Note: This API calls are shared between DOS and Win16 personality.

DPMI is a shared interface for DOS applications to access Intel 80286+ CPUs services. DOS DMPI host provides core services for protected mode applications. Multitasking OS with DOS support also provides DMPI in most cases. Windows standard and extended mode kernel is a DPMI client app. Standard and extended mode kernel differs minimally and shares common codebase. Standard Windows kernel works under DOSX extender. DOSX is a specialized version of 16-bit DPMI Extender (but it is standard DPMI host). Standard mode is just DPMI client, exnhanced mode is DPMI client running under Virtual Machime Manager (really, multitasker which allow to run many DOS sessions). Both modes shares DPMI interface for kernel communication. The OS/2 virtual DOS Protected Mode Interface (VDPMI) device driver provides Version 0.9 DPMI support for virtual DOS machines. Win16 (up to Windows ME) provides Version 0.9 DPMI support. Windows in Standard Mode provides DPMI services only for Windows Applications, not DOS sessions.

DPMI host often merged with DPMI extender. Usually DPMI extender provide DPMI host standard services and DOS translation or True DPMI services.

2021/08/05 10:15 · prokushev · 0 Comments

Int 2FH, AH=16H, AL=87H

Version

0.9

Brief

Obtain Real-to-Protected Mode Switch Entry Point

Input

```
AX = 1687h
```

Return

```
If function successful
AX = 0
BX = flags
```

```
Bit Significance
```

```
0   0 = 32-bit programs are not supported
1 = 32-bit programs are supported
1-15    not used
CL = processor type
Value   Significance
02H 80286
03H 80386
04H 80486
05H-FFH Reserved for future Intel processors
DH = DPMI major version as a decimal number (represented in binary)
DL = DPMI minor version as a decimal number (represented in binary)
SI = number of paragraphs required for DPMI host private data (may be 0)
ES:DI = segment:offset of procedure to call to enter protected mode
if function unsuccessful (no DPMI host present)
AX = nonzero
```

Notes

This function can be called in real mode only to test for the presence of a DPMI host, and to obtain an address of a mode switch routine that can be called to begin execution in protected mode.

The entry point returned by Int 2FH Function 1687H is only called for the first switch to protected mode by a DPMI client. For further details on the protocol for switching to protected mode and the environment after switching to protected mode, see that page.

Under DPMI hosts, the major version number is returned in DH and the minor version number is returned in DL. There are two decimal digits for the minor version number with the least-significant digit representing the revision number of the minor version number. Under DPMI version 0.9 hosts, DH is returned as 0, and DL is returned as decimal 90 (5AH). In hypothetical DPMI version 2.3, DH would be returned as 2 and DL would be returned as 30 (1EH).

See also

Note

Text based on http://www.delorie.com/djgpp/doc/dpmi/