
Subject: Re: UltimateOpenGL [BETA] 3D Engine
Posted by [Xemuth](#) on Fri, 22 Nov 2019 20:41:52 GMT
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Hello !

Here you can find an exemple of UltimateOpenGL working with GLCtrl of Upp :

```
#include <CtrlLib/CtrlLib.h>
#include <GLCtrl/GLCtrl.h>
#include <UltimateOpenGL_V2/UltimateOpenGL.h>
using namespace Upp;

struct OpenGLExample : GLCtrl {
    Point point;

    String TransformFilePath(String FilePath){
        String FilePathBuffer = String(__FILE__);
        String FilePathTempory = "";
        FilePathBuffer = Replace(FilePathBuffer,Vector<String>{"\\"},Vector<String>{"/"});

        Replace(FilePath,Vector<String>{"\\"},Vector<String>{"/"});
        FilePathTempory = FilePathBuffer.Left(FilePathBuffer.ReverseFind("/") + FilePath);
        if(!FileExists(FilePathTempory)){
            return (GetExeFolder() +FilePath);
        }
        return FilePathTempory;
    }

    Vector<float> CubeVertices{
        -0.2f, -0.2f, -0.2f, 0.0f,0.0f,-0.4f, 0.0f, 0.0f,
        0.2f, -0.2f, -0.2f, 0.0f,0.0f,-0.4f, 1.0f, 0.0f,
        0.2f, 0.2f, -0.2f, 0.0f,0.0f,-0.4f, 1.0f, 1.0f,
        0.2f, 0.2f, -0.2f, 0.0f,0.0f,-0.4f, 1.0f, 1.0f,
        -0.2f, 0.2f, -0.2f, 0.0f,0.0f,-0.4f, 0.0f, 1.0f,
        -0.2f, -0.2f, -0.2f, 0.0f,0.0f,-0.4f, 0.0f, 0.0f,

        -0.2f, -0.2f, 0.2f, 0.0f,0.0f, 0.4f, 0.0f, 0.0f,
        0.2f, -0.2f, 0.2f, 0.0f,0.0f, 0.4f, 1.0f, 0.0f,
        0.2f, 0.2f, 0.2f, 0.0f,0.0f, 0.4f, 1.0f, 1.0f,
        0.2f, 0.2f, 0.2f, 0.0f,0.0f, 0.4f, 1.0f, 1.0f,
        -0.2f, 0.2f, 0.2f, 0.0f,0.0f, 0.4f, 0.0f, 1.0f,
        -0.2f, -0.2f, 0.2f, 0.0f,0.0f, 0.4f, 0.0f, 0.0f,

        -0.2f, 0.2f, 0.2f, -0.4f, 0.0f, 0.0f, 1.0f, 0.0f,
        -0.2f, 0.2f, -0.2f, -0.4f, 0.0f, 0.0f,1.0f, 1.0f,
        -0.2f, -0.2f, -0.2f, -0.4f, 0.0f, 0.0f,0.0f, 1.0f,
        -0.2f, -0.2f, -0.2f, -0.4f, 0.0f, 0.0f,0.0f, 1.0f,
        -0.2f, -0.2f, 0.2f, -0.4f, 0.0f, 0.0f,0.0f, 0.0f,
```

```

-0.2f, 0.2f, 0.2f, -0.4f, 0.0f, 0.0f,1.0f, 0.0f,

0.2f, 0.2f, 0.2f, 0.4f, 0.0f, 0.0f,1.0f, 0.0f,
0.2f, 0.2f, -0.2f, 0.4f, 0.0f, 0.0f,1.0f, 1.0f,
0.2f, -0.2f, -0.2f, 0.4f, 0.0f, 0.0f,0.0f, 1.0f,
0.2f, -0.2f, -0.2f, 0.4f, 0.0f, 0.0f,0.0f, 1.0f,
0.2f, -0.2f, 0.2f, 0.4f, 0.0f, 0.0f,0.0f, 0.0f,
0.2f, 0.2f, 0.2f, 0.4f, 0.0f, 0.0f,1.0f, 0.0f,

-0.2f, -0.2f, -0.2f, 0.0f, -0.4f, 0.0f,0.0f, 1.0f,
0.2f, -0.2f, -0.2f, 0.0f, -0.4f, 0.0f,1.0f, 1.0f,
0.2f, -0.2f, 0.2f, 0.0f, -0.4f, 0.0f,1.0f, 0.0f,
0.2f, -0.2f, 0.2f, 0.0f, -0.4f, 0.0f,1.0f, 0.0f,
-0.2f, -0.2f, 0.2f, 0.0f, -0.4f, 0.0f,0.0f, 0.0f,
-0.2f, -0.2f, -0.2f, 0.0f, -0.4f, 0.0f,0.0f, 1.0f,

-0.2f, 0.2f, -0.2f, 0.0f, 0.4f, 0.0f,0.0f, 1.0f,
0.2f, 0.2f, -0.2f, 0.0f, 0.4f, 0.0f,1.0f, 1.0f,
0.2f, 0.2f, 0.2f, 0.0f, 0.4f, 0.0f,1.0f, 0.0f,
0.2f, 0.2f, 0.2f, 0.0f, 0.4f, 0.0f, 1.0f, 0.0f,
-0.2f, 0.2f, 0.2f, 0.0f, 0.4f, 0.0f,0.0f, 0.0f,
-0.2f, 0.2f, -0.2f, 0.0f, 0.4f, 0.0f,0.0f, 1.0f
};

UltimateOpenGL_Context context;
bool isLoaded = false;

virtual void GLPaint() {
if(!isLoaded){
glEnable(GL_DEPTH_TEST);
glEnable(GL_MULTISAMPLE);
context.SetScreenSize(GetSize().cx,GetSize().cy);
Scene& presentation = context.AddScene("presentation"); //Create Scene
unsigned int camera = presentation.AddCamera(); //Adding camera to the scene
Object3D& cube = presentation.CreateGameObject<Object3D>("cube",CubeVertices);
//Adding the cube
context.AddTextures("upp",TransformFilePath("/texture/upp.png"),SAMPLE_RGB);
cube.BindTexture("upp",0.64f);

cube.GetTransform().SetNewPosition(glm::vec3(0.0f,0.0f,-1.0f)); // move the cube forward the
camera
presentation.Load(); //Loading the scene

cube.SetOnDrawFunction([](GameObject& myGameObject){
myGameObject.GetTransform(). RotateFromEulerAngles(0.5*
myGameObject.GetScene()->GetContext()->GetDeltaTime(),glm::vec3(1.0f,1.0f,1.0f)); // rotating
of 0.001 degree every frame1
}
};

```

```

});

GameObject& sun = presentation.CreateGameObject<GameObject>("sun");

sun.AddDirLight("lightSun",DirLight(glm::vec3(0.0f,-1.0f,0.0f),glm::vec3( 0.5f, 0.5f,
0.5f),glm::vec3(0.9f, 0.9f, 0.9f) ,glm::vec3(0.5f, 0.5f, 0.5f)));
sun.GetTransform().SetNewPosition(glm::vec3(0.0f,3.0f,0.0f));

    isLoaded=true;
}
this->GetTopWindow()->Title("UltimateOpenGL UPP GLCtrl - " + AsString(context.GetFPS()) + "
FPS");

context.Draw(); //Drawing the context (active scene)
Refresh();

glEnd();
}
};

GUI_APP_MAIN
{
Ctrl::GlobalBackPaint();
TopWindow win;
OpenGLExample gl;
gl.SetFrame(InsetFrame());
win.Add(gl.HSizePos(10, 10).VSizePos(10, 10));
win.NoSizeable();

win.SetRect(0, 0, 320, 320);
win.Open();
win.Run();
}

```

Here you can find package with texture and .exe :

File Attachments

1) [UltimateOpenGL and Upp GLCTRL.7z](#) , downloaded 376 times
