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Subject: Re: UltimateOpenGL [BETA] 3D Engine  
Posted by [Xemuth](#) on Tue, 19 Nov 2019 20:43:28 GMT  
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koldo wrote on Tue, 19 November 2019 08:10Hello Klugier

UltimateOpenGL would be a great new part of Bazaar, and I invite Xemuth to include it there, giving my personal support if needed.

GitHub is very interesting, and my main personal project, BEMRosetta, is there. However I cannot include BEMRosetta in Upp Bazaar because I have released it with GPLv3. However Xemuth has released UltimateOpenGL in a BSD like license so it would fit perfectly in Bazaar.

In addition, the advantage of Bazaar over GitHub, especially in projects like UltimateOpenGL, is that the developer can match sources and dependencies so well that it is very easy for a new developer to run a sample. When in GitHub, a new developer has to arrange it all by hand, and UltimateOpenGL include at least GLM, Glad, Assimp, GLFW, and Bullet3.

I agree with Klugier that it would be great if you could integrate it in OpenGL control. In addition I would ask you to separate (if it is not already done), if possible, the physics from the visualization, as some applications would not require to add Bullet3. This would be great as I think a thin scene graph manager for U++ would be necessary.

I did some test today with GLCtrl and it Worked !

Let me show you how I did it :

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

```
struct OpenGLExample : GLCtrl {
    Vector<float> CubeVertices{
        //Here is a vertice of cube
    };
};
```

```
UltimateOpenGL_Context context;
bool isLoading = false;
```

```
virtual void GLPaint() {
    if(!isLoading){
```

```
        glEnable(GL_DEPTH_TEST);
        glEnable(GL_MULTISAMPLE); // Anti aliasing
```

```
        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
cube.AddTextures("upp","/texture/upp.png",SAMPLE_RGB);
cube.BindTexture("upp",0.64f);

cube.GetTransform().SetNewPosition(glm::vec3(0.0f,0.0f,-2.0f)); // move the cube forward the
camera
presentation.Load(); //Loading the scene

cube.SetOnDrawFunction([](GameObject& myGameObject){
    myGameObject.GetTransform().RotateFromEulerAngles(0.008f,glm::vec3(1.0f,1.0f,1.0f)); //
rotating of 0.001 degree every frame
});

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;
}
    glClearColor(0.4f,0.5f,0.8f, 1.0f); //définie la couleur de fond dans la fenetre graphique
    glClear(GL_COLOR_BUFFER_BIT | GL_DEPTH_BUFFER_BIT); //nétoie la fenetre graphique
et la regénère
    context.Draw(); //Drawing the context (active scene)
    Refresh();

}
};

```

GUI\_APP\_MAIN

```

{
    Ctrl::GlobalBackPaint();
    TopWindow win;
    OpenGLExample gl;
    gl.SetFrame(InsetFrame());
    win.Add(gl.HSizePos(10, 10).VSizePos(10, 10));
    win.Sizeable().Zoomable();
    win.Open();
    win.Run();
}

```

To use glew instead of glad.h I did this in UltimateOpenGL:

```

#ifndef flagUPPGL
#include <glad/glad.h> //Glad is used to init OpenGL
#else
#include <GLCtrl/GLCtrl.h>
#endif

```

If you are wondering why I did an initialisation in the drawing loop and not in window constructor, it's because at window constructor the GL context is not started yet so I can't load and compile thing as shader. Is it a probleme ? I dont know ?

Here is the result :

The gif is really slow compared to the reality

however the scene is ugly compared to test on GLFW.

it seems like AntiAliasing is inexistant and texture seems really blurring at some time.

I dont see from what it could come.