Instructions to compile C++ plugins

On Windows

The following instructions assume that:

- You are using Visual Studio 2015.
- A properly-patched Boost 1.55 is installed in `C:\boost_1_55_0`.
- appleseed's dependency package is installed in `C:\appleseed\appleseed-deps`.

Make sure to adapt them as required.

Open a Command Prompt inside a plugin's folder, then type:

- With an **end-user** release of appleseed:

```
mkdir build
cd build
cmake -G "Visual Studio 14 2015 Win64" -DAPPLESEED_INCLUDE_DIR=..\..\..\..\include -
DAPPLESEED_LIBRARY=..\..\..\..\lib\appleseed.lib -DBOOST_ROOT=C:\boost_1_55_0 -
DIMATH_INCLUDE_DIR=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\include -
DIMATH_MATH_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\Imath-2_2.lib -
DIMATH_IEX_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\Iex-2_2.lib -
DIMATH_HALF_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\Half.lib -
DOPENEXR_INCLUDE_DIR=C:\appleseed\appleseed-deps\stage\vc14\openexr-release\include -
DOPENEXR_IMF_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\openexr-release\lib\IlmImf-2_2.lib -
DOPENEXR_THREADS_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\IlmThread-
2_2.lib -DAPPLESEED_DEPS_STAGE_DIR=C:\appleseed\appleseed-deps\stage\vc14 ..
```

- With a **working copy** of the appleseed repository:

```
mkdir build
cd build
cmake -G "Visual Studio 14 2015 Win64" -DAPPLESEED_INCLUDE_DIR=..\..\..\..\..\src\appleseed -
DAPPLESEED_LIBRARY=..\..\..\..\lib\v140\Ship\appleseed.lib -DBOOST_ROOT=C:\boost_1_55_0 -
DIMATH_INCLUDE_DIR=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\include -
DIMATH_MATH_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\Imath-2_2.lib -
DIMATH_IEX_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\Iex-2_2.lib -
DIMATH_HALF_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\Half.lib -
DOPENEXR_INCLUDE_DIR=C:\appleseed\appleseed-deps\stage\vc14\openexr-release\include -
DOPENEXR_IMF_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\openexr-release\lib\IlmImf-2_2.lib -
DOPENEXR_THREADS_LIBRARY=C:\appleseed\appleseed-deps\stage\vc14\ilmbase-release\lib\IlmThread-
2_2.lib -DAPPLESEED_DEPS_STAGE_DIR=C:\appleseed\appleseed-deps\stage\vc14 ..
```

Open the Visual Studio solution file (.sln file) that was generated in build and build the plugin in the configuration of your choice (Debug or Release).

On Linux

The following instructions assume that:

- You are using the prebuild linux dependencies that can be found here

Make sure to adapt them as required.

In a Bash shell, inside a plugin's directory, type:

```
export APPLESEED_DEPENDENCIES=/directory/with/precompiled/dependencies
export CMAKE_INCLUDE_PATH=$APPLESEED_DEPENDENCIES/include
export CMAKE_LIBRARY_PATH=$APPLESEED_DEPENDENCIES/lib
export LD_LIBRARY_PATH=$APPLESEED_DEPENDENCIES/lib
```

- With an **end-user** release of appleseed:

```
mkdir build
cd build
cmake \
-DUSE_STATIC_BOOST=OFF \
-DBoost_SYSTEM_LIBRARY_RELEASE=$APPLESEED_DEPENDENCIES/lib/libboost_system-gcc48-mt-
1_61.so.1.61.0 \
-DAPPLESEED_INCLUDE_DIR=../../../../../src/appleseed \
-DAPPLESEED_LIBRARY=../../../../lib/libappleseed.so \
..
make
```

- With a **working copy** of the appleseed repository:

```
mkdir build
cd build
cmake \
-DUSE_STATIC_BOOST=OFF \
-DBoost_SYSTEM_LIBRARY_RELEASE=$APPLESEED_DEPENDENCIES/lib/libboost_system-gcc48-mt-
1_61.so.1.61.0 \
-DAPPLESEED_INCLUDE_DIR=../../../../../src/appleseed \
-DAPPLESEED_LIBRARY=../../../../lib/Ship/libappleseed.so \
..
make
```