SOUPING PARALLEL MONITOR DEVELOPMENTS TOGETHER

(MULTI)

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1.0 INTRODUCTION

This document is a precis of the use of SOUP in multi-file
mode to create two correction files, merge the correction
files, resolve conflicts, and eventually produce a new
edited version of a complex of files.

2.0 REQUIREMENTS

It is convenient to have FAILSAFE tapes of three sets of
source files at the beginning of the operation:

    1. A complete set of father files,
    2. A complete set of user-son files, and
    3. A complete set of manufacturer-son files.

Note: the complete set of user-son files may be made by
copying the father files and replacing just those that were
edited.

It is convenient to have five distinct disk areas at your
disposal:

    1. Area 1 for father files,
    2. Area 2 for user-son files,
    3. Area 3 for manufacturer-son files,
    4. Area 4 for correction files, and
    5. Area 5 for grandson files.

3.0 LIST OF PROCEDURES

    1. Restore the father files,
    2. Restore the user-son files.
    3. Restore the manufacturer-son files.
    4. Produce the correction files
        (father-user and father-manf.).
    5. Merge the correction files,
    6. Resolve the conflicts.
    7. Produce the final edited version,
    8. Copy any new user or manufacturer files.
    9. Save the new version with FAILSAFE (twice),

3.1   Restore the Father Files

Log In with the number under which the   father   files   were
saved and type the following commands,

```
     .AS MTA FAILSA
     -
     ,R FAILSA [or FAILCD]
     -
     **.*
     *+C
     -
```

3.2   Restore the User-Son Files

Log In with the number under which the user-son files were
saved.   Restore them as above In 3.1, but do not rename any
files,

3.3   Restore the Manufacturer-Son Files

Log In with the number   under   which   the manufacturer-son
files were saved, Restore them as above in 3.1, but do not
rename any files,

Note: If the father files or either set of son files are on
DECtapes Instead of on magnetic tape, use FILEX In quick
mode to restore the DECtapes as follows,

```
     .AS DTA
     -DTA3 ASSIGNED

     .AS DTA
     -DTA4 ASSIGNED
```

Mount the first DECtape and type:

```
        ,R FILEX
        *DSK:/Q+DTA3:*,*
        -
```

While DTA3 is spinning, mount the second reel on DTA4.
Type command ahead:

```
        DSK:/Q+DTA4:*,*
```

While DTA4 is spinning, remove DTA3 and place the third reel
on it. Note that this is one of the rare times that you do
not need to assign the DECtape in order to read the new
file. Type the next command as:

```
        *DSK:/Q+DTA3:*,*
        -
```


3,4   Producing Correction Files

For the following examples let us choose a few specific disk
areas.

        Let the father-files be placed on area [10,77770],
        Let the user-son files be placed on area [10,77771],
        Let the manufacturer-son files be placed on area [10,77772],
        Let the work-area be on area [10,77773],
        Let the grandson area be on area [10,77774],

It is important that the father disk area and the son areas
have no extraneous files, otherwise the correction files
produced for the complex will include corrections for the
extraneous files. It is also important that both correction
files produced in multi-file mode are made with the father
area unchanged (file order and file contents) so that all
subfile corrections appear in the same order. This is a
requirement of the merging operation. The file names USRCOR
and MANCOR indicate user corrections and manufacturer's
corrections respectively.

The sample commands to produce the correction files are as follows:

Log In under work area [10,77773],
.DEL *.*

.R CAM

*DSK:USRCOR.COR,DSK:USRCOR.L01←DSK:[10,77770],DSK:[10,77771]

COMPAR: BASE=S   .MAC USER=NEW=S   .MAC

:...... [Logged output of COMPAR]
***CAM TERMINATED - INPUT FILES EXHAUSTED
----
*↑C

.R CAM

*DSK:MANCOR.COR,DSK:MANCOR.L01←DSK:[10,77770],DSK:[10,77772]

COMPAR: BASE=S   .MAC USER=NEW=S   .MAC

:.... [Remaining logged output of COMPAR]
***CAM TERMINATED - INPUT FILES EXHAUSTED
----
*↑C

:

If the user-son or manufacturer-son files do not contain some files which are in the father files, CAM will print the following for each such 'missing' file:

*** FILE xxxxxx NOT ON USER'S DEVICE DSK

:

The user should type the CONT monitor command if this was expected. CAM will produce a file deletion header in the correction file causing FED to delete the file from the final complex of edited files. This is a normal occurence whenever the manufacturer or the user wishes to discontinue maintenance of a file.

If this was not expected, list all the directories and compare file names. It may be necessary to start again,

3.5 Merging the Correction Files

CAM is used to merge two sets of correction files as well as
to produce the individual correction files. The crucial
difference in the command string is a comma (,) immediately
following the backarrow (+). The name of the merged
correction file is the name of the monitor to be produced
after the final editing, e.g., 50102.COR. The merging
process requires CAM version 28 or later. A command string
that assumes that all the necessary files are on DSK
follows.

```
.R CAM
+
+DSK:50102.COR,DSK:50102+,DSK:USRCOR,DSK:MANCOR
+
COMERG:   BASE=S     ,MAC  USER=NEW=S        ,MAC MANF=NEW=S ,MAC
----------------------------------------------------------------
COMERG COMPLETED    n ERRORS AND n CONFLICTS DETECTED
----------------------------------------------------------
.
.:.....:
+** END OF CORRECTION FILE MANCOR. ON DSK
----------------------------------------------
.CONT
+
+<CR>
+
COMERG:    LAST FILE
--------------------
.CONT
+
+<CR>
COMERG COMPLETED:  n ERRORS AND n CONFLICTS DETECTED
----------------------------------------------------
++C
.
. [the operation is finally complete.]
+
```

Note: The user must type CONT and <CR> twice to CAM to make
the process terminate correctly. Unfortunately, there is no
message saying that the entire merge is completed, only a
message for each file header.

3.6   Resolving Conflicts

Conflicts created by independent editing of the source files must be resolved by editing the merged correction file ,in this example file 50102.COR. Be careful not to insert extra form feeds into the correction file as they will be edited into the final output. To do this, always use N rather than P TECO commands to move down the file.

CAM treats identical edits to the same lines of the base file and identical deletions as conflicts. To resolve such a pseudo-conflict, delete one of the pair of conflicting corrections from the correction file.

A real conflict would appear as follows.

```
- /-/-/-/-/-/-/ BEGINNING OF CONFLICT    1 \-\-\-\-\-\-\
-130
     CONSZ PTP,PTPNTP ;ARE WE OUT OF TAPE
     JRST NOTAPE   ;YES
-130
     CONI PTP,PTPSTS ;STORE CONI STATUS
- /-/-/-/-/-/-/ END OF CONFLICT          1 \-\-\-\-\-\
```

To remove such a real conflict, both insertions must be replaced by the correct final code to be added at line 130.

3.7 Producing the Final Edited Version

Three items besides FED are required to produce the final
edited version of a complex of files:

     1.   The base (father) complex of files,
     2.   The merged correction file, and
     3.   A clean disk area.

After the merged correction file is edited, it must be
applied by FED to the base complex to produce a final edited
version.   Following the preceding examples the command
sequence to accomplish this would be:

Log in under [10,77774]
.DEL *.*   [Clean up the disk area.]
-
.R FED
-
*DSK:,-DSK:[10,77770],DSK:50102.COR[10,77773]
-
[Note: Listing files are purposely left out to
avoid cluttering up the disk output area.]
FED COMPLETED ON FILE -!S.MAC-S.BSE

:......
***FED COMPLETED SUCCESSFULLY
----
*+C
-

.
!
-

The new complex of edited files has been created. It is now
necessary to determine that the monitor (or whatever) works,

3.8   Copy New Files

If new files are to be added to the final edited complex,
they should now be copied by means of PIP from either the
user-son area or the manufacturer-son area, as appropriate,
to the grandson area.

3.9   Save the New Complex of Files

The final operation is saving the results of the merge
operation on two FAILSAFE tapes for safety. Assuming that
you are still logged-in under the grandson number
[10,77774], issue the following command string:

        .AS MTA FAILSA
        -
        .R FAILSA
        -
        */U [Save the user area.]
        -

Dismount and label the resulting FAILSAFE tape(s).