

Support on a Power management problem

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<http://www.tech-archive.net/Archive/Development/microsoft.public.development.device.drivers/2007-12/msg00335.html>

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 - Date: Wed, 19 Dec 2007 22:45:25 -0800 (PST)
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I am developing a low filter driver of disk on a notebook PC with Robson card on it. And I found a very strange problem. The OS is Vista. I installed Intel Turbo Memory v1.5.0.1013 on it. I set power option to turn off hard disk after 1 minute in powercfg.cpl. And no standby/ hibernation, no screen saves. After the PC idles for 1 minute, the OS will turn off the HDD. I filter the power management IRPs and print via DbgPrint.

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00000000 0.00000000 0:Diskfilter_InternalDeviceControl:
SRB_FLAGS_BYPASS_LOCKED_QUEUE. Func=00000018, Flags=00080100
00000001 0.00001655 0:Diskfilter_InternalDeviceControl:
SRB_FLAGS_BYPASS_LOCKED_QUEUE. Func=00000000, Flags=00080128
00000002 0.00005029 0:Diskfilter_InternalDeviceControl:
SRB_FLAGS_BYPASS_LOCKED_QUEUE. Func=00000000, Flags=00080128
00000003 0.00005916 0:Diskfilter_DispatchPower: Enter.
QueuedRequestCount=0
00000004 0.00007201 0:Diskfilter_DispatchPower: DeviceObject 879DC558,
Irp 880D7C20 (16,2) Power.Type=1, Power.State=2
00000005 0.00007697 0:Diskfilter_DispatchPower:
PowerSleepOperationInProgress = TRUE. PowerDeviceCompleted = FALSE (MN:
2, DS:2)
00000006 0.00009848 0:Diskfilter_DispatchPower: Exit. Status =
00000103
00000007 0.00013521 0:Diskfilter_DispatchPowerCompletion: Enter.
Status=00000000, QueuedRequestCount=0
00000008 0.00014129 0:Diskfilter_DispatchPowerCompletion: DeviceObject
879DC558, Irp 880D7C20 (16,2) Power.Type=1, Power.State=2
00000009 0.00014632 0:Diskfilter_InternalDeviceControl:
SRB_FLAGS_BYPASS_LOCKED_QUEUE. Func=00000019, Flags=00080000
00000010 45.02156448 0:Diskfilter_DispatchPower: Enter.
QueuedRequestCount=0
00000011 45.02157974 0:Diskfilter_DispatchPower: DeviceObject
879DC558, Irp 87872488 (16,2) Power.Type=1, Power.State=2
00000012 45.02158737 0:Diskfilter_DispatchPower:
PowerSleepOperationInProgress = TRUE. PowerDeviceCompleted = FALSE (MN:
2, DS:2)
00000013 45.02162933 0:Diskfilter_DispatchPower: Exit. Status =
00000103
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00000014 45.02178574 0:Diskfilter_DispatchPowerCompletion: Enter.
Status=00000000, QueuedRequestCount=0

00000015 45.02179337 0:Diskfilter_DispatchPowerCompletion:
DeviceObject 879DC558, Irp 87872488 (16,2) Power.Type=1, Power.State=2

I found that OS set the power state of disk to D1 (Power.State=2). As
I know, HDD have only two device power state: D0, D3. No D1 state. But
in this case, D1 state is selected.

And, one thing more, OS never set D0 again after it set the D1 state.

Maybe, that is cause by Robson tech. But why OS can skip D0 setting
after it issued a D1 state. Is there anybody meet a same problem?

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