

Re: Relocate from nor to ddr CE 5.0

Source:

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.platbuilder/2008-12/msg00192.html>

- *From:* "Dean Ramsier" <ramsiernospam@xxxxxxxxxx>
 - *Date:* Mon, 8 Dec 2008 09:47:41 -0500
-

Again, it depends on the bootloader implementation; we can't tell you how your bootloader works. Setting the IMGFLASH variable doesn't necessarily do anything; it's just an environment variable.

--
Dean Ramsier - eMVP
BSQUARE Corporation

"Maarten" <Maarten@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:3DD85D47-2E12-487A-B282-A18AB75CC3E8@xxxxxxxxxxxxxxxxxxxx

Hi Dean/fabio,

as soon as I change config.bib in such a way that the image is compiled for RAM with the intention to write it to flash (IMGFLASH= 1), the image is not programmed into flash. BLCOMMON checks with OEMIsFlash if the image needs to be flashed, but the image info says it belongs to ram. Must I change OEMIsFlash, or is there something I do wrong?

--
Maarten

"Dean Ramsier" wrote:

That is the job of the bootloader; nothing special on the part of Platform Builder. Your bootloader needs to have code that recognizes if the image is targeted to flash, and if it is then the bootloader programs it. We can't tell you if your bootloader supports the functionality, but if your BSP is based on one of the reference designs that comes with PB then it probably

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does.

--

Dean Ramsier – eMVP
BSQUARE Corporation

"fabio antonini" <fabioantonini@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
news:E7A53157-0EF5-4826-AB79-F0CC2C83D1C9@xxxxxxxxxxxxxxxxxxxx

Hi Marteen
sorry for the delayed reply.
what do you mean when you say "to get it into flash"?
thanks for your feedback
fabio

"Maarten" wrote:

Hi Fabio,

what are you using to get it into flash? Is there a standard solution from platformbuilder?

--

Maarten

"fabio antonini" wrote:

Hi Marten
I faced the problem you are talking about. I have added the following piece of asm code at the end of the startup.s in the your OAL just before jumping into KernelStart section

```
;CUSTOM ADD – BEGIN  
IF :LNOT: BOOTLOADER  
IF :LNOT:  
IMAGE_NORAMRELOCATION
```

; Copy the nk image from

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flash to RAM. The image is configured ; to run in RAM, but is stored in flash. Absolute address references ; should be avoided until the image has been relocated and the MMU enabled. ; ; NOTE: The destination (RAM) address must match the address in the nk's .bib file. The latter dictates the code fix-up addresses. ;

```
; Check if we are running
from NOR flash
mov r0, pc
ldr r1,
=IMAGE_BOOT_NORDEV_NOR_PA_START
cmp r0, r1
blt CODEINRAM
```

```
ldr r1,
=IMAGE_BOOT_NORDEV_NOR_PA_END
cmp r0, r1
bgt CODEINRAM
```

```
ldr r8,
=IMAGE_BOOT_NKIMAGE_NOR_PA_START
ldr r1,
=IMAGE_BOOT_NKIMAGE_RAM_PA_START
ldr r2,
=(IMAGE_BOOT_NKIMAGE_NOR_SIZE
/ 16) ; NK image
length
(this must be <= the NK
; length in the
.bib
file). We are block-copying
; 16-bytes per
iteration.
```

```
; Do 4x32-bit block copies
from flash->RAM (corrupts
```

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```
r4-r7).  
;  
10 ldmia r8!, {r4-r7} ;  
Loads from flash (post  
increment).  
stmia r1!, {r4-r7} ; Stores  
to RAM (post increment).  
subs r2, r2, #1 ;  
bne %B10 ; Done?
```

; Now that we've copied
ourselves to RAM, jump to
the RAM image.

```
Use  
the "CodeInRAM" label  
; to determine the  
RAM-based code address to  
which we should  
jump.  
;  
ldr r1,  
=IMAGE_BOOT_NKIMAGE_NOR_PA_START  
adr r2, CODEINRAM  
sub r2, r2, r1  
ldr r0,  
=IMAGE_BOOT_NKIMAGE_RAM_PA_START  
add r2, r0, r2  
mov pc, r2  
nop  
nop  
nop
```

```
CODEINRAM  
; Now that we're running out  
of RAM  
;  
ENDIF  
ENDIF  
;CUSTOM ADD – END
```

```
adr r0, g_oalAddressTable  
b KernelStart
```

Of course you have to
define the
IMAGE_NORAMRELOCATION
macro in your
settings
please let me know your
feedback

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regards
fabio antonini

"Maarten" wrote:

Hi,

my
freescale
platform
has
originally
been setup
to run from
NOR
(XIP), but
due to
performance
problems, I
must move
to DDR
first.

Does
anyone
know what
steps to
make?

--
Maarten