FROM:        R. Fenichel

SUBJ:        Legacy of Fenichel


1.    Inter$\left\{\begin{array}{c}\text{Program}\\\text{Console}\end{array}\right\}$Communication

           RFLXC8

           PMTAF1

           TCORB8

           LGAB8F

           are special modules for this. The arrays OKPROG and OKPRØB
have been kludged into lower core; they should be lifted into common.


2.    SQZALL

           SQZALL uses Wolman's SQZBCD to replace multi-track FAP and MAD
files with FAPSQZ and MADSQZ equivalents. To squeeze all your FAP and
MAD files, type

           RESUME     SQZALL


3.    UPDSYS

           UPDSYS is a routine mainly designed for reassembling the whole
system, as specified by a given CTSSLD file. See UPDSYS notes for
further information.


4.    TEST INFO

           This file describes the testing programs for the inter console
and interprogram packages.


5.    SPY

           To X-RAY the system, type

                RESUME     SPY

To cause the console with logical user number N to become a slave of logical user number M, type

RESUME    SPY    M    N


6. MERGE

MERGE $\alpha$ $\beta$ $\gamma$ $\delta$ C1 C2 C3 ... Cn

Merges files $\gamma/\beta$ and $\delta/\beta$ into file $\alpha/\beta$. $\gamma/\beta$ is the correction file, so that in case of duplicate lines in $\gamma$ and $\delta$, the one from $\gamma$ is taken.

C1, C2, ... are specifications of deletions: Each argument is a line number or 'THRU'.

1. If $\gamma$ is '*', it is taken to be empty.

2. If $\delta$ is omitted, it is taken to be $\alpha$.

3. If it is intended to delete all lines of $\delta$ from nnnnn to the end, the command may be written

Merge $\alpha/\beta$ $\gamma$ $\delta$ . . . nnnnn thru

Flowchart of MERGE:

| SET | THRUBX | ZERO | [NØT DELETING THRU R] |
|-----|--------|------|------------------------|
| SET | DLET | NØN-ZERO | [CORRECTIONS COMING] |
| SET | MERGE | NØN-ZERO | [GAMMA CØMING] |
| START | AT FIRST | ARGUMENT | |

GET ARGUMENT. IF FENCE, ERROR
    ARGUMENT IS $\alpha$ AND $\delta$

GET ARGUMENT. IF FENCE, ERROR
    ARGUMENT IS $\beta$

GET ARGUMENT. IF FENCE, ERROR
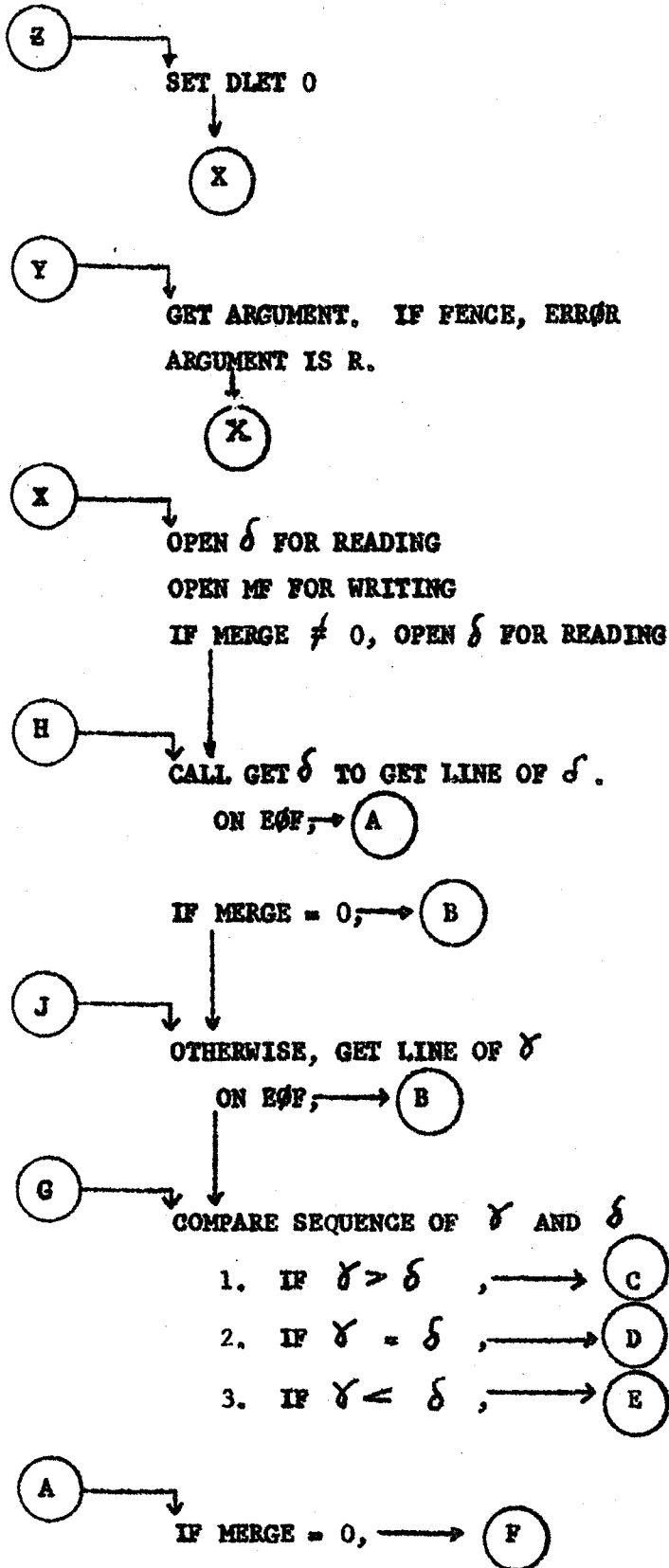    IF *, SET MERGE 0
    OTHERWISE, ARGUMENT IS $\gamma$ ( Z )

GET ARGUMENT. IF FENCE, ⟶ ( Z )
    IF NUMERICAL, ARGUMENT IS R
    IF THRU, SET THRUBX NON-ZERO, ⟶ ( Y )
    OTHERWISE, ARGUMENT IS

( X )

Z ⟶ SET DLET 0

X

Y ⟶ GET ARGUMENT. IF FENCE, ERRØR

ARGUMENT IS R.

X

X ⟶ OPEN $\delta$ FOR READING

OPEN MF FOR WRITING

IF MERGE $\neq$ 0, OPEN $\delta$ FOR READING

H ⟶ CALL GET $\delta$ TO GET LINE OF $\delta$.

ON EØF; ⟶ A

IF MERGE = 0; ⟶ B

J ⟶ OTHERWISE, GET LINE OF $\gamma$

ON EØF; ⟶ B

G ⟶ COMPARE SEQUENCE OF $\gamma$ AND $\delta$

1. IF $\gamma > \delta$ , ⟶ C

2. IF $\gamma = \delta$ , ⟶ D

3. IF $\gamma < \delta$ , ⟶ E

A ⟶ IF MERGE = 0, ⟶ F

OTHERWISE, GET LINE OF $\gamma$,

ON EØF, ⟶ (F)

PUT LINE ON MF

CALL GET $\delta$ TO GET LINE OF $\delta$

ON EØF, ⟶ (F)

(B) PUT $\delta$ ON MF

(C) PUT $\delta$ ON MF

CALL GET $\delta$ TO GET LINE OF $\delta$

ON EØF, PUT $\gamma$ ON MF, ⟶ (A)

(G)

(D) PUT $\gamma$ ON MF

(H)

(E) PUT $\gamma$ ON MF

(J)

(F) CLØSE MF

RENAME MF TØ $\alpha$

EXIT

GET $\delta$

(M) READ LINE OF $\delta$

(P) IF DLET = 0, RETURN TO CALLER

OTHERWISE, COMPARE $\delta$ TO R

    IF R $>$ $\delta$ , $\longrightarrow$ (K)

    IF R $=$ $\delta$ , $\longrightarrow$ (L)

    IF R $<$ $\delta$ , $\longrightarrow$ (N)

(K) $\longrightarrow$

IF THRUBX $\neq$ 0, $\longrightarrow$ (M)

OTHERWISE, RETURN TO CALLER

(L) $\longrightarrow$

CALL GETDEL TO SET UP NEW THRUBX, R

(M)

(N) $\longrightarrow$

CALL GETDEL TO SET UP NEW THRUBX, R

(P)

GETDEL $\longrightarrow$

SET THRUBX = 0

(S) $\longrightarrow$

GET ARGUMENT

    IF FENCE, $\longrightarrow$ (Q)

    IF 'THRU', SET THRUBX $\neq$ 0, $\longrightarrow$ (S)

    IF NUMBER, SET R, RETURN TO CALLER

(Q) $\longrightarrow$

IF THRUBX = 0, SET DLET = 0, RETURN TO CALLER

OTHERWISE, SET R = 99999, BACK UP ONE ARG, RETURN
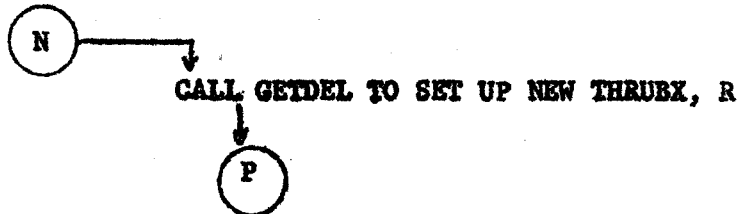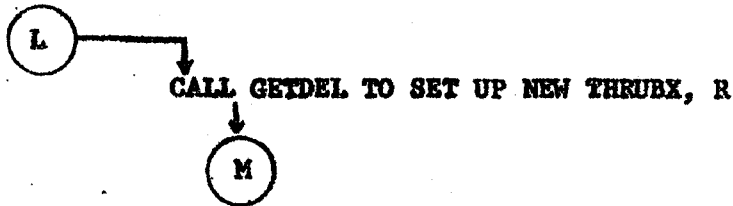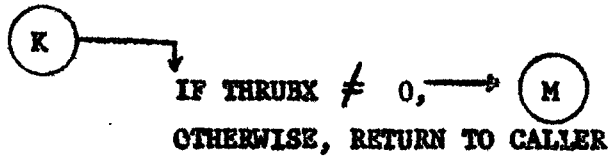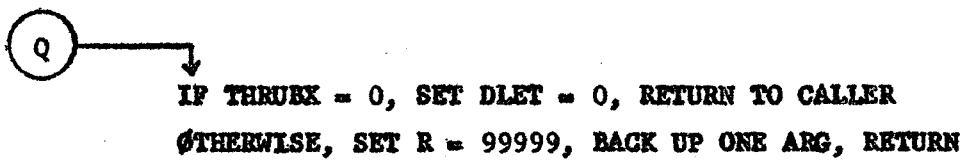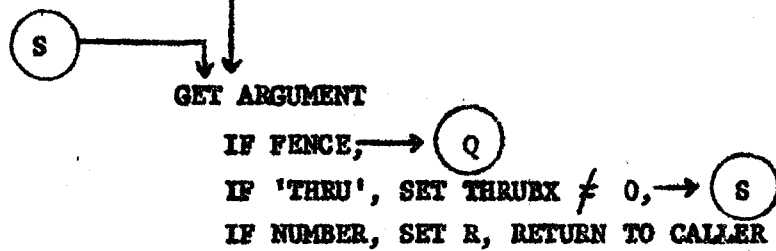
7. **FIB**

FIB with the new I/∅ System

1. General-Purpose Facilities Needed

A) SAVE command which preserves activity of temporary files, common file status, etc. Possibly save should generate a file which is closer to a runcom file [of comfil commands, etc.] than to a core image.

B) REST∅R to suit

C) A command to channel all WRFIXed lines into a designated file, rather than to the T/W.

D) A command to undo the work of C)

E) A command to associate a symbol with the command's line in a RUNCOM file.

F) A command to skip forward in a RUNCOM to a specified symbol, after a specified amount of time.

2. Special Purpose Facilities Needed

A) SETFIB A

A command to put RUNCOM file A onto the FIB queue. In response to this command, the supervisor will tell the user what FIB number has been assigned to the specified job.

B) GETFIB FIBN

To retrieve a FIB job. In response to this command, the user will be asked to accept, one by one, the files created by the job specified. A saved file, preserving the final machine conditions of the job, will be among these.

C) DELFIB FIBN

To delete a FIB job from the queue.

D) FIBSTT

To determine the status of jobs submitted by the user.

E) L∅SPLC

To go to the end of the queue (Command only for use by FIB jobs).

3. STRATEGY

When a FIB job is received, a fictitious U.F.D. is created, composed wholly of linkages to the files of the user submitting the job.

When the job comes to the head of the queue, the fictitious user, having the same probn as the real user, is logged in on the real user's time. The fictitious user runs like a real user except that

(1) calls to WRFLX, unless shunted into a file by the facilities proposed above, are ignored.

(2) going dead, going dormant, calling RDFLX, or any other wait results in the termination of the job.