Activating Change MCU and Connection in Processor Expert V3.1 Project

Technical note TN241 describes how to extend V3.1 project with ability to switch easily to another MCU or connection.

The mechanism described there could not be applied to Processor Expert projects as special requirements apply there. This technical note explains:

- The special requirements on Processor Expert
- How to extend V3.1 processor expert projects with ability to switch to another MCU or connection.

Requirements on Processor Expert projects

Following requirements apply to processor expert projects:

- Source and header files generated by Processor Expert should be stored in a specific project sub directory (.\DOC per default).
- Beans settings are stored in the file called <projectFile>.pe located in the project directory.
- The Processor Expert project file should have the same base name as the CodeWarrior project: For example if your project file is called "Test.mcp", the processor Expert project file should be called "Test.pe".
- The main application source file should have the same base name as the CodeWarrior project and be located in the CODE sub directory.
  For example if your project file is called "Test.mcp", the main application file should be called "Test.c".
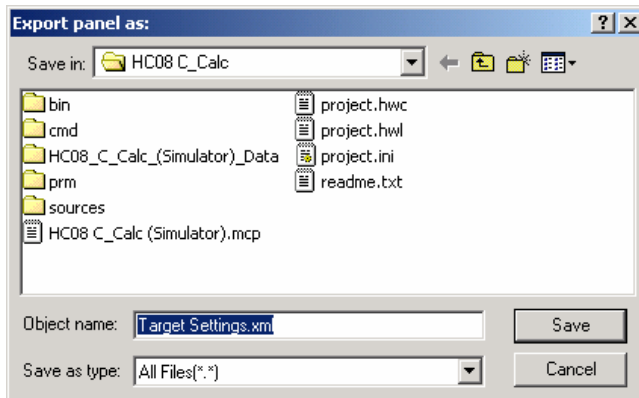
Extend V3.1 Processor Expert Project with ability to switch MCU & Connection

Projects created by the Wizard in V5.0 include support to easily switch to a new MCU or a new connection. You will find instructions below on how to add this functionality to your existing Processor Expert project created using V3.1 or earlier.

We recommend that you create a new project with the latest Wizard and then restore your project settings in the new project.

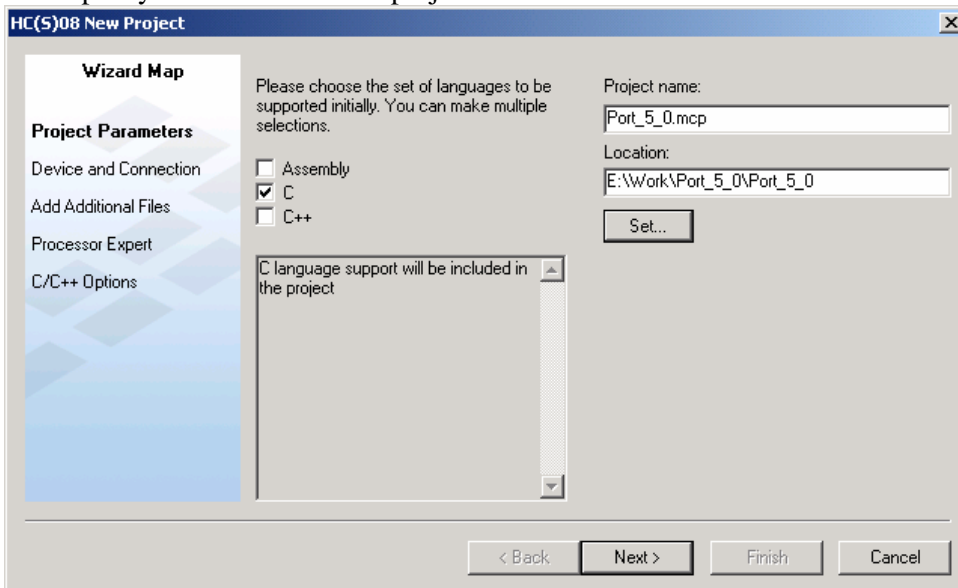1. Export Target Settings to XML files

- Open the original project with V3.1 IDE

- Select the Build Target Setting dialog box (Press ALT + F7 or click the Target setting icon in the project window's toolbar).
- Export settings from the "Target Settings" panel to "Target Settings.xml".
  - Click on "Target Settings" to see the "Target Settings" preference panel.
  - Click on the "Export Panel" button.

- Save Panel Settings as "Target Settings.xml".
- Export settings for the "Assembler for HC08" panel to "Assembler for HC08.xml".
- Export settings for the "Compiler for HC08" panel to "Compiler for HC08.xml".
- Export settings for the "Importer for HC08" panel to "Importer for HC08.xml".
- Export settings for the "Linker for HC08" panel to"Linker for HC08.xml".
- If you are using OSEK, export settings for the "OSEK Sysgen" panel to "OSEK Sysgen.xml".
- In case you are using PC-lint, export settings for the "PCLint Main Settings" panel to "PCLint Main Settings.xml" and "PCLint options" to "PCLint Options.xml".
- If you are using non-standard file extensions, export settings for the "File Mappings" panel to "File Mappings.xml".
- In case you are using Source Trees, export settings for the "Source Trees" panel to "Source Trees.xml".
- If you are using custom Keywords, export settings for the "Custom Keywords" panel to "Custom Keywords.xml".

2. Create a New Project using the V5.0 Wizard

- Start the V5.0 IDE
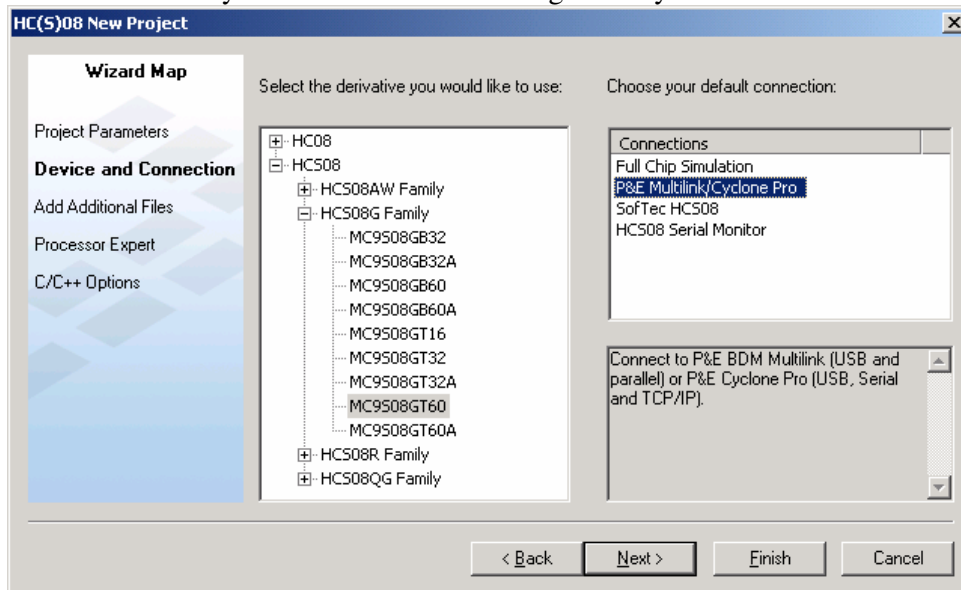- Click on the "Create New Project" button in the Startup dialog box.

- In the "Project Parameters" panel
    - Check the boxes in front of any programming languages used in the project.
    - Use the "Set …" button to browse for the location where you want to store your V5.0 project. For backward compatibility, we recommend that you create a new directory for the ported project.
    - Use the same project name as the original project (*.mcp). This will make it easier to import your data to the new project.
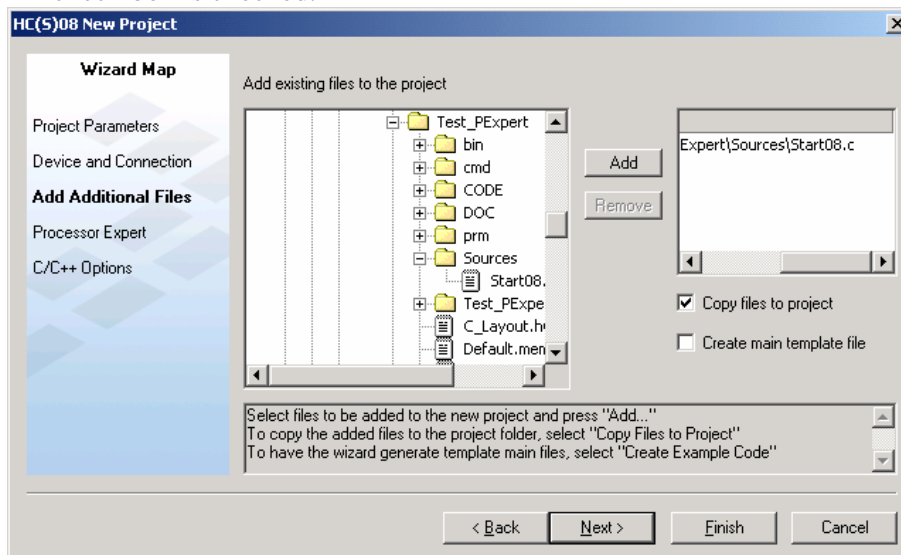

    - Click the "Next >" button
- In the "Device and Connection" panel, select the derivative and the default connection you wish to use in the project.

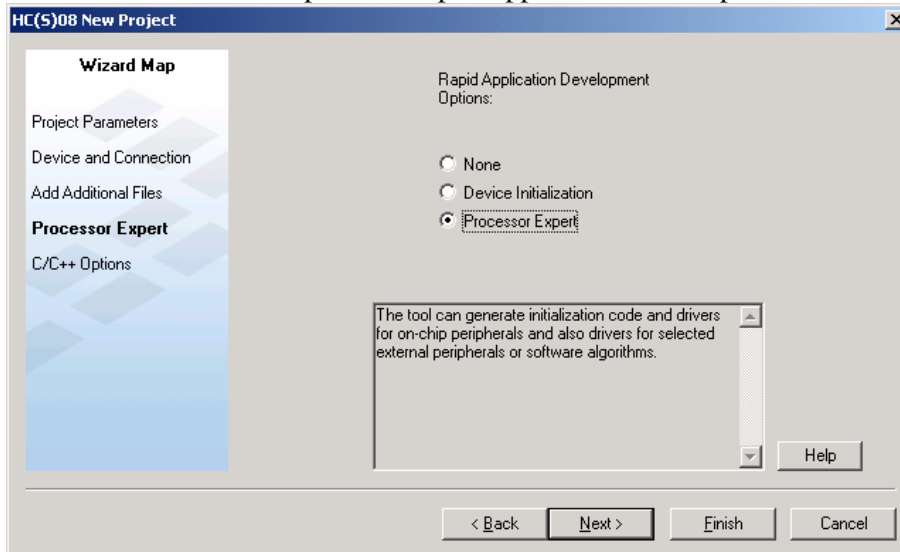- The selection you make here can be changed easily in the IDE afterwards.

- Click on the "Next >" button.
- In the "Add Additional Files" panel:
  - Browse for the original project's source files (or the source file directory).
  - Select each of the source files in the original project which has not been generated by Processor Expert and press "Add".
  - From here you can decide if you want to duplicate the application source files in the new project directory or if you want to use the original source files in the new project.
  - We would recommend duplicating the source file. So make sure the "Copy files to Project" check box is checked.
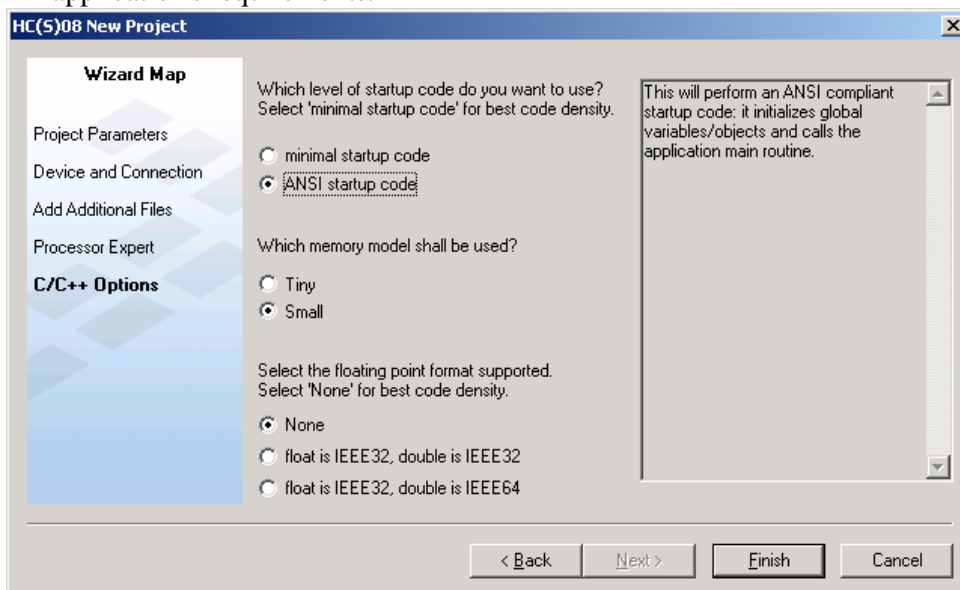

- Uncheck the box "Create main template file" as your current application already include a main function.
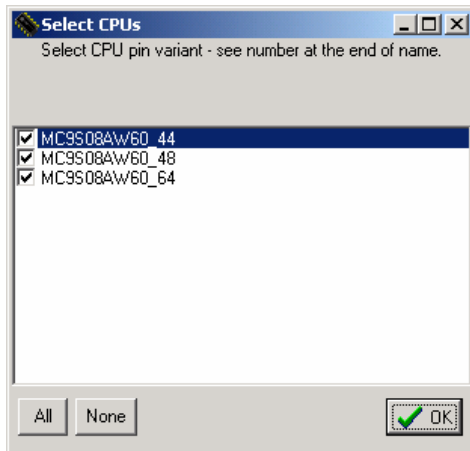
- Click on the "Next >" button.
- The "Processor Expert" panel might not be available for all derivatives. In this panel:
  - Select "Processor Expert" as Rapid Application Development method.

- Click on the "Next >" button.
- In the "C/C++ Options" panel:
  - Select the level of startup code, memory model, and floating-point format according to the application's requirements.

- Click on the "Finish >" button.
- During creation of the project you will be asked to select the CPU Pin variant you wish to use.

- Select the variant(s) you want to use and press "OK".

A new project has now been created for V5.0, in which the "Change MCU/Connection" from the Project menu has been enabled.
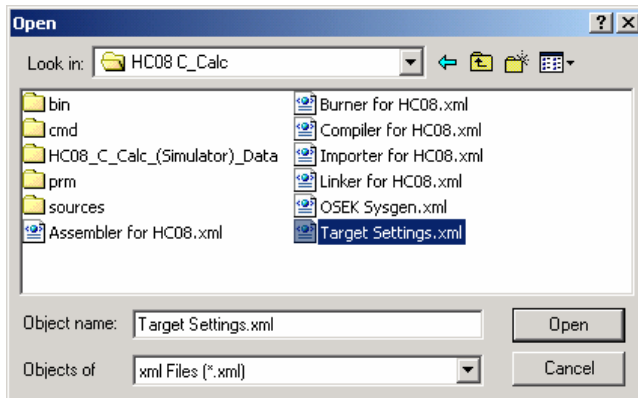
3. Import Processor Expert Setting to the project.

- Close the project in the IDE.
- Copy (duplicate) the "CODE" and "DOC" sub-directory from the original project into the new project.
- Copy the .pe project file located in your original project directory to the destination project directory.
- Make sure the .pe base file name (whatever is specified in front of the .) is identical to the .mcp base file name.
  For example if your project file is called "Test.mcp", the processor Expert project file should be called "Test.pe".
- In the IDE select "File" -> "Open Recent" and re-open the project you have created previously.

The bean settings you have defined in your V3.1 project are imported in the new project.

4. Import Target Settings from XML Files

Now you need to apply your original project settings to the new project.

- Select the Build Target Setting dialog box (Press ALT + F7 or click the Target setting icon in the project window toolbar).
- Import settings for the "Target Settings" panel from "Target Settings.xml".
  - Click on "Target Settings" to see the "Target Settings" panel.
  - Click on the "Import Panel" button.

- Open "Target Settings.xml".
- Import settings for the "Assembler for HC08" panel from "Assembler for HC08.xml".
- Import settings for the "Compiler for HC08" panel from "Compiler for HC08.xml".
- Import settings for the "Importer for HC08" panel from "Importer for HC08.xml".
- Import settings for the "Linker for HC08" panel from "Linker for HC08.xml".
- If you are using OSEK, import settings for the "OSEK Sysgen" panel from "OSEK Sysgen.xml".
- In case you are using PC-lint, import settings for the "PCLint Main Settings" panel from "PCLint Main Settings.xml" and "PCLint options" from "PCLint Options.xml".
- If you are using non-standard file extensions, import settings for panel "File Mappings" from "File Mappings.xml".
- In case you are using Source Trees, import settings for the "Source Trees" panel from "Source Trees.xml".
- If you are using custom Keywords, import settings for the "Custom Keywords" panel from "Custom Keywords.xml".

Now you have imported all your original project's settings for configuring the new project.

5. Debugger Settings.

Debugger settings are not easily portable from V3.1 to V5.0. All debugger-specific settings from the original V3.1 project must be applied manually to the new V5.0 project. The following points should be taken into consideration:

- **Debugger Command Line**:
  Do not add any options on the debugger command line in a project created with CodeWarrior V5.0 . The command line will be changed completely when you switch to another connection.
- **Debugger Command Files**:
  If you were using some commands in the debugger command files, you have to apply them again to the new command files.
  You can copy the contents of the original command files to the new files.
- **Connection settings**:
  If you were using specific connection settings in the original project, you must apply them again using the "Communication" menu entry in the Target menu (Multilink/CyclonePro, FCS, Softec…).