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Identification

BOS snapshot generator
Snap
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Purpose

The SNAP command provides a facility for interrupting a run of Multics and saving the machine state and the contents of core and drum on tape for later reloading.

Overview

The "Snapshotter" comprises a pair of bootloadable programs (snap and shot) which offer respectively the abilities to preserve the state of the 645's core and drum at an arbitrary time and to restore that state at a later time. Primarily, this facility is useful in the context of system initialization: A perhaps rather lengthy initialization can be snapped after the bulk of its tasks have been finished successfully. The tape(s) generated can then be shot back into the machine later, so that subsequent initialization runs can be performed starting from the same point the earlier run had reached. Thus, the computation time which otherwise would have had to be expended in initializing the system (e.g., creating data bases, initializing the File System hierarchy, etc.) is saved.

A second use of the Snapshotter lies in the area of System "crashes": Taking a snapshot of the System at the time of a crash preserves the state of the System for subsequent inspection with the Dumper (BV.1.02). Therefore, a system programmer attempting to analyze the situation need not monopolize the machine to perform all this dumping at the time the problem arises, but may instead take a "snapshot" and use it to allow dumping to be done as needed.

Usage

To initiate a snapshot, type the following to BOS:

```
SNAP -n- -temp-
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Where tape n will be the snapshot tape and tape temp will be used as a scratch tape. The default temp is n-1 and the default n is 1.

Operation

BOS will load the SNAP program and give it control. Core will be written out on tape temp and temp will be rewound. Then the drum will be dumped on the snap tape, and then tape temp will be copied onto the snap tape. Both tapes will then rewind and unload and control will return to BOS. At this point core and drum are exactly as they were before the SNAP, so that the run may be continued by CONTIN.

The snap tape is written in standard Multics tape format. (see BB.3.01).