IX.4.5C-SYSTEM   FORECAST COMPONENT DATA BASE FILE INTERACTIONS

Introduction

This Section provides information about the general interactions
between program FCINIT and the Forecast Component files and
information about the files affected by each FCINIT command.

On most computer systems an output statement only puts the data record
into a file buffer and not on the file itself unless the buffer is
full or the file is closed. When an abnormal program termination
(caused by a system failure a programming error or any other problem)
occurs before the file can be closed the integrity of the file
contents is uncertain.

Without error recovery procedures, an abnormal program termination
would result in the Forecast Component files being unusable.

Any program error or any system failure that causes an abnormal
program termination leads to greater difficulty in file recovery.
Because of the current sequence of file updating and the file
interrelations, error recovery is limited (with one exception) to the
restoring the files from the last file backup. This method has the
disadvantage of requiring the re-execution of any runs made between
the last backup and the abnormal program termination. The one
exception for recovery from a abnormal program termination is for
commands SEGDEF and RESEGDEF which is described in the appropriate
command section.

Messages are printed by FCINIT command indicating the start and
successful completion of the file updates made within the command.
For commands with no error recovery procedures there are generally
only 3 messages printed:

    o the first before the first update occurs
    o the second when all updates have successfully finished
    o the third noting the successful completion of the command or
      subcommand

A more detailed trace of file updating is produced for the commands
where file recovery is possible. These commands print messages
indicating the start and completion of each file update with a
separate final message indicating command completion.

For the unrecoverable commands, if the program ends before the final
message noting command or subcommand completion, but after the first
update message then it can be assumed that the files have been made
unusable and should be restored from the most recent backup.

For the commands with error recovery potential, instructions on
recovery are provided in this Section for that particular command.

The following list shows which FCINIT commands change the file
contents:

Command Name	Changes	
CGDEF	yes	[Hyperlink]
DEF-RC	yes	[Hyperlink]
DELETE	yes	[Hyperlink]
FGDEF	yes	[Hyperlink]
PRINTOPS	no	
PRINTRC	no	
PRINTSEGS	no	
PUNCHSEGS	no	
RESEGDEF	yes	[Hyperlink]
SEGDATE	yes	[Hyperlink]
SEGDEF	yes	[Hyperlink]
SPECIALFG	yes	[Hyperlink]
STATUS	no	

The user should check the output from each execution of FCINIT for an abnormal program termination. To make sure, the next attempt at executing FCINIT after a abnormal program termination will only inform the users that a failure occurred during the previous run and indicate the command that was being processed when the failure occurred. No commands will be processed. Subsequent executions of FCINIT will not be prevented. It is the user's responsibility to determine if the files need to be restored.

The message provided to notify the user of abnormal termination is:

```
*** FATAL ERROR - LAST RUN OF FCINIT DID NOT COMPLETE SUCCESSFULLY.
                  THE COMMAND BEING EXECUTED WAS xxxxxxxx.
                  PLEASE CHECK OUTPUT FOR THE JOB THAT TERMINATED ABNORMALLY.
                  THE DATA FILES PROBABLY WILL HAVE TO BE RESTORED.
                  NO COMMANDS WILL BE PROCESSED DURING THE CURRENT EXECUTION OF
                  PROGRAM FCINIT.
                  FUTURE EXECUTION OF PROGRAM FCINIT WILL NOT BE PREVENTED.
```


File Interactions for Each FCINIT Command

This remaining documents in this Section describe the following information for each program FCINIT command that modifies files:

    o files that are changed
    o sequence of the modifications
    o messages that are output
    o possibility for error recovery
    o procedure for recovery if applicable

The following Forecast Component files are modified by FCINIT commands:

File Name	Contents
FCCARRY	Carryover values for all Segments for all dates of carryover
FCCOGDEF	Carryover Group definition file

File Name	Contents
FCFGLIST	List of Segments contained in each Forecast group
FCFGSTAT	Forecast Group definition and pointer file
FCPARAM	Parameters values for operations in each Segment
FCRATING	Rating Curve definition file
FCRCPTR	Rating Curve pointer file to locate Rating Curve definitions
FCSEGPTR	Segment pointer file to locate Segment definitions
FCSEGSTS	Segment definition file

A description of each file can be found in Section IX.4.5B [Hyperlink].