

Re: FlashROM as a disk in CE 5.0

Source:

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.platbuilder/2007-03/msg00041.html>

- *From:* "Gary Swalling" <garret.swalling@xxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Thu, 1 Mar 2007 09:45:34 -0800
-

Hi Gouri,

I am curious about what you changed to get this working.

It looks like you changed the MountFlags registry setting in the profile, but according to MSDN, this is deprecated as of CE 5.0. Instead, MountBootable (which you added) tells the hive which driver is needed to access the registry at bootup. You also added Flags of 1000, which tells the system to load your driver in the first boot phase (and only in the first phase).

related MSDN pages are:

<http://msdn2.microsoft.com/en-us/library/aa916269.aspx>

and: <http://msdn2.microsoft.com/en-us/library/aa914710.aspx>

It looks like you doubled the BlockSize and WriteBufferSize...I presume this is to account for two devices interleaved.

So I'm guessing you told the HIVE how to load the registry when booting from flash and this fixed the problem...

Best regards,
Gary

"gouri" <gouri@xxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
news:871C8E93-D13E-4727-BAA9-01F93CBF8581@xxxxxxxxxxxxxxxxxx

Hi,

It is working.

; HIVE BOOT SECTION

```
[HKEY_LOCAL_MACHINE\Drivers\BuiltIn\StrataFMD]
"Dll"="stratad.dll"
"Order"=dword:2
"Prefix"="DSK"
"Ioctl"=dword:4
```

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```
"Profile"="MSFlash"  
"IClass"="{A4E7EDDA-E575-4252-9D6B-4195D48BB865}"  
"BlockSize"=dword:40000  
"WriteBufferSize"=dword:40  
"MemBase"=dword:B2C00000  
"MemLen"=dword:1F00000  
"IsPairedFlash"=dword:1  
"Flags"=dword:1000  
"MountBootable"=dword:1
```

```
[HKEY_LOCAL_MACHINE\System\StorageManager\AutoLoad\MSFlash]  
"DriverPath"="Drivers\BuiltIn\StrataFMD"  
"LoadFlags"=dword:1 ; synchronous load  
"Order"=dword:0  
"BootPhase"=dword:0
```

; Override names in default profile

```
[HKEY_LOCAL_MACHINE\System\StorageManager\Profiles\MSFlash]  
"Name"="MSFLASH for STRATAFLASH"  
"Folder"="IPSM"  
"DefaultFileSystem"="FATFS"  
"PartitionDriver"="mspart.dll"  
"AutoMount"=dword:1  
"AutoPart"=dword:1  
"AutoFormat"=dword:1  
"MountFlags"=dword:E
```

```
[HKEY_LOCAL_MACHINE\System\StorageManager\Profiles\MSFlash\FATFS]  
"Dll"="fatfsd.dll"  
"Flags"=dword:00000014  
"Util"="fatutil.dll"  
"Paging"=dword:1  
"CacheSize"=dword:0  
"MountAsRoot"=dword:1  
"MountAsBootable"=dword:1  
"MountPermanent"=dword:1
```

```
[HKEY_LOCAL_MACHINE\System\StorageManager\Profiles]  
"MountFlags"=dword:E
```

; END HIVE BOOT SECTION

"Bruce Eitman [eMVP]" wrote:

Probably because it is XIP from flash. So instructions running from flash

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are putting the flash in command mode, which means that the next instructions cannot be read.

--

Bruce Eitman (eMVP)
Senior Engineer
beitman AT applieddata DOT net

Applied Data Systems
www.applieddata.net
An ISO 9001:2000 Registered Company
Microsoft WEP Gold-level Member

"gouri" <gouri@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
news:F3917638-306D-4975-994A-FEFC22DD5F8B@xxxxxxxxxxxxxxxxxxxx

Hi gray,

Some component or application means.If i tried to download
the image
to
flash i am getting the Debug messages like following.

```
4: >>> Loading module core.dll at address  
0x03F10000-0x04000000 (RW  
data  
at 0  
x01FFE000-0x01FFF7A5)  
0x830c8930: >>> Loading module core.dll at address  
0x03F10000-0x04000000  
(RW  
data at 0x01FFE000-0x01FFF7A5)  
0x830c8930: >>> Loading module filesys.exe at address  
0x04010000-0x040A5000  
0x830c8930: CertMod.dll not found, using old OEM Trust  
Model  
0x830c8930: FileSystem Starting - starting with clean file  
system  
0x830c8930: FS: initializing ROM/RAM file system  
0x830c8930: SC_CreateAPIHandle: pvData == NULL  
0x830c8930: FS: Registering file system ROM, index 2,  
flags 0x00000031  
0x830c8930: FS: Mount complete (ROM, index 2, flags  
0x00000031)  
0x830c8930: OEMIoControl: Unsupported Code 0x101008c  
- device 0x0101  
func  
35  
0x830c8930: FSVOL: Opening existing volume  
0x830c8930: FSVOL: Volume heap already initialized  
0x830c8930: FSREG: Mounted ROM portion of boot
```

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```
registry
0x830c8930: FSVOL: Creating clean virtual volume
0x830c8930: FSVOL: Initializing volume heap
0x830c8930: FSREG: Mounted RAM portion of boot
registry
0x830c8930: FS: Creating signal event
SYSTEM/DevMgrApiSetReady
0x830c8930: FS: Creating signal event
SYSTEM/PowerManagerReady
0x830c8930: FS: Creating signal event
SYSTEM/GweApiSetReady
0x830c8930: FS: Creating signal event
SYSTEM/BatteryAPIsReady
0x830c8930: FILESYS: Starting storage manager.
0x830c8930: >>> Loading module fsdmgr.dll at address
0x03C60000-0x03C8E000
(RW d
ata at 0x01FD8000-0x01FD8808)
0x830c8930: FS: Registering file system StoreMgr, index 3,
flags
0x00000001
0x830c8930: >>> Loading module ceddk.dll at address
0x03BF0000-0x03BF9000
(RW da
ta at 0x01FD0000-0x01FD00C4)
0x830c8930: >>> Loading module stratad.dll at address
0x02A90000-0x02AA6000
(RW
data at 0x01F1A000-0x01F1AB50)
it is loading our Flash driver dll also.
```

After this only it is hanging. Do u have any idea why it is hanging here.

Thanks,
Gouri.

"Gary Swalling" wrote:

```
Hi Gouri,
Are you saying that if you download to
SDRAM, you no longer have the
"block
0 locked" error? Did you work around that to
allow the FAL to format
the
flash?
```

As far as behavior of loading in SDRAM

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versus loading from flash, is
the
bootloader jumping to the right place to load
your code from flash?

It
looks like the bootloader tries to jump into
the OS code and doesn't
get
very far...

I have noticed that when downloading the
OS to RAM, a component or
application can be loaded automatically from
the flatrelease
directory,
even
though it was not included in the image.
Maybe you have some
component
that
is not properly included in nk.bin, so it loads
for you when
downloading
to
RAM, but when booting from the flash, it
doesn't have that same
connection
to the flatrelease directory...

Regards,
Gary

"gouri"

<gouri@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
wrote in message

news:BD3EBDED-6802-4C2E-9977-6F89CA368D39@xxxxxxxxxxxxxxxxxxxx

Hi Gary,

If i downloaded the Iamge
to SDRAM it is creating the
Nor flash
folder.

If i downloaded the Iamge
to Flash even display is not
getting up.
It is hanging at.....

Download successful!
Jumping to image at
0x9CA81000 (physical

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```
0x81000)...  
Got  
EDBG_CMD_JUMPIMG  
Got  
EDBG_CMD_CONFIGWindows  
CE Kernel for ARM  
(Thumb Enabled) Built  
on  
Jun  
24  
200  
4 at 18:25:00  
ProcessorType=0411  
Revision=7  
sp_abt=fff5000  
sp_irq=fff2800  
sp_undef=fffc800  
OEMAddressTable =  
9ca85ab4  
Sp=fffc7cc  
OEMIoControl:  
Unsupported Code  
0x101008c – device 0x0101  
func 35
```

Actually after this only
Stratad.dll will be loaded.

I have tried with and
without Hive based
registry. In both cases
display
is
not getting up.

Am i missed any
thing. Plesse Guide me.

Thanks,
Gouri.

"Gary Swalling" wrote:

```
Hi Gouri,  
Are you  
saying that  
you set a  
breakpoint  
in  
FMD_Init
```

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and didn't
hit
it
because the
FMD is not
getting
loaded?
In that case,
your
MemSize
and
MemLength
aren't being
looked at
yet.

You
mentioned
that you
included
FAT and it
looks like
you selected
TFAT
format.
Have you
included
TFAT? I
think that at
least in CE
4.2,
TFAT
required an
additional
dll. Maybe
you could
check the
makeing
output
for
the TFAT
dll.

Also, I
would
check
reginit.ini
and ce.bib
in the
flatrelease
directory

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to
make sure
your reg
and bib
changes got
included.

If all the
components
are included
correctly,
you should
be able to
see
FMD_Init
getting
called.

Regards,
Gary

"gouri"
<gouri@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
wrote in
message
news:5D4F26C5-F93C-46ED-A72A-102EB2C79B5E@xxxxxxxxxx

Hi
Gary
Swalling,

I
have
build
the
Image
in
Debug
mode
and
i
have
captured
the
Debug
messages
but
in
driver
loading
list

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i
didn't
find
the
stratad.dll.I
have
Enabled
the
following
in
the
Build
options.

1.Enable
CE
target
control
support
(SYSGEN_SHELL=1)
2.Enable
Eboot
Space
in
memory(IMAGEBOOT=1)
3.Enable
full
kernal
mode
(IMAGENOTALLKMODE=1)
4.Enable
kernal
debugger
(IMAGENODEBUGGER=1)
5.Runtime
image
can
be
larger
than
32
MB.

and
i
have
modified
the
Project.bib
and
project.reg

Re: FlashROM as a disk in CE 5.0

as
i
said
earlier. But
why
it
is
not
coming
in
the
loading
list
i
didn't
get. Am
i
missing
anything. Please
help
me.

Thnaks,
Gouri.
"Gary
Swalling"
wrote:

Hi
Gouri,
Have
you
tried
debugging
FMD_Init
to
see
if
the
flash
driver
is
being
loaded?
And
if
so,
what
registry
values

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it
finds
for
MemBase
and
MemLength?

Regards,
Gary

"Bruce
Eitman
[eMVP]"
<beitman.nospam@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
wrote
in
message
news:uDuvGpzMHHA.3668@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

What
about
size,
did
you
change
that?

--
Bruce
Eitman
(eMVP)
Senior
Engineer
beitman
AT
applieddata
DOT
net

Applied
Data
Systems
www.applieddata.net
An
ISO
9001:2000
Registered
Company
Microsoft
WEP
Gold-level

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Member

"gouri"

<gouri@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>

wrote

in

message

news:33D85E34-9653-4766-8733-BC080E

Hi

bruce,

I

tried

this

option

but

still

there

no

nor

flash

folder.I

have

one

doubt

here

actually

we

have

to

use

Uncached

virtually

address

only

right.Here

BE400000

is

Uncached

equivalent

value

of

cached

9E400000.

Can

anybody

help

me

please.

Re: FlashROM as a disk in CE 5.0

Thanks,
Gouri.

"Bruce
Eitman
[eMVP]"
wrote:

Change
MemBase
and
MemLength
to
match
what
you
put
in
OEMAddressTable?

--
Bruce
Eitman
(eMVP)
Senior
Engineer
beitman
AT
applieddata
DOT
net

Applied
Data
Systems
www.applieddata.net
An
ISO
9001:2000
Registered
Company
Microsoft
WEP
Gold-level
Member

"gouri"
<gouri@xxxxxxxxxxxxxxxxxxxx>
wrote

Re: FlashROM as a disk in CE 5.0

in
message
news:0ACA7842-3E06-4E

Hi
experts,

Currently
workin
on
proving
FMD
support
for
Intel
Strata
NOR
flash
(K3
family
of
32
MB)
on
pxa27x
platform
with
WinCE
5.0
.I
amfacing
a
strange
problem
,
wherein
i
not
able
to
mount
the
FAT
partition.
The
driver
i
am
using
is
the

Re: FlashROM as a disk in CE 5.0

sample
FMD
code
given
by
Microsoft
for
NOR
flashes(
strata
folder
in
MSFLASHFMD).I
am
not
able
mount
the
"NOR
folder"
at
boot
time.

for
this
i
have
included
the
SYSGEN_MSFLAS
in
the
environmental
variables
and
i
included
the
stratad.dll
in
project.bib
like

stratad.dll
\$(_FLATRELEASE
NK
SH.

I
have

added
the
Registry
settings
to
Project.reg
file
like

```
[HKEY_LOCAL_M
"Dll"="stratad.dll"
"Order"=dword:2
"Prefix"="DSK"
"Ioctl"=dword:4
"Profile"="MSFlash"
"IClass"="{A4E7ED
"MemBase"=dword:
"MemLen"=dword:
001E0000
"Index"=dword:1
"BlockSize"=dword:
"WriteBufferSize"=c
"SectorSize"=dword
"IsPairedFlash"=dwo
```

```
;
Override
names
in
default
profile
[HKEY_LOCAL_M
"Name"="MSFLASH
for
STRATAFLASH"
"Folder"="NOR
Flash"
"DefaultFileSystem"
"AutoMount"=dword
"AutoPart"=dword:1
"AutoFormat"=dword
"PartitionDriver"="n
"BootPhase"=dword
```