The Basic Multics Supervisor

The Basic Multics Supervisor, by definition, consists of the following procedures and their associated data bases:

1. The Basic File System, including Page, Segment, and Core control. (BG.)

2. The Traffic Controller, including the System Interrupt Interceptor and the Basic CPU scheduler. (BJ.)

3. The GIOC interface module. (BF.)

4. The System Fault Interceptor (BK.3)

5. Fault and Interxxeptex Interrupt vectors. (BK.3)

6. GIOC mail boxes (BF.)

All of the procedures of the Basic Multics Supervisor are loaded into locations selected by the System Initializer. They remain fixed in those locations until the system goes down or until a Basic Supervisor Reconfiguration is done. These procedures, while paged, do not take part in swapping of pages back and forth from secondary storage; there is no secondary storage file from which they are mapped into core memory. Such procedure segments will be termed "wired-down" (there may be a secondary storage file of which these procedures are a copy.)

The data bases of the Basic Multics Supervisor appear in two classes of segments: system-wide, and per-process. Some system-wide data segments are loaded by the initializer and are wired-down exactly as are the procedures segments of the Basic Multics Supervisor. Other system-wide data segments are swapped in and out from secondary storage as are ordinary user segments. These swappable segments are not loaded and located by the initializer, but rather by the core and storage allocation machinery of the Basic File System in response to execution time needs of the system.

The second class of data segments of the Basic Multics Supervisor, per-process segments, all have the property that, while they may be swapped in and out of secondary storage, during the time that a process is running, all per-process segments pertaining to that process must be in core memory. These segments are known as process segments.

It is also possible for a user with appropriate administrative authority to provide a substitute for any procedure of the Basic Multics Supervisor, to be used whenever his process is in execution. Such procedures may be swapped in and out, but must be present whenever the process is executing; they also fall into the category of process segments. Process segments may be shared among several processes, in which case they must be in core memory whenever any of the processes sharing the segment are running.

~~Each version of the~~

A particular version of the Basic Multics supervisor has an

identification tag consisting of a 4-character name and a 4-character

serial number. Whenever a change, however trivial, is made to a

version of the Basic Multics supervisor, the ~~character~~ serial number

is increased by 1. The 4-character name is changed rarely, only

to indicate a major new edition of the Basic Multics Supervisor. ~~One~~

~~name,~~ "TEST" is reserved ~~Typically the series of serial number~~

~~are used~~ A "Test" system may be easily identified because it

has a different 4-character name, and uses a different series of serial numbers.

The sequence of serial numbers used by test system is independent of the sequence

of serial numbers used by the standard system.

The Basic Multics Supervisor identification tag is the

System Name

Installation I.D. || Basic Multics Supervisor I.D.

|| Operational Multics Supervisor I.D.

|| User System I.D.

|| instance

Obtainable from Ring 0, 1, or 2   in toto.

from Ring 1   first 4 parts only

from Ring 0   first 3 parts only