 This is part of **Family API** which allow to create dual-os version of program runs under OS/2 and DOS

Note: This is legacy API call. It is recommended to use 32-bit equivalent

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DosSleep

This call suspends the current thread for a specified time. If the requested interval is 0, the call gives up the remainder of the current time slice.

Syntax

```
DosSleep (TimeInterval)
```

Parameters

- TimeInterval (ULONG) - input : Time interval in milliseconds until the thread is awakened.

Return Code

rc (USHORT) - return

Return code descriptions are:

- 0 NO_ERROR
- 322 ERROR_TS_WAKEUP

Remarks

DosSleep suspends the current thread for the specified time period. The actual time it is asleep may be off by a clock tick or two, depending on the execution status of other threads running in the system.

If the time is 0, the thread gives up the remainder of the current time slice and allows any other ready threads of equal priority to run with the current thread for its next slice. Because the amount of sleep time specified is 0, an immediate return with 0 delay is made if no other ready thread is found. However, DosSleep does not yield to a thread of lower priority.

If the time is non-0, the time is rounded up to the resolution of the scheduler clock.

If DosSleep is used to regularly poll an external source to determine the occurrence of some event, a time equal to the longest response interval should be used.

For short time intervals, the rounding-up process combined with the thread priority interactions may cause a sleeping interval to be longer than requested. Also, when a process completes sleeping, it is scheduled for execution. But that execution could be delayed by hardware interrupts or by another thread running at a higher priority. A program should not use the DosSleep call as a substitute for a real-time clock because rounding of the sleep interval causes cumulative errors.

Asynchronous timers can be started with DosTimerAsync and DosTimerStart. DosTimerAsync starts a one-shot asynchronous timer, and DosTimerStart starts a periodic interval timer. DosTimerStop is issued to stop these timers.

Note: To ensure optimum performance, you should not use DosSleep in a single-thread Presentation Manager application. See WinStartTimer.

Family API Considerations

Some options operate differently in the DOS mode than in OS/2 mode. Therefore, the following restrictions apply to DosSleep when coding in DOS mode:

- DosSleep accuracy can be in error by 0.5%.
- DosSleep can degrade system performance of non-foreground program operations when DOS mode is in foreground.

Example Code

C Binding

```
#define INCL_DOSPROCESS

USHORT  rc = DosSleep(TimeInterval);

ULONG           TimeInterval;  /* Interval size (in milliseconds) */

USHORT          rc;            /* return code */
```

The following example illustrates how to obtain the priority of a thread and how to change the priority. The main thread creates Thread2 and allows it to begin executing. Thread2 iterates through a loop that prints a line and then sleeps, relinquishing its time slice to the main thread. After one or two iterations by Thread2, the main thread obtains Thread2's priority information and prints it. It then raises Thread2's priority to fixed-high, and increments the level by ten. Since Thread2 is now at a high priority, it immediately finishes its remaining iterations before relinquishing control on a long sleep; at this point, the main thread re-examines Thread2's priority and reports its new priority level. In this example, it is helpful to understand how the DosSleep calls are used either to relinquish control of the processor, or to keep a thread alive (see DosTimerAsync or DosTimerStart for alternatives to DosSleep).

```
  #define INCL_DOSPROCESS

  #include <os2.h>

  #define    PRTYC_FIXEDHIGH   4      /* Priority class: fixed-high */
  #define    PRTY_DELTA        10     /* Priority delta: increase by 10 */
  #define    SEGSIZE           4000   /* Number of bytes requested in
segment */
  #define    ALLOCFLAGS        0      /* Segment allocation flags - no
sharing */
  #define    SLEEPSHORT        0L     /* Sleep interval - 5 milliseconds */
  #define    SLEEPLONG         20L    /* Sleep interval - 75 milliseconds */
  #define    RETURN_CODE       0      /* Return code for DosExit() */


  VOID APIENTRY Thread2()
  {
    USHORT     i;

    /* Loop with four iterations */
    for(i=1; i<5; i++)
    {
      printf("In Thread2, i is now %d\n", i);

      /** Sleep to relinquish time slice to main thread **/
      DosSleep(SLEEPSHORT);          /* Sleep interval */
    }
    DosExit(EXIT_THREAD,             /* Action code - end a thread */
            RETURN_CODE);            /* Return code */
  }

  main()
  {
    USHORT     Priority;           /* Thread priority */
    USHORT     Class;              /* Priority class */
    USHORT     Level;              /* Priority level */
    SEL        ThreadStackSel;     /* Segment selector for thread stack */
    PBYTE      StackEnd;           /* Ptr. to end of thread stack */
    USHORT     rc;

    /* Allocate segment for thread stack; this is better than just */
    /* declaring an array of bytes to use as a stack.  Make pointer eos. */
    rc = DosAllocSeg(SEGSIZE,                    /* Number of bytes
requested */
                     &ThreadStackSel,            /* Segment selector
                                                    (returned) */
                     ALLOCFLAGS);                /* Allocation flags */
    StackEnd = MAKEP(ThreadStackSel, SEGSIZE-1);

    /* Start Thread2 */
    if(!(DosCreateThread((PFNTHREAD) Thread2,    /* Thread address */
```

```
                        &ThreadID,              /* Thread ID (returned) */
                        StackEnd)))             /* End of thread stack */
      printf("Thread2 created.\n");

    /** Sleep to allow Thread2 to execute **/
    if(!(DosSleep(SLEEPLONG)))                   /* Sleep interval */
      printf("Slept a little to let Thread2 execute.\n");

    /** Obtain Thread2's priority information and report it **/
    if(!(rc=DosGetPrty(PRTYS_THREAD,             /* Scope - single
                                                    thread */
                       &Priority,                /* Address to put
                                                    priority */
                       ThreadID)))               /* ID - thread ID */
    {
      /* Extract priority class and level information */
      Class = HIBYTE(Priority);
      Level = LOBYTE(Priority);
      printf("Thread2: ID is %d, Priority Class is %d and Level is %d\n",
             ThreadID, Class, Level);
    }
    /** Raise Thread2's priority **/
    if(!(rc=DosSetPrty(PRTYS_THREAD,             /* Scope - single thread */
                       PRTYC_FIXEDHIGH,          /* Prty class - fixed-high
*/
                       PRTY_DELTA,               /* Prty delta - increase
                                                    by 10 */
                       ThreadID)))               /* ID - thread ID */
    {
      /* Obtain Thread2' new priority information and report it */
      rc=DosGetPrty(PRTYS_THREAD,                /* Scope - single thread */
                    &Priority,                   /* Address to put
                                                    priority */
                    ThreadID);                   /* ID - thread ID */

      /* Extract priority class and level information */
      Class = HIBYTE(Priority);
      Level = LOBYTE(Priority);
      printf("Thread2: ID is %d, New Priority Class is %d and Level is
%d\n",
             ThreadID, Class, Level);
    }
  }
```

MASM Binding

```
  EXTRN  DosSleep:FAR
  INCL_DOSPROCESS     EQU 1

  PUSH   DWORD   TimeInterval  ;Interval size (in milliseconds)
```

```
CALL   DosSleep
```

Returns WORD

Note

This text based on http://www.edm2.com/index.php/DosSleep_(FAPI)

Family API		
DOS	Process Manager	DosBeep DosExit DosSleep DosExecPgm
	File Manager	DosChDir DosChgFilePtr DosClose DosDelete DosDupHandle DosMkDir DosMove DosQCurDir DosQCurDisk DosSetFileMode DosOpen DosQFileInfo DosRead DosQFileMode DosQFSInfo DosQVerify DosRmDir DosSelectDisk DosFindClose DosFindFirst DosFindNext DosSetFileInfo DosSetVerify DosWrite DosFileLocks DosSetFHandState DosNewSize DosBufReset DosQFHandState DosSetFSinfo DosShutdown
	Memory Manager	DosFreeSeg DosSubAlloc DosSubFree DosSubSet DosAllocHuge DosAllocSeg DosReallocHuge DosReallocSeg DosGetHugeShift DosCreateCSAlias
	NLS	DosCaseMap DosGetCtryInfo DosGetDBCSEv DosSetCtryCode DosGetCollate DosGetMessage DosInsMessage DosPutMessage
	Date and Time	DosSetDateTime DosGetDateTime
	Devices	DosDevConfig DosDevIOCtl DosDevIOCtl2
	Signals	DosHoldSignal DosSetSigHandler
	Misc	BadDynLink DosGetEnv DosGetMachineMode DosGetVersion DosError DosErrClass DosSetVec
KBD		KbdCharIn KbdFlushBuffer KbdGetStatus KbdSetStatus KbdStringIn KbdPeek
VIO		VioGetBuf VioGetConfig VioGetCurPos VioGetCurType VioGetPhysBuf VioReadCellStr VioReadCharStr VioScrollUp VioScrollDn VioScrollLf VioScrollRt VioScrUnLock VioSetCurPos VioSetCurType VioSetMode VioGetMode VioShowBuf VioWrtCellStr VioWrtCharStr VioWrtCharStrAtt VioWrtNAttr VioWrtNCell VioWrtNChar VioWrtTTY VioScrLock VioPopUp
Tools		BIND
Modules		DOSCALLS.DLL VIOCALLS.DLL KBDCALLS.DLL MSG.DLL
Libraries		API.LIB OS2386.LIB FAPI.LIB DOSCALLS.LIB SUBCALLS.LIB

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