Using a central location for files within SDK that could be under content management control

This document outlines how to place SDK projects external from SDK's workspace. Once the projects are external, they can be managed using a source code management system such as GIT.

Getting started

Create a directory structure that will hold the SDK projects external from SDK. For the purpose of this document, a workspace_src directory will be used to hold the exported/managed files and a workspace directory will be used as SDKs active workspace.

Creation of External Projects

SDK will be used to create the applications and BSPs and then export them to 'workspace_src'.

Hardware Platform

Export the hardware from Planahead, Vivado, or XPS to SDK. Place/copy the exported files into 'workspace_src/device1'. If XPS was used to export the hardware, the exported files can be found in <xps project dir>/SDK/SDK_Export/hw.

Open SDK and point its workspace to an empty workspace directory. For the purpose of this document the directory will be named 'workspace'.

Create a new hardware platform.

1. Select File->new->project->Xilinx->Hardware_platform_specification (for 14.3, select->file->new->other->Xilinx->hardware_platform_specification)
2. next
3. Name the hardware platform 'device1'. It will be important later on that the name of the hardware platform within the SDK workspace has the same name has the hardware exported directory in workspace_src
4. Select the target hardware specification by browsing to the previously exported hardware in '\workspace_src\device1' and select the xml file. The bit file and bmm file should automatically get populated if those files exist from the export.
5. Finish

At this point, if the xml file in '\workspace_src\device1' changes, SDK will notice the change, signal the user, and then update the hardware project in the workspace with the newly exported files

BSP

Create a new BSP using the hardware platform that was previously created.

1. Select File->new->board_support_package

2. Give it a name such as ‘bsp_standalone’
3. Make sure the hardware platform selected is ‘device1’
4. Finish
5. When the Board support package settings pops up, select OK

Export the BSP to the src directory.

1. right click on the BSP
2. select export
3. select General->file_system, next
4. in the left pane, make sure the BSP is highlighted but not checked
5. in the right pane, all files should be checked except for libgen.log
6. set 'to directory' by browsing to 'workspace_src'
7. For options, make sure 'create directory structure for files’ is checked
8. Finish

Application

Create a new application that uses the BSP

1. file->new->application project
2. Give it a name such as 'app_hello_world'
3. make sure the board support package uses the existing BSP that was previously created
4. next
5. select the Hello World template
6. Finish

Export the Application to the src dir

1. right click on the application
2. select export
3. select General->file_system
4. next
5. In the left pane, expand hello_world and unselect the 'Debug' folder
6. change the 'to directory' to ‘workspace_src’
7. make sure 'create directory structure for files' is checked
8. finish

Source Control

Once the hardware, BSPs, and Applications exist in the src dir, lock down the files as these will become working directories and will have additional files/dirs added when working with SDK. This flow has been tested with GIT.

Using the External Projects

At this point, the source files have been created and are available in the src dir. SDK will now be used to point to these external resources.

1. Delete all of the files in '\project\workspace'. Alternatively, a blank workspace could be used.
2. Open SDK and point to the now empty '\project\workspace'

Create a new hardware platform that references the exported platform

1. file->new->project
2. Xilinx->Hardware_Platform_Specification
3. give it the name same name as what was originally used during the export process. In this case, the name is 'device1'
4. Select the target hardware specification by browsing to the previously exported hardware in 'workspace_src\device1' and select the xml file
5. The bit file and bmm file should automatically get populated if those files exist from the export
6. Finish

At this point, if the xml file in 'workspace_src\device1' changes, SDK will notice the change, signal the user, and then update the workspace with the newly exported files

Import/leave In Place the previously created BSP and application

1. file->import
2. general->Existing Projects into Workspace
3. next
4. browse to and select 'workspace_src'
5. Add a checkmark beside the bsp and application you want included in the workspace
6. Make sure 'copy projects into workspace' is not checked
7. Before selecting Finish, note that you have the option to 'copy' into the workspace but then any changes made within SDK will not be reflected in the 'workspace_src' dir. If copy wasn't selected deleting files or projects from the workspace will delete them from the 'workspace_src' dir
8. Finish