

EIAS VERSION 9.0 SDK EXAMPLES

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1. Examples organization

The “Examples” folder contains:

- “Sources” folder contains all sources (.c) and header (.h) files. Same files are used for Macintosh and Windows platform, for 32 and 64 bits.
- “Platform Mac” folder contains all Xcode projects, resource files and built examples for Macintosh platform. All examples are compiled as universal 32/64 bit binaries.
- “Platform Windows” folders contains all MSVC projects, resource files and built examples for Windows platform. Each project has 2 targets to build 32 and 64 bit version respectively.

2. Compilers requirements

On Macintosh platform Xcode 3.1 or later required. The preprocessor symbol `__MACINTOSH__` should be defined. For all examples it’s defined in files `PluginPrefix.h` and `EIShader_Prefix.pch` for plugins and shaders respectively. The exported functions are defined in `.exp` files.

On Windows platform MSVC 2008 or later required. The preprocessor symbol `__WIN32__` should be defined for 32-bit build, same as `__WIN64__` for 64-bit. For all examples they are defined in “Preprocessor Definitions” inside projects. For shaders the exported functions are defined in `.def` files.

Note for both platforms: when you build your own shaders, you need to be accurate with exported functions (defined in `.exp` or `.def` file). No compile/link errors happen, but a shader won’t be workable if one of following functions is not exported:

```
EIShaderInformation
EIShaderInitialize
EIShaderFinish
EIShaderShade
```

If you plan to use one or more of following functions, they should be defined in export file as well.

```
EIShaderHostInfo
EIShaderSerial
EIShaderInterfaceSetup
```

3. Plugins examples

The Glow is a simple example of flare plugin. The plugin has no UI.

The Mesh and Teapot are typical examples of model plug-ins. They explain well how to create model’s geometry, calculate vertices normals, texture and blur positions. If you’re new in 3D and/or in EI SDK, so it’s a good idea to start learning from these plugins.

The Particle is a simple example of dynamic system plugin that creates and updates data frame by frame.

The MrBlobby is a more complex plugin to create implicit geometry, known also as “metaballs”.

The ColorMesh is a plugin to show following SDK abilities:

- writing plugins/shaders in C++
- using graph and gradient custom controls in Animator and Camera
- saving arbitrary complex data in project by using stream-based technique

4. Shaders examples

The ColorNoise, Crumple, Eroded and Wood are typical examples of simple shaders to create bump and color. It's a good start point to learn.

The BumpyNoise shader demonstrates how a advanced UI (with sliders, child dialogs etc) can be created for a shader.

The ListTest shader shows how listbox UI control can be used by shaders or plugins.

The LightShade shader visually does nothing, it's a basic example of "illuminator" shader that has a full control of phong shading on objects the shader is applied to.

The Normals shader creates different colors depending where actual surface normal points to. It's a simple example how shaders can create view-dependent effects.

The CustomControlsTest shader is an example of using of advanced controls (graph and gradient)

5. Summary

The SDK examples have no goal to demonstrate a complex and advanced technique of programming. Vice versa, most of examples are maximally simplified in order that a developer with minimal C/C++ knowledges can create usable products. Good luck.