



ConnectCore Family patches for Windows CE 6 R3

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Acronyms

Name		Description
OS		Operating System
PB		Platform Builder
BSP		Board Support Package
OEM		Original Equipment Manufacturer

1 Overview

1.1 *Introduction*

This document will describe all current patches that haven't been included in the latest Windows CE 6 R3 release and Digi Embedded Windows CE version V2.2 and any previous BSP version for the Digi ConnectCore Family.

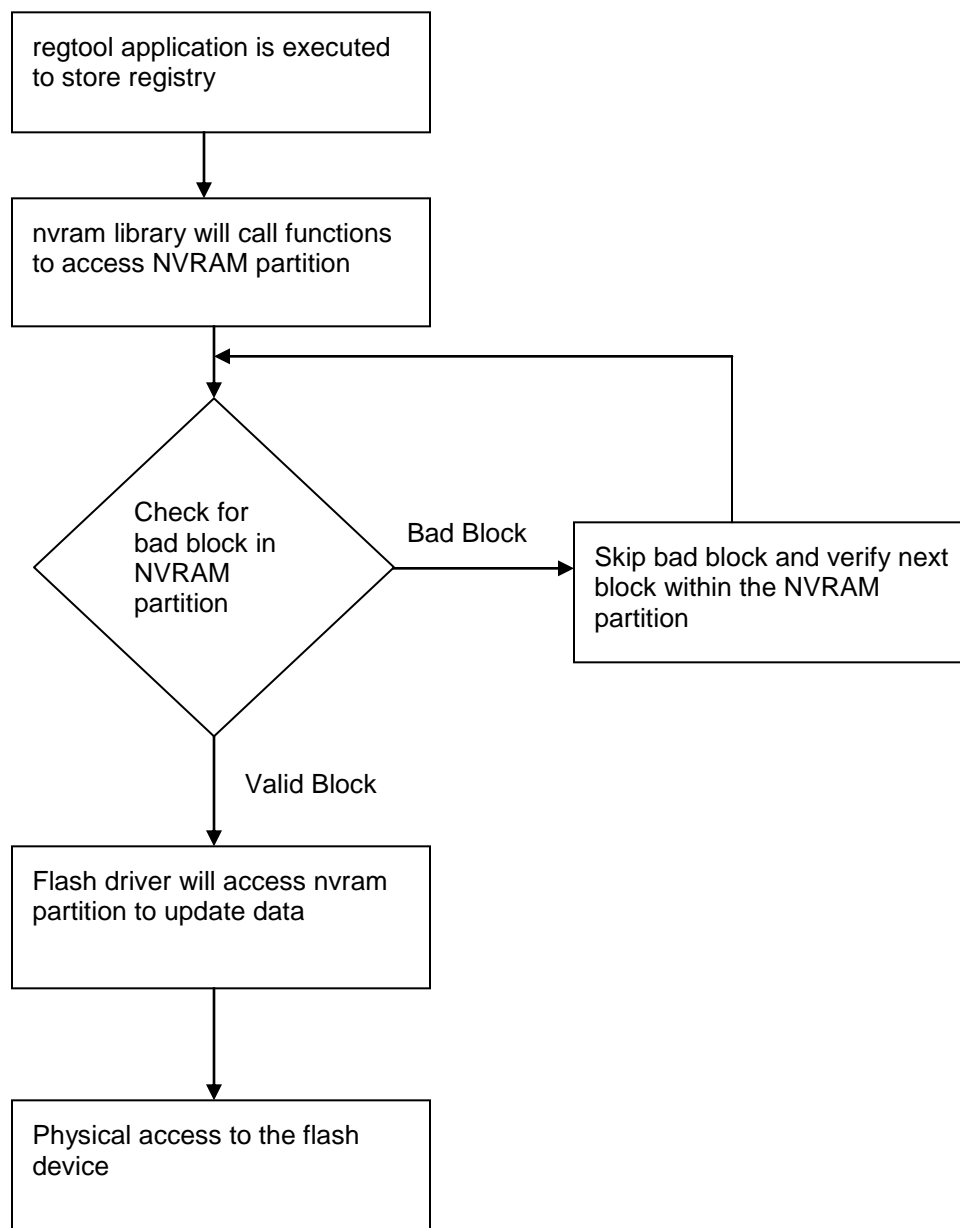
2 NVRAM Patch

2.1 *NVRAM functionality*

The nvram is a data structure created by the bootloader that contains information of the booted device like the network information, the partitions of the flash and the additional environment variables.

Windows CE will update the nvram data when calling the application regtool.

The following figure shows a functional diagram of the synchronisation mechanism between Windows CE and NVRAM.



2.2 Failure Description

It had been seen that having a bad block within the NVRAM partition could cause a failure in updating the NVRAM structure that is shared between Windows CE and U-Boot. The failure only happens if the bad block is on the second block of the NVRAM partition or any further block because it will not skip the bad block.

2.3 Patch Description

This patch is necessary to prevent that regtool fails when storing the Windows CE registry to the Flash file system and updating the nvram data structure in flash.

The patch will check now each of the flash blocks within the nvram partition if it is a valid block or not and will skip that block and look for the next valid block within the nvram partition.

If the patch is not applied it will not harm or break the system it only will make synchronization between Windows CE and the U-Boot fail.

2.4 How to apply the patch

The following the instruction only applies to ConnectCore BSP versions previous to version v2.3 apply the patch to the Windows CE BSP sources.

1. Copy the nvram_priv_wince.c to
WINCEROOT\platform\<BSP>\src\common\lib\nvram were BSP is the platform name of the used module.
2. On BSP versions previous to V1.6 the regtool and uboot_env application need to be added as a subproject to the Windows CE OS project to make sure that the new library will be linked correctly to the application.
3. Rebuild the complete BSP by selecting from the Visual Studio menu Build->Advanced Build commands->Rebuild Current BSP and subprojects
4. Apply the new OS image to the target and test the correct functionality of regtool to update the NVRAM data.