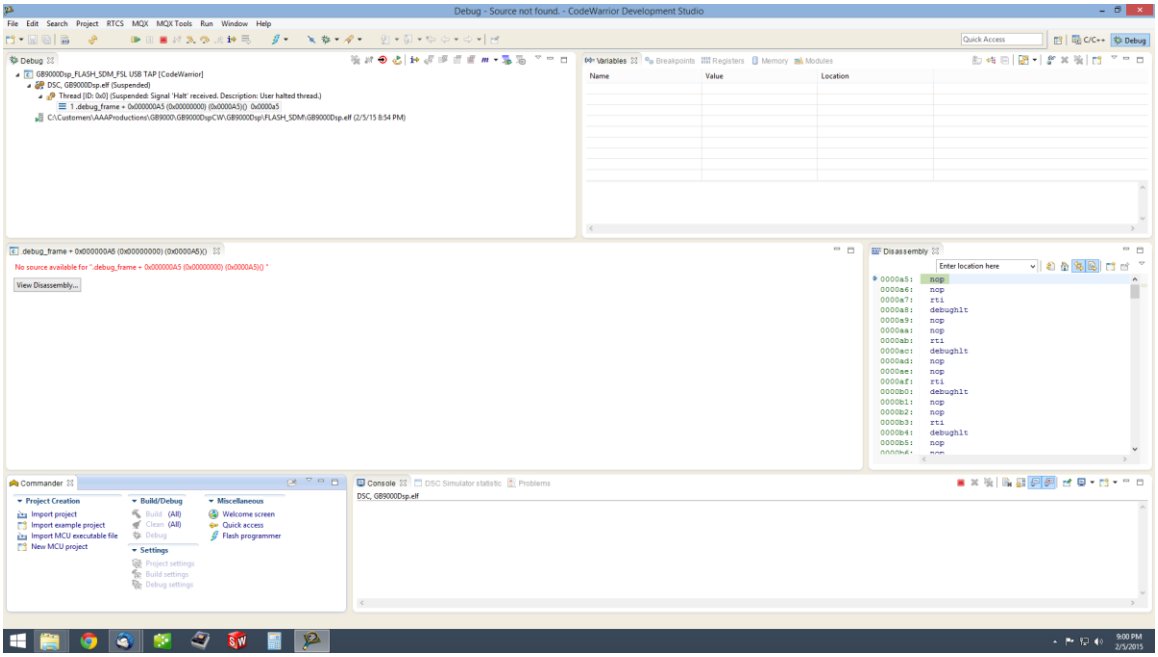
Workaround for programming 56F8323 in CodeWarrior v10.6 debugger

There is a known problem in CodeWarrior v10.6 debugger. After user creates a new bareboard project for 56F8323 in CW10.6 and starts debugging with USBTAP, but the debugger stops, and the debugger view shows " No source available for ".debug_frame + 0x000000A5 (0x00000000) (0x0000A5)() ", just as below:



To resolve this problem, we need two steps:

1) Go to project folder, and open the file “MC56F8323.tcl” under “\Project_Settings\Debugger” subfolder, then add the line as below between “change x:0xF401 0x0000” and “change x:0xF401 0x0100” to unprotect boot sector:

change x:0xF411 0x0000

The picture as below shows the content in file “MC56F8323.tcl” after modification.

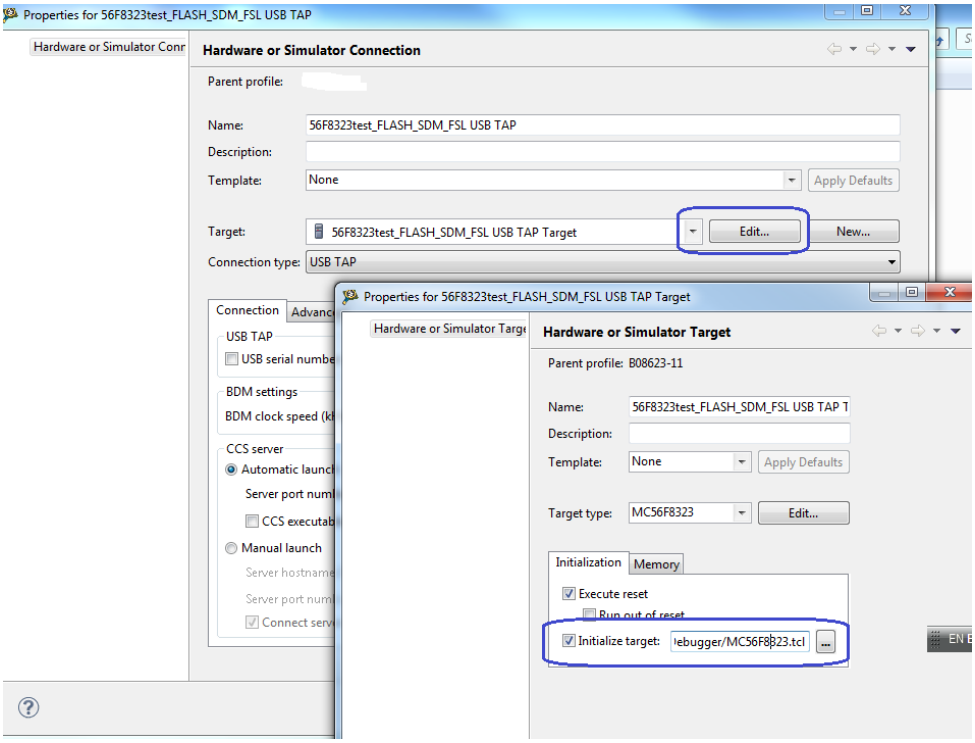
MC56F8323.tcl

```
radix x
config hexprefix 0x
config MemWidth 16
config MemAccess 16
config MemSwap off

#-----------------------------------------------------

#  MC56F8323 initialization file for flash
#  Freescale sample code

# Enable Reset.  GPIOD4 will be forced by the debugger
# GPIO D BASE + 3 is register address.  We need to set
# Content is 1 which means peripheral owns the pin.  N
# need to be set for this device in order to reset the
change x:0xF173 0x1000

# set Flash Clock Divider (write 0x27)
change x:0xF400 0x0A00

# unlock protection
change x:0xF401 0x0000

# unprotect
change x:0xF410 0x0000
change x:0xF411 0x0000

# unprotect data
change x:0xF401 0x0100
change x:0xF410 0x0000
```

It is recommended to make this modification in “MC56F8323.tcl” either which is under the CodeWarrior folder:

C:\Freescale\CW MCU v10.6\MCU\lib\wizard_data\DSC\DataBase\init_files

Because this file is copied into the project subfolder (“\Project_Settings\Debugger”) when user creates a new project for DSC from File menu->New->Barebaord project. User can find the path which saves the copied file as below:



2) Go to CodeWarrior v10.6 installation folder, usually is below:

C:\Freescale\CW MCU v10.6\MCU\bin\plugins\support\Products\ProductData\DSCFPDevices.mwpdb\FP

And open the file “MC56F8323_P_FLASH.xml”, then change the value in line13 from:

<skip_bytes>0x18000</skip_bytes>

to :

<skip_bytes>0x1C000</skip_bytes>

This is a gap to the boot sector of the flash memory.

The picture as below shows the content in file “MC56F8323.tcl” after modification.

MC56F8323_P_FLASH.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<device-file>
<device>
<content>
        <name>MC56F8323_P_FLASH</name>
        <manufacturerid>0xFFFF</manufacturerid>
        <chiperase>true</chiperase>
        <memory_space>0</memory_space>
        <access_type>WORD</access_type>
        <sectors>
                <sectorcount>32</sectorcount>
                <sectorsize>0x200</sectorsize>
                <skip_bytes>0x1C000</skip_bytes>
                <sectorcount>16</sectorcount>
                <sectormem>boot</sectormem>
                <sectorsize>0x100</sectorsize>
        </sectors>
        <protecttype>dsc_hfm_program_32k_boot_8k</protecttype>
        <flash_config_base>0x3FF7</flash_config_base>
        <clock_div>0xA0</clock_div>
        <flash_module_base>0xf400</flash_module_base>
        <buffer_start>0x2FC00</buffer_start>
        <buffer_size>0x400</buffer_size>
        <third_party_support>
                <workspace_start>0x2F800</workspace_start>
                <workspace_size>0x200</workspace_size>
        </third_party_support>
        <organizationcount>1</organizationcount>
        <organization>
                 <name>68kx16x1</name>
                 <id>0xFFFF</id>
                 <begin_address>0x000000</begin_address>
                 <end_address>0x021000</end_address>
```

3) When CodeWarrior launches, it creates one database, which includes all xml config files from the {CW home directory}\MCU\bin\plugins\support\Products\ProductData. It's name is chameleon_toc.sqlite. If this file already exists, is not enough to fix MC56F8323_P_FLASH.xml. User have to delete C:\Freescale\CW MCU v10.6\MCU\bin\plugins\support\Products\ProductData\chameleon_toc.sqlite (if it exists)

After these modifications, the debugger become work well with USBTAP and MC56F8323.

The attached two files are the modified "MC56F8323.tcl" and "MC56F8323_P_FLASH.xml". User can put them under the subfolder below to replace the old ones:

C:\Freescale\CW MCU v10.6\MCU\lib\wizard_data\DSC\DataBase\init_files

and

C:\Freescale\CW MCU v10.6\MCU\bin\plugins\support\Products\ProductData\DSCFPDevices.mwpdb\FP

This problem will be fixed in further update. Before it, user can use the workaround in above to resolve the problem.