. with DQEF2 30.6 ✓ error

Q. 1.7 HPCG, Q. 1.7 DQEF ✓ ✓

Modified Q to dimensionless form. Q. ✓

Q. 2.7 HPCG, Q. 2.7 modified.

3. Man &

$$e^{-k_1 t} \left[\beta - i\sqrt{k_1} \operatorname{erf} (i\sqrt{k_1} t) \right]$$

$$- \beta \operatorname{erf} (\beta^2 t) \operatorname{erfc} (\beta\sqrt{t})$$

Quick 13-6

Quick 15-6

✓
✓

MP-1000

Pub. C.R.

17.9.84

As soon as system is switched on,
you would be with a working directory
in some volume.

To create a global directory on
Volume 30 say

CI > CRDIR /GLØBE 30

prompt

~~st~~

File Structures.

File - may have name or name.ext
upto 16 character; ext. upto 4 character.

Files reside under a directory.

Full representation of a file

/Global/sub1/sub2/FILE

When a file is in your working directory,
it can be referred to without reference
to working directories.

Recommended extensions

CMD - command

DAT - data

FTN - FORTRAN

LIB - library

REL - Relocatable

RUN - ?

Filename . ext :: type = size = length
Specifies the files completely.

TYPE varies from 0 - 7

1 and 2 Random ~~access~~ access

Fixed length [1 word = 2 bytes]

TYPE 1 ~~is~~ 128 ~~words~~ words in a record 256 bytes

2 — user defined # words in a record.

3, 4, 5 — sequential access.
variable length.

4 — ASCII

5 — Binary

6 = Memory image, ~~same as 1~~

Random access, fixed length 128 records

of 7?

Default is 3.

size - Default = 24 blocks

1 block = 256 bytes = 128 words

Length = # ~~sectors~~ words in a record
Default = 1024 record in a file

① CR Command CREATE
used for creating FILES.

CR - file descriptor

eg.

CR /MBU /R103 /R103 A /RAMAKRISHNAN: 4N

In Global directory MBU, sub directy

R103, sub sub directy R103 A

create a file RAMAKRISHNAN. 4N

If you want to create a file in the working directory.

CR RAMESH KRISHNAN can is enough.

(II) DL & directory listing.

DL & file distribution (mark qualifiers).

(options) (output)

mark - wild construction

@ equivalent to * & DDE

This X*.FTN → all files beginning with X with mti.FTN

- equivalent to ?

Qualifiers can be e, a, u, c
~~options~~ access, update, creation

e = everywhere i.e. from any directory

c, a, u after = creation, access & update time.

DL PAUL-FAR-E.

CE > DL gives all files in
worky directory 13/9/84

CE > DL PAUL indicates where PAUL is
there in the worky directory.

DL/MBU lists files in Global ~~file~~ in
Directory & ~~also~~ lists subdirectories.
but not files in subdirectories.

To check for ~~new~~ files created
between particular times

e.g.
DL @.@.C840913.13 — 840913.14

Gives all files created between
13⁰⁰ hrs & 14⁰⁰ hrs ~~between~~ on 13th
Sept 1984.

COMMAND & SPACE are synonymous.

Options: all single character options
given after the mark qualifiers, separated by
blank or commas

a — time of access

b — time of creation

f — file type

l = location in disc ?

n — # records

r = largest record in the file

s — size of file in blocks

u = update time

w = # words

eg

DL PAUL B f gives file type also.

DL PAUL B f s a

gives file type, size & access time.

The * option = gives all the
information about f, p, n, s, w, x
! option \Rightarrow all options

+ or - can be put before
some of the options

eg. + w implies average in increasing
order by number of words

- c ; average in decreasing order
of creation of times

output - -
default is terminal

DL PAUL. # 73

will print the response on the printer.

[logical unit to be specified]

LI _____ Lst equivalent to TYPE
on DEC

CI → LI & File descriptor, format override,
first line, last line.

Format override A - ASCII
B - Binary

If not specified

TYPE 3 & 4

next

default is ASCII

default is BINARY

1st line, last line, if not given; assumed
to be 1st & last line in the file

eg.

LI MATRIX.FTN, 15, 40

in ASCII, line 15 to 40 of MATRIX.FTN

After the screen is full, it asks

~~FOR~~ MORE?

To continue, press space bar

to abort, press a

to list the complete file, press return

RN = rename file
on directly

RN file description file description
~~new~~ ORIGINAL ~~old~~ NEW

~~MOVE~~
MO - move

MO source destination

[provided they are on the same volume.]

MO A.FAR - B.FAR

will move from source to destination
& also change the name.

CO - copy

CO source destination

Permitted in different volumes also.

CO lu1 lu2

copies entire volume lu1 on lu2

Generally used for backup

CO ~~Y~~ MT1.RUN / TEST/VITAL / XYZ.FTN

copies MT1.RUN from your worky directly
to .global dir / TEST, subdir VITAL, under
the name XYZ.FTN

PU Purge \equiv delete

PU file discription (mark)

A PU file discription (OK)

PU MT1.RUN will purge MT1.RUN
~~even if~~ If asks whether OK, but does not
wait for your response & purges it anyway.

But

PU MT1-@

will ask Y N A
To Purge Y
NOT TO PURGE N
To abort Purge operations A

BUT

PU & MT @ OK

will execute the whole operation

Edity - Dr. Saraswati

13/9/84

CI> RU EDIT

OR CI> EDIT

- i) creation & ending of file
- ii) Display of information / special characters.
- iii) Specify line range, search pattern
- iv) Manipulation of lines within a file
- v) " characters (similar to Alter mode)
- vi) Special features of HP-1000.
screen oriented editing
keys for editing available on the
key board ~~at~~ itself.
- vii) Running programs while editing -

EDIT file.ent
16 char . 4 char .

edit prompt - /

To enter new lines

/ < statement .

The first space after / is reserved for edit commands -

> EDIT
/ F1 & MATRIX.FTN

/

/

IEC → end & return to CIL
when you create a file

IER → when editing an old file

else ~~CIL~~ EDIT
/ enter program

IEC & MATRIX.FTN

to edit existing file
EDIT & MATRIX.FTN

If you wish to cancel all the editing,

/A { about }

to save edited part

/WC first time

/WR subsequent editings

Files can be created & edited in any directory.

e.g.

/EC MATRIX.FTN = : MBU

Special symbols

• current line

\$ last line

- or ^ backward movement

* same as the first line defined

e.g. 20, 30 can be referred to as

20, *+10

N — absolute line number

/N tells you the line ~~is~~ number of the current line.

+ forward movement

Pattern searches

/ 'PATTERN' searches forward for pattern.

also \ pattern \ searches backward for it.

! Command separation.

\ escape → a separate key apart from back slash

If any of the special characters are to be entered into text, enclose it between two escapes.

/L equivalent to *P of ~~dec~~ ~~DEC~~

/ [] [] L [max] [+] [last file description]

start end

/L \Rightarrow prints 20 lines

/20L list from line 2 to line 20

/L30 will list 30 lines

/L40.. XYZ.XYZ will list 40 lines
into file XYZ.XYZ

/List ~~file xyz~~ ^{to} list 10 more lines
XYZ.XYZ as appended to XYZ.XYZ

/LN displays lines with line numbers

/LV without line numbers.

/LI \rightarrow gives total # lines

/LE \rightarrow gives length of the line

/ 'PATTERN' L will search & list

on line help
/H on /? will list out ~~help~~
information about edity commands.

/H V PL gives more details about PL

/SH B L will list out default option.

Pattern search

B → [start] [end] B /pattern/[A][V][Q][N]

~~B~~ Default line numbers are begining to end.

F default is pendy line to end of file.

A → looks for all occurences

V → searches for all lines without
~~the~~ pattern.

Q → suppresses display

N → ?

17/9/89

HP-1000

Dr. Saraswathi

18/2/84

FORTRAN compilation of linky.

CI → RU & FTN7X, same input [, list output,

BIMART output,

RU is optional. → REL file

the CI → FTN7X X.FTN

list output, default is terminal.

If instead of list output, a - syn is put in the file 'X ~~FTN~~' is made on the same cartridge.

Normally %X is the default name of the REL file.

A null will ~~create~~ the REL file not being created.

i) FTN7X MATRIX.FTN

NO rel file created, output on TT

1/84
ii) FTN7X MATRIX.FTN, 'LIST'
~~Results~~ Compilation merges in 'LIST'.
No sel file

output →
iii) FTN7X MATRIX.FTN, -
will create sel file, %MATRIX.

PRINT → Not permitted

READ(I, -) - input from terminal

WRITE(I, -) - ~~with~~ output on terminal.

to read & write data from files.

OPEN (UNIT = ,) statement
has to be used.

When OPEN statement is in the program,
\$FILES should be the first card in the
main program or subroutine.

LINK -

CS > LINK

link: RE MATRIX ↓

link: RE Subroutines ↓

link: SE LIB ↓ — search for

library -
NOT necessary for intrinsic routines.

Eg. Plotter subroutines are not part of
intrinsic subroutines: SE has to be used.

The core image is called a SIMPLISPOT file.

To end linking,

link: EN ↓

A file MATRIX.RUN is created.

LINK: MATRIX.REL, SUB1.REL, ... is also
permitted.

To create a P
C \Rightarrow RU MATRIX ~~RU~~ Model

26/Sept./89

$$-P_K)(1-P_R)$$

Not ok
visible.

Name of element
not specified.

$$\frac{\beta-1}{-V)}$$

$$E = 0 \longrightarrow 0$$
$$E = \infty \longrightarrow 1$$

(1) Modified Preston Model

26/Sept/89

$$P_D P_K P_R \quad \cancel{N}$$

$$P_D \cdot P_K \quad (1-P_D)(1-P_K)(1-P_R)$$

Optimal Least square fit. Not ok.
All birds are equally visible.

Value of effort not specified.

(2) → IAGAL model

Distribution of visibility

$$f(v) = \frac{v^{\alpha-1} \cdot (1-v)^{\beta-1}}{B(\alpha, \beta)}$$

Given Effort → $\frac{1}{E}$

$$E = 0 \rightarrow 0$$
$$E = \infty \rightarrow 1$$

Various aspects of the work were dealt with by ^{Pd. Madhav Goshal,} Mrs. Ranjit Daniels, who in fact ~~did~~ did all the work as far as bird watch is concerned, Pd. Anil Gane & Anil Kharsikar, who formulated the more important part of the model, and myself, who did the remaining modelling and computation.

The Centre for Ecological Sciences, has been included in the district of Uttar Kanwar for many years, and work on the biology of Bamboos, 1975, ecosystem, Human ecology etc. Over the years, large scale changes are taking place; ~~and plans etc~~ many more are planned [Kajja, Madhav - no questions] ~~Even though~~ The forest cover has come down, though still high, and there is widespread apprehension that the ~~Ecology~~ Ecology of the region has been adversely affected. Bird sp

$$\# \quad \frac{P_2}{1-P_2} = \frac{204}{137} = \frac{204}{341}$$

$$P_2 \Rightarrow 137 P_2 = 204 - 204 P_2 \quad \frac{20}{34} = \frac{10}{17} = 0.6$$

$$P_2 = 0.6 \quad ; \quad \frac{P_1}{1-P_1} = \frac{204}{28} = P_1 = \frac{204}{232} = \frac{28}{33}$$

$$P_1 = 0.88 \text{ no. 9}$$

$$\frac{510}{58}$$

$$0.54 = 204 \Rightarrow N \approx 400$$

$$\frac{400}{64} = 460$$

$$0.8$$

$$\# \quad \frac{296}{346} = \frac{270}{36} \quad 85 \quad \frac{240}{32} \quad 272$$

$$180$$

$$0.72 = \frac{290}{0.72}$$

$$410$$

$$0.7$$