11.1 GENERAL DESCRIPTION

TOSS (Terminal Operating System Software) is the operating system used in the full range of PTS systems.

The TOSS monitor is a real time monitor with the ability to control a number of independent tasks running at different priority levels.

According to one definition, a monitor is:-

> 'A collection of routines stored permanently in memory, which control the operation of user programs and coordinate the various hardware and software activities; synonymous with executive program. Such a system controls the allocation of Store and peripheral units to programs, the loading and scheduling of programs, time sharing of input/output operations, and multitasking.'

Four main functional blocks make up the major part of TOSS:-

* Dispatcher
* Monitor tables
* Monitor processors
* I/O drivers and interrupt handlers

The dispatcher allocates CPU resources to the different tasks and monitor processors.

The TOSS Monitor is table oriented, which means that special monitor tables are used for describing the system and terminal configurations. Monitor tables also contain work areas for devices, status information related to each device and task, pointers and queue links for handling different queues, etc.

The following tables are described in Chapter 15:-

* SCT System Control Table
* TCTAB Task Control Table
* TTAB Task Table
* CDTAB Common Device Table
* DWT Device Work Table
* DAB Driver Address Block

Monitor tables are necessary for, among other things, the monitor processors, to allow them to perform their functions for different tasks, e.g. I/O, Wait, Exit, Activation, etc.

The requested monitor processors are included and the required tables built up from the information supplied to SYSGEN (System Generation program) and SYSLOD (System Loading).

I/O drivers and interrupt routines are responsible for all communication with the devices in the system. There is also one driver that is not related to any specific device in the system, the Intertask Communication driver.

All drivers have their own specifications with full descriptions of calling sequences, return codes, and system adaptations specific to each driver. These details are described in the Assembler Programmers' Reference Manual, Part 2.

In systems with MMU some special tables are added to the monitor:-

* SEGTAB Segment block table.
* PAGTAB Page block table.

See Chapter 18 for details.