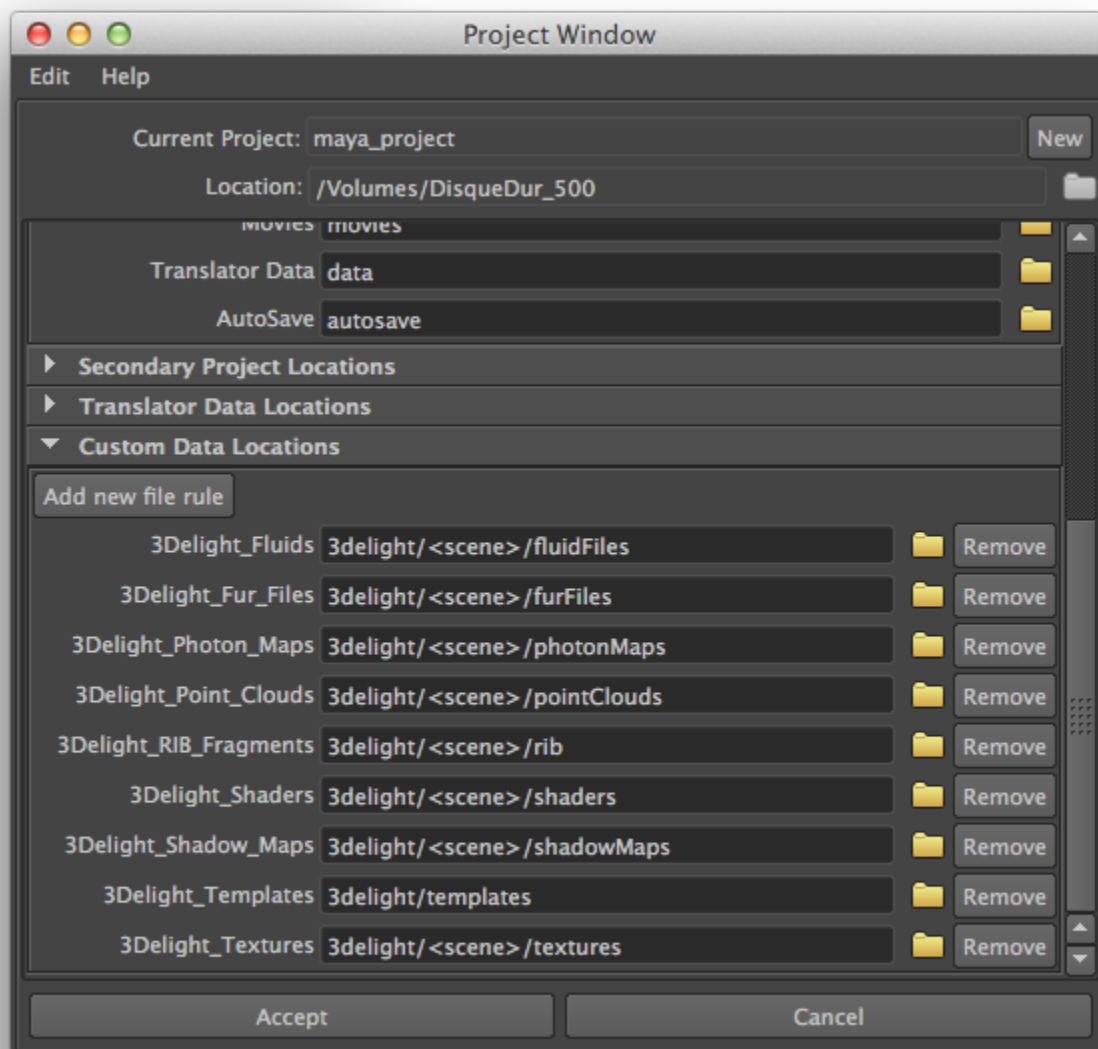# 3Delight Data Locations

Some files are automatically generated by *3Delight for Maya*. The destination folders for these files are specified in the *Project Window* of *Maya*.

Maya's *Project Window with the*
Custom Data Locations for 3Delight

The default locations for *3Delight for Maya* data are indicated in the *Project Window*. These, like other *Maya* project settings, are relative paths to the *Maya* project's *Location* (specified at the top of the same window). Here is a description of these data locations:

3Delight Fluids

> Specifies the folder where *Fluids* data will be saved. *3Delight for Maya* needs to generate data files for each fluid node visible in the scene if the fluid simulation has not been cached.

3Delight Fur Files

> Specifies the folder where *Fur Files* will be saved. *3Delight for Maya* needs to generate a geometry file for each *Fur Feedback* node visible in the scene. Also saved at this location are RIB file produced by the *Shave and a Haircut* plugin in some cases. Refer to Shave and a Haircut Tips.

3Delight Photon Maps

Deprecated. These files no longer exist.

3Delight Point Clouds
3Delight RIB Fragments

Specifies the folders where *Point Clouds* and *Advanced: RIB Fragments* will be saved respectively.

3Delight Shaders

When an object has no *RenderMan* shader attached to it, *3Delight for Maya* will attempt to translate any *Hypershade* shading network attached to that object to *RenderMan* shaders, which are then used in the rendering. This process generates shader source files, which are stored in a `'src'` directory. These source files are then compiled into compiled shader files and stored under the `'OBJ'` directory. Both the `'src'` and `'OBJ'` folders are created under the folder specified by *3Delight Shaders*. Note that this project setting is relevant only for translated shaders from *Hypershade* networks. It has no effect on *RenderMan* shader nodes or on the shader paths displayed in the *Shader Selector*.

3Delight Shadow Maps

Specifies the folder where auto-generated *Shadow Maps* will be saved. *Shadow Maps* will be automatically generated only if the *Auto-Generate Shadow Maps* rendering attribute is turned on <u>and</u> if either:

   a. A light source has no *Light Attribute Node* attached to it and its *Use Depth Map Shadows* attribute is turned on.
   b. A light source has a *Light Attribute Node* attached to it and this attribute has its *Generate Shadow Maps* attribute turned on.

3Delight Templates

Specifies the folder where *Render Pass* templates are saved and looked up for the *Create Render Pass from Template* menu. Note that template files are created on-demand only and are not affected by the `_3DFM_OUTPUT_PATH` environment variable described below. See Saving a Render Pass as a Template for details.

3Delight Textures

Any node in an *Hypershade* network that uses a texture file name not ending with the '.tdl' extension will undergo a texture conversion process in order to speed up texture lookup during rendering. This conversion produces a *3Delight* texture file that is stored under the directory specified in the *3Delight Textures* project setting. It is possible to prepare texture files in order to avoid this conversion as explained in Preparing Textures for Rendering.

Data Creation and Removal Process

This tables explains the process behind the creation and removal of the data files at these locations.

Data Location	Creation and Removal Process
3Delight Fluids 3Delight Fur Files	These files are written for each frame. At each re-render, they will be rewritten. These files are not useful anymore after each rendering and should be discarded, but in the current implementation, *3Delight for Maya* leaves them hanging.
3Delight Point Clouds 3Delight RIB Fragments	These files are generated for each frames if their respective options are enable. They each have a *Write Mode* set to either overwrite existing file or reuse existing file. It means these files can remain valid indefinitely.
3Delight Shaders *3Delight Textures*	An attempt in made to keep and re-use compiled shaders and converted textures (i.e. re-compile or re-convert only when needed at render time). It means these files can remain valid indefinitely. Note that in the current implementation of *3Delight for Maya*, *Shaders* will be re-compiled at the next render after opening the scene. ⊘ The default location for these files pose a problem when rendering an animation using multiple computers simultaneously (such as on a render farm). That is because each computer may attempt to save the compiled shaders or converted textures all the same time in the same files respectively (because they remain the same for each frame). For this reason, it is advised to change that default location to a one that is local (and unique) for each computer. Alternately, you have to make sure all the shaders have been compiled and all textures manually converted prior to launching the rendering of each frame of the animation. ⓘ When using a local directory for *3Delight Textures*, it is recommended to enable the *Use Network Cache* Render Settings option. See Render Engine: Performance.

3Delight Shadow Maps	These files will be generated each frame if the *Auto-Generate Shadow Maps* rendering attribute is turned on. Otherwise, the existing *Shadow Map* files will be re-used. It means these files can remain valid indefinitely. ⊘ The problem described above may also pose itself for *Shadow Maps,* but to a lesser degree since they are much more likely to change from frame to frame.
3Delight Templates	Template files are created and modified by direct user actions through the user interface. Similar to "preferences" of an application. They are never removed otherwise.

Environment Variables to Override the Project Window's Data Locations

By default, the *3Delight for Maya* data locations described above, and others described elsewhere in this manual (such as the *Image Filename* rendering attribute in the *Display* group), are relative to the *Maya* project *Location*. Sometimes, it is not desirable to produce such files at that *Location*. Alternately, it is possible to override that *Location,* in the context of *3Delight for Maya* data, using an environment variable named `_3DFM_OUTPUT_PATH`. Doing so will prepend all of the *3Delight for Maya* data locations described above, and others described in this manual, with the path specified by this environment variable instead of the *Maya* project's *Location.*

ⓘ The environment variable `_3DFM_OUTPUT_PATH` needs to be defined before *Maya* (or *Maya*'s **Render** command line utility) is launched.

In addition to `_3DFM_OUTPUT_PATH`, if the following environment variables are defined, their values will be used to override the corresponding data location in the *Project Window*.

Data Location	Environment Variable
Maya project's *Location*	`_3DFM_OUTPUT_PATH`
3Delight Fluids	`_3DFM_FLUIDS_PATH`
3Delight Fur Files	`_3DFM_FURFILES_PATH`
3Delight Point Clouds	`_3DFM_POINTCLOUDS_PATH`
3Delight RIB Fragments	`_3DFM_RIBFRAGMENTS_PATH`
3Delight Shaders	`_3DFM_SHADERS_PATH`
3Delight Shadow Maps	`_3DFM_SHADOWMAPS_PATH`
3Delight Templates	`_3DFM_TEMPLATES_PATH`
3Delight Textures	`_3DFM_TEXTURES_PATH`