

COMPUTATION CENTER  
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SUBJECT Disk Salvage Program

## PURPOSE

The disk salvage program is designed to salvage, and put into usable form, the contents of disk storage after a power, machine or program failure. All discovered errors will be noted on and off line.

## IMPLEMENTATION

The disk salvage program is currently available as a non-time-sharable FMS job and should be initiated by the operations staff either with or without direction from the programming staff. The program requires approximately 45 minutes to run to completion.

## METHOD

Every file on the disk is read. Every file directory is checked for format and valid track addresses. All files are checked for valid track addresses. A new Track Usage Table is constructed and a check is made that no track is used more than once. If the salvage program is allowed to run to completion, the new Track Usage Table will replace the old one on the disk. If the program is stopped before completion, the two Track Usage Tables will be combined and rewritten on the disk.

## CATASTROPHIC ERRORS

1. Incorrect format or invalid track address.
2. File attempts to use a track already assigned.
3. A single file exceeds the track quota by more than 100.
4. Unreadable track e.g. parity error or bad home address.

## NON-CATASTROPHIC ERROR

A track assigned in the new Track Usage Table was left unprotected in the old.

If a catastrophic error occurs during the reading of a Master or User File Directory, the file directory will be truncated at that point. If the catastrophic error occurs while processing a normal user file, that file will be deleted. In addition, an attempt will be made to correct unreadable tracks by rewriting the home address (HA2) of the offending track. The non-catastrophic error will cause an error message to be printed, in case the file in question proves to be in error at a later time.

#### OPERATION

The salvage program should be initiated by the operations staff after any of the following error conditions.

1. Power or machine failure during operation of CTSS.
2. Unusual end to the operation of CTSS where no automatic "LOGOUT" was possible.
3. Fatal error during the updating phase of the disk load editor (LDEDT).
4. Unsuccessful attempt to dump the disk.

To terminate the operation of the disk salvage program sense switch 1 may be depressed. To check only Master and User File Directories sense switch 2 may be depressed. The above options should be taken only after a member of the programming staff has been consulted.

All error comments will be labeled with a number from 1 to 35. To suppress the on line printing of any error comment, the corresponding console key may be depressed. The Master File Directory entry currently in process is normally printed on line. This comment may also be suppressed by depressing the sign key (S).