sn.h File [2]

Note: Typically, the file is stored in `/usr/src/uts/cf.`*xxxx*`/sn.h`. It is strongly recommended that you use the UNICOS installation and configuration menu system (ICMS) to maintain your system configuration, rather than manually editing this file. (For more information on the ICMS, see the online help files and the *UNICOS System Configuration Using ICMS*, Cray Research publication SG–2412.) If special circumstances require that you set the parameters in `sn.h` manually, use the procedures in this chapter.

The `sn.h` file contains parameters that define machine-specific characteristics of your mainframe. You must change some of these parameters to reflect your system's characteristics.

You will set the parameters by using the following menu:

```
Configure System
    ->Mainframe hardware configuration
```

If you manually edit `sn.h`, you must define the following parameters:

- Mainframe serial number
- Main memory size
- Number of banks of main memory
- Number of bits per chip in main memory

If your system is not fully configured with CPUs, you should also define the following parameters:

- Number of CPUs
- Number of mainframe clusters

Appropriate defaults for the remaining parameters in the `sn.h` file are set automatically, based upon your machine's serial number. You will not need to set these parameters.

2.1 Required steps

The following steps are required if you edit `sn.h` manually:

1. Set your mainframe serial number by defining the `SN` parameter to be that value.

   Example:

   ```
   #define SN          4025
   ```

2. Set the physical memory size parameter (`MEMORY`) in decimal words to the highest addressable word.

   Example:

   ```
   #define MEMORY      512*MEGAWD-1
   ```

3. Set the `NBANKS` parameter to the number of memory banks in your mainframe:

   Example:

   ```
   #define NBANKS      1024
   ```

4. Set the number of bits per memory chip used in main memory by defining the `CHIPSZ` parameter with one of the following values:

Bits/chip	`CHIPSZ` value
131072	`M128KCH`
262144	`M256KCH`
524288	`M512KCH`
1048576	`M1MCH`
2097152	`M2MCH`
4194304	`M4MCH`
8388608	`M8MCH`
16777216	`M16MCH`

   Example:

   ```
   #define CHIPSZ      M1MCH
   ```

2.2 Optional steps

The following steps are optional. Appropriate default values are assigned according to the mainframe serial number.

1. Set the mainframe type parameter (`MFTYPE`) to one of the following values.

Option	Description
`CRAY_TS`	CRAY T90
`CRAYC90`	CRAY C90
`CRAYYMP`	CRAY J90 and CRAY J90se

Example:

```
#define MFTYPE     CRAYC90
```

2. Set the mainframe subtype (`MFSUBTYP`) parameter to the appropriate option.

Option	Description
`C900XX`	CRAY C916
`C92AXX`	CRAY C92A
`D92AXX`	CRAY C92AM
`C94AXX`	CRAY C94A
`D940XX`	CRAY C94M
`C940XX`	CRAY C94
`C980XX`	CRAY C98
`D980XX`	CRAY C98M
`YMPJ90`	CRAY Y-MP architecture, CRAY J90 and CRAY J90se series
`T4XXX`	CRAY T94
`T16XXX`	CRAY T916
`T32XXX`	CRAY T932

Example:

```
#define MFSUBTYP   C900XX
```

3. If your system is not fully configured, define the number of CPUs (NCPU) and cluster registers (MAXCLUS).

   Example:

   ```
   #define NCPU       8
   #define MAXCLUS    9
   ```

4. Set the clock period to the frequency in hertz (cycles per second) by defining HZ; the default values are based on MFSUBTYP and mainframe serial number.

   Example:

   ```
   #define HZ   HZ_416
   ```