

Multiple Target Features Using Processor Expert™ and CodeWarrior

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1. Abstract

One of the benefits of the using Code Warrior with Processor Expert for Freescale’s family of processors is its flexibility. Code Warrior provides Stationery (templates) to address different memory configurations. However, templates to address new product hardware may be required and can be developed using tools in CodeWarrior. This document details the steps required to create a new build target.

There are two meanings for the term “target”, as used by CodeWarrior:

A **build target** is a particular collection of settings and files that determines the content of your code and the process in which the code is compiled and linked into the final output.

A **platform target** is the processor or operating system for which you are writing code, represented as the choice of linker specified in the build target settings panel.

In this document, the term “target” refers to a build target.

2. Introduction

This application note details how to create the new Stationery and build target for a prototype product configuration, possibly differing in software, hardware, or both, from the build targets supplied with standard Stationery. The new build target, *proto*, is in addition to the existing build targets defined in the Stationery.

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These tasks are required to add multiple varied build targets:

1. Create a project from existing Stationery
2. Select the *project* window to make it the active window
3. Customize the project so it can be used as a template for creating other projects. In this case, we will define a new build target based on an existing target with a new preference setting.
4. Click *File*
5. Click *Save A Copy As* (from the *File* menu of Code Warrior)
6. Locate the *Stationery* folder in the CodeWarrior installation
7. Create a folder inside the *Stationery* folder to store the new Stationery:
 - Click the *create folder* icon
 - Type in folder name
 - Select the folder
 - Click *open*
8. Type new the Stationery name in the *Object Name* field using a descriptive name with an “.mcp” extension
In this example, the name *Custom.mcp* houses the custom Stationery.
9. Click *Save*
10. Click *File*
11. Click *Close* to automatically save and close the customized project as Stationery
12. Copy the source files that were created and added to the project in Step 3 (if any) into the new Stationery folder
For example, there could be source, header, and text files.
Do not copy the *projectname_Data* folder.
In this example, there will be no new files to copy.

Note: This process is available from the the *Help* function of CodeWarrior.

A step-by-step illustrated procedure follows.

Prior to undertaking this procedure, back up the contents of the directory:

C:\Program Files\Metrowerks\CodeWarrior\Stationery

After completing the procedure, back up the new contents in a separate place, so that in the event of a subsequent installation of CodeWarrior, there is no possibility of lost work.

3. Step-by-Step Illustration

In this section, Figures 3-1 through 3-8 correspond to the end position after following the first eight steps. The text above each figure is a more detailed description of the corresponding step.

In this example, we are defining a new build target with a new preference setting, but based on an existing target.

3.1 Step One

To build the new project:

- Use the *DSP56800E EABI Stationery*; this choice appears after *File>New* in the CodeWarrior IDE
- In the project name field, give it a name of “*tempa*”, since it will be deleted after it is saved as Stationery
- Click *OK*
- Expand *M56836E* and select *C with Processor Expert*
- Click *OK* again
- See [Figure 3-1](#)

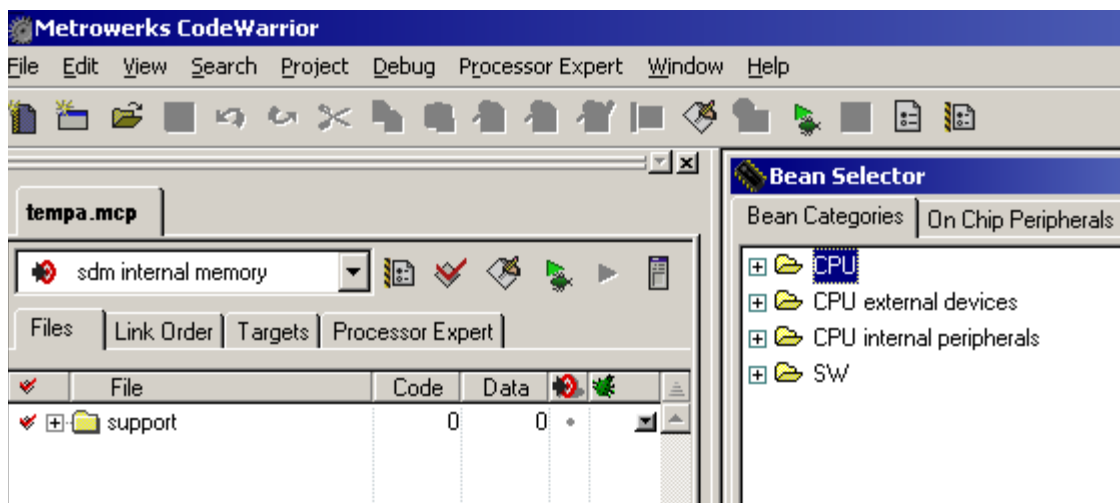


Figure 3-1. After Step One

3.2 Step Two

- Select the *project* window to make it the active window
- See [Figure 3-2](#)

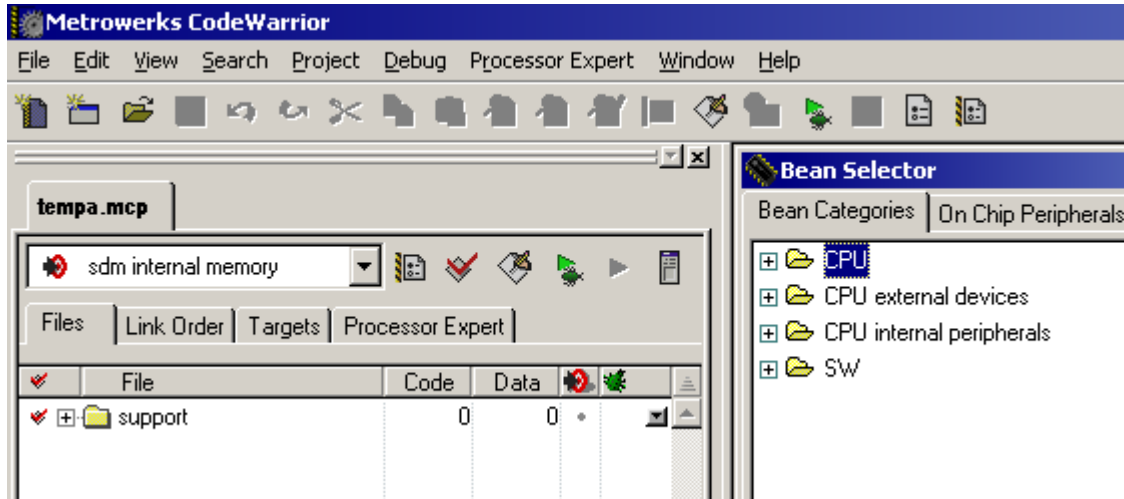


Figure 3-2. After Step Two

3.3 Step Three

Customize the project so it can be used as a template for creating other projects:

- Click *Targets* in the project window
- Select *Project*
- Click *Create Target*
- In the *New Target* window, select *Clone existing target*
- Name the new target “*Proto*”
- When you click *OK*, “*Proto*” will be cloned from **sdm internal memory**
Notice *Proto* is now a target
- Double click on *Proto* to edit the settings
For example, change it so that warnings are treated as errors
- See [Figure 3-3](#)

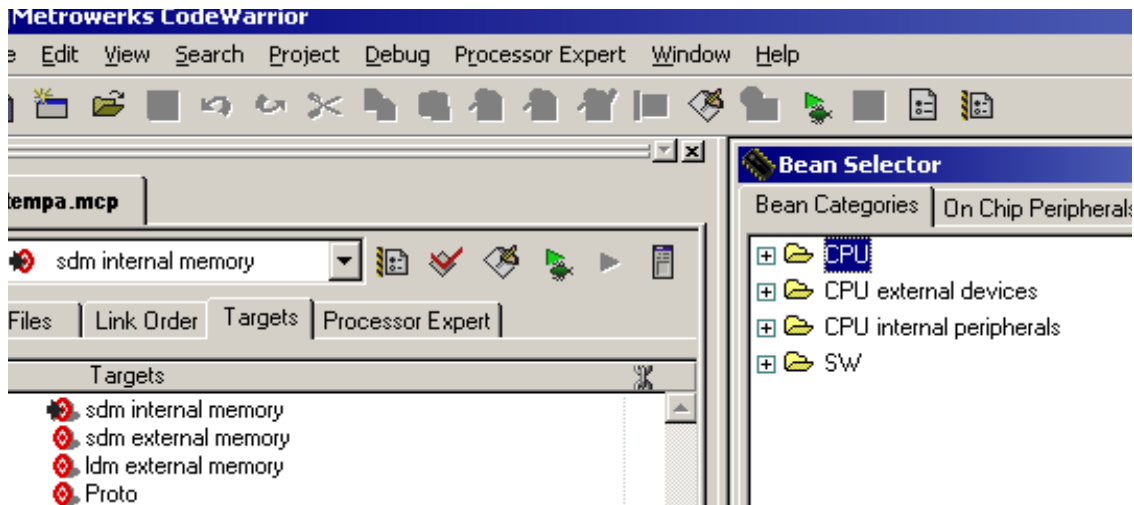


Figure 3-3. After Step Three

3.4 Step Four

- Be sure that the *project* window is the active window
- Click *File*
- Click *Save A Copy As* (from the *File* menu of Code Warrior)
- See [Figure 3-4](#)

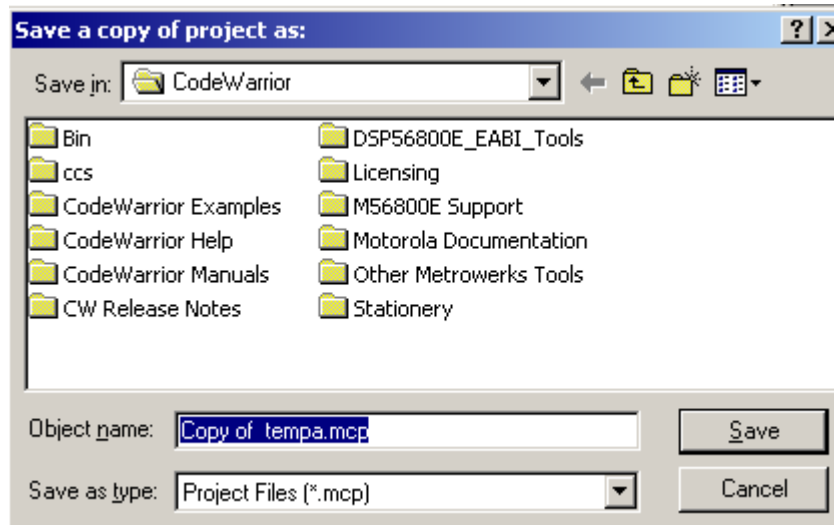


Figure 3-4. After Step Four

3.5 Step Five

- Locate the *Stationery* folder in the CodeWarrior installation
- See [Figure 3-5](#)

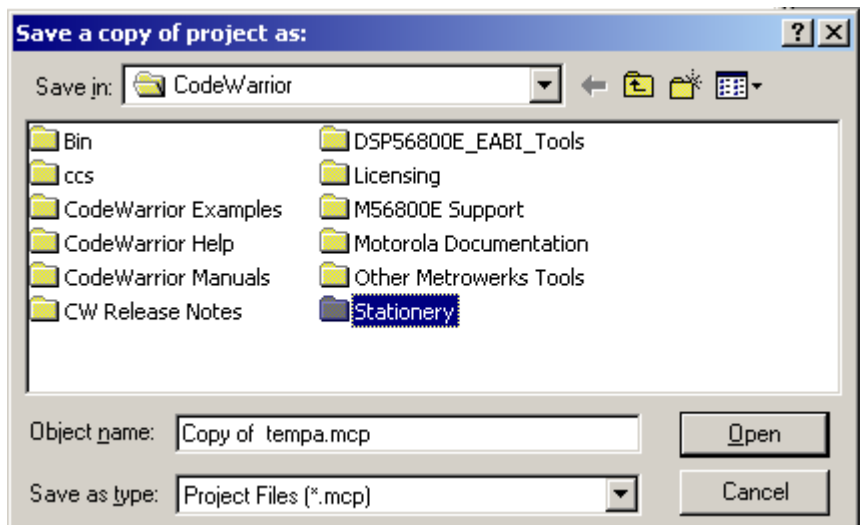


Figure 3-5. After Step Five

3.6 Step Six

Create a folder inside the *Stationery* folder to store the new Stationery:

- Click the *create folder* icon
- Name the folder “*Custom*”
- Select the *Custom* folder
- Click *Open*
- See [Figure 3-6](#)

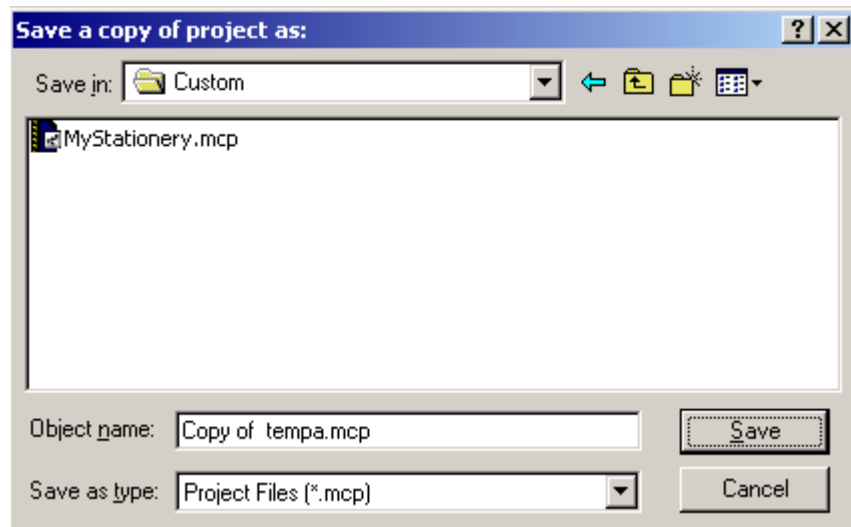


Figure 3-6. After Step Six

3.7 Step Seven

- Type the new Stationery name in the *Object Name* field using a descriptive name, such as *Custom*, with an “.mcp” extension
- In this example, the name “*Custom.mcp*” houses the custom Stationery
You can choose any name
- See [3-7](#)

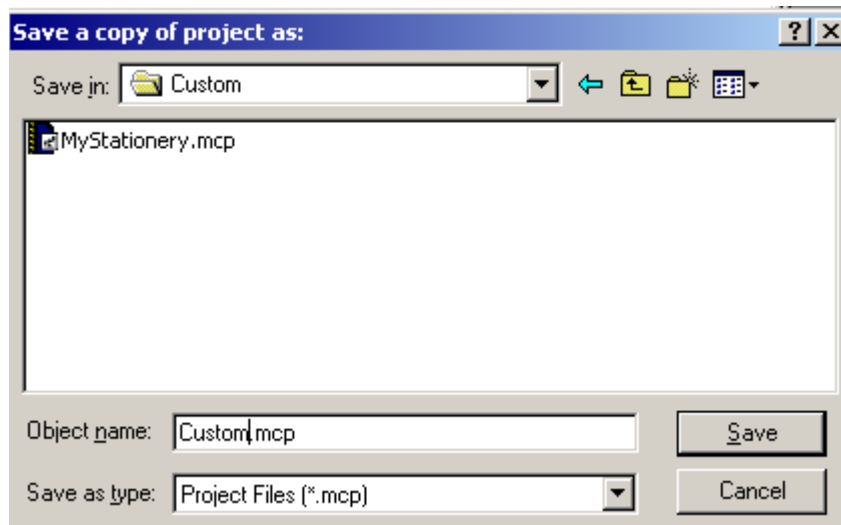


Figure 3-7. After Step Seven

3.8 Step Eight

- Click *Save*
- See [Figure 3-8](#)

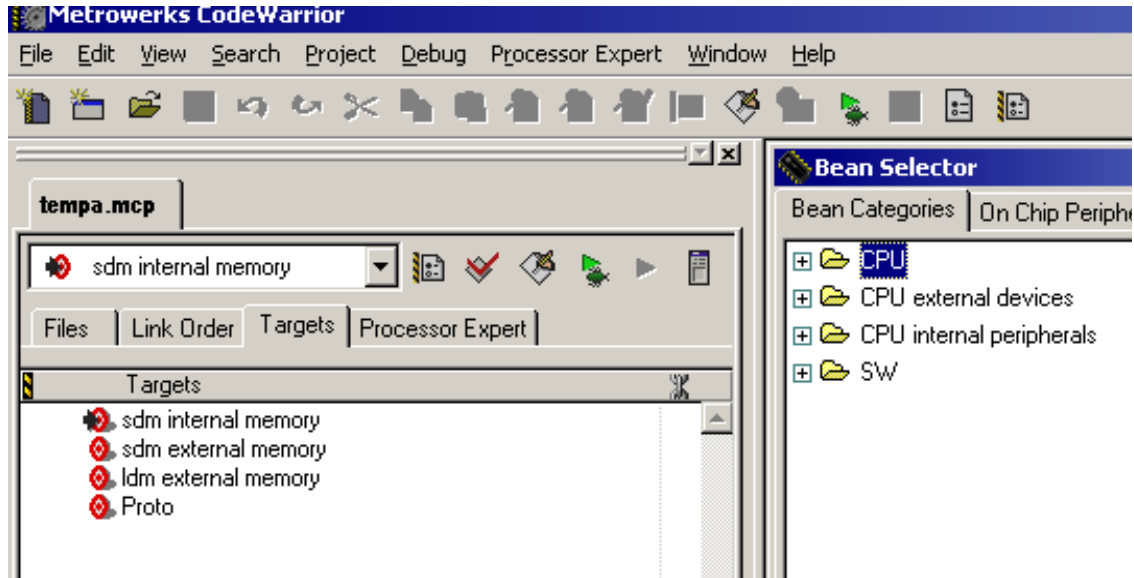


Figure 3-8. After Step Eight

3.9 Step Nine

- Click *File*
- Click *Close*
- The new Stationery is available

3.10 Step Ten

In this example, there were no files added, so Step Ten is abbreviated.

To test the new Stationery:

- Click *File*
- Click *New*
- Be sure the Stationery retained the setting(s) you changed

4. Conclusion

Templates to address new product hardware *can* be developed using tools in CodeWarrior and, in fact, it is *simple* to make new Stationery with multiple targets using Code Warrior. This capability allows projects to hit multiple objectives with minimal complexity.



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