

TIMER PROCESS

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Technical Document

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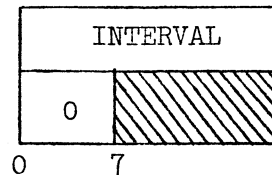
The timer process is used to request a message to be sent to a process after a specified delay. There are three different requests which may be made of the timer process by using the IPC message mechanism. All messages to the timer process must contain a response capability and a descriptor. The response capability must correspond to the requesting process itself and it must be a port capability. All messages from requestors are received on port 1 of the timer process. If these conditions are not met, no return message will be sent. If no descriptor is sent or the command is not 0, 1 or 2, an error message of scalar value 4 is sent to the requestor.

An outline of the three requests follows.

DELAY\INTERVAL

Arguments: a command of 0, delay interval in milliseconds.

Format:



Action:

A message with scalar value 0 will be sent to the specified port after the time has elapsed.

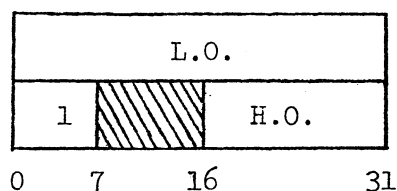
Errors:

Any message with scalar value $\neq 0$ indicates an error. If the requestor already has one message pending, he may not request another, so he receives a message with scalar value 1. If the interval is negative, he receives a message with scalar value 2. If the list of requests is full, he receives a message with scalar value 3.

DELAY\REAL\TIME

Arguments: a command of 1, a real time in microseconds.

Format:



H.O. = high order 16 bits of real time

L.O. = low order 32 bits of real time

Action:

Same as in DELAY\INTERVAL .

N.B. If the time has already passed, he will receive the message back immediately.

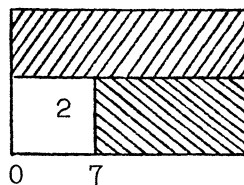
Errors:

If the requestor already has a message pending, he will receive a message of scalar value 1. If the list of requests is full, he will receive a message of scalar value 3. If the real time is greater than 1 week from the time of request, then an error message with scalar value 5 is sent.

PURGE\IF\PRESENT

Arguments: a command of 2, and a process capability.

Format:



Action:

If a message is pending for the PROCESS identified by the process capability, it is sent immediately and purged from the list. If no message is pending, nothing is done.

Errors:

If no process capability is given, an error message of scalar value 6 is sent to the purge requesting process.