TO: Distribution

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SUBJECT: Processor Data Switches used by Multics, et. al.

This memo obsoletes MOSN-148

The following is a list of the current uses of the processor data
switches by Multics, BOS, salvager and the checker.

switch   usage

0   Used in the salvager. If up, the names of all
              directories scanned will be printed on the printer.

              Used in the checker to signal that the switches have
              been set and the program can begin.

1 - 5   Used in the checker to indicate the collections to be
              checked.

1   Used in the salvager. If up, a "long" salvager will be
              run. If it is reset after the salvager has started,
              the "regular" mode of salvaging will be entered. If
              switch 1 is not up when the salvager is started, the
              salvager will choose a mode of operation based upon the
              shutdown state.

2   Used in the salvager. If up, a "flush" or "write down"
              of the paging device will be done at the end of the
              salvager.

3 - 5   Not currently used.

6 - 11   Used in the checker as a binary number to indicate the
              number of tapes to be read.

6   Used in the BOS runcoms to avoid calling the CRASH
              runcom when BOS is entered other than by a shutdown.

7   Used in the BOS runcoms to skip taking the dump and to
              start the emergency shutdown instead.

8   Used in the BOS runcoms to indicate that two processors
              are being used (causes an online dump of the non-
              bootload processor to be taken).

9   Used in the BOS runcoms to indicate that a tape (rather than a disk) dump is to be taken.

10   Used in the BOS runcoms to indicate a stop before taking the disk dump (after the online dump) to allow the setting of the FDUMP number (or whatever).

11   Used in the BOS runcoms to indicate that a dump of the initializer should be taken (on tape).

12 - 17   Used in the checker to indicate the number of copies of the loading summaries to be printed.

12   Used in the BOS runcoms to indicate a stop before salvaging to allow restores (or whatever).

13 - 17   Reserved for use by the BOS runcoms.

18   Used in Multics to cause a loop whenever a crawlout occurs. The system will loop until switch 19 is put up.

19   Used in Multics to exit from the "crawlout loop".

20   Used in Multics to indicate that a trace of the typewriter package should be taken.

21   Used in Multics to indicate that the trace (any of the three) should be taken on printer A.

22   Used in Multics to indicate that the trace (any of the three) should be taken on printer B.

23   Used in Multics to indicate that the trace (any of the three) should be taken on tape 0.

24 - 33   Not currently used.

34   Used in Multics to indicate that a trace of page control should be taken.

35   Used in Multics to indicate that a trace of segment control should be taken.

In addition, the following values may be set in switches 0 - 17 to be used by the system initialization code for debugging purposes and are valid for booting Multics, the salvager or the checker.

163164 ("st")   Used to stop the system before reading collection
                 1 to allow patching of bootstrap1, etc.

123134 ("ST")   Used to stop the system after reading col. 1.