

Simple Wireframe Shader
Ver.1 19.07.2016

Introduction

Simple Wireframe is a shader package that could be used to implement various effects displaying ordinary and skinned meshes.

In order to work this shader require barycentric coordinates of each vertex . Barycentric coordinates should be written to colors32 array of mesh object. This can be done in one click using Tools->Wireframe->Prepare Mesh menu item.

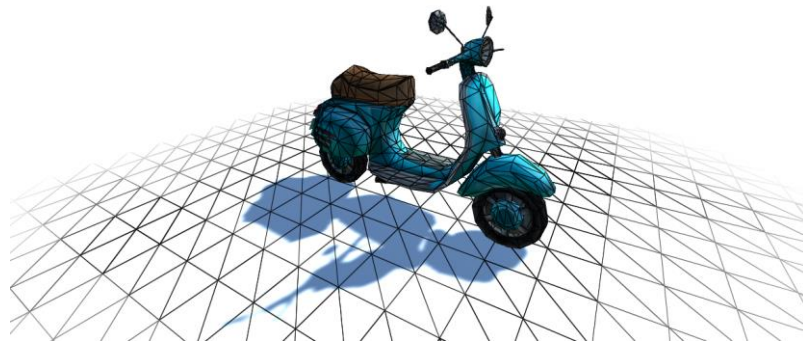


Fig.1 – Wireframe shader applied to Vespa-Scooter

Features

- Wireframe projector
- Wireframe
- Variable Color
- Variable Thickness
- ZTest
- Automatic Calculation of barycentric coordinates

Package Structure

TreeView control located in **Assets/Battlehub/Wireframe**

Package organized as following:

/Scripts for scripts

/Shaders for shaders

/Prefabs for prefabs

/Demo contains everything related to demoscene

Menu

There are four menu items:

- 1) Create Projector – creates ready to use wireframe projector from prefab
- 2) Prepare – calculate barycentric coordinates for selected GameObject
- 3) Apply – applies default wireframe material to selected GameObject
- 4) Save Mesh to **Assets/Battlehub/SavedMeshes** folder

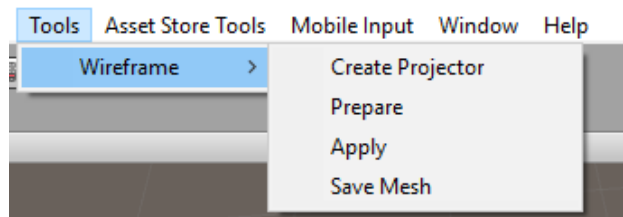


Fig.2 – Wireframe menu

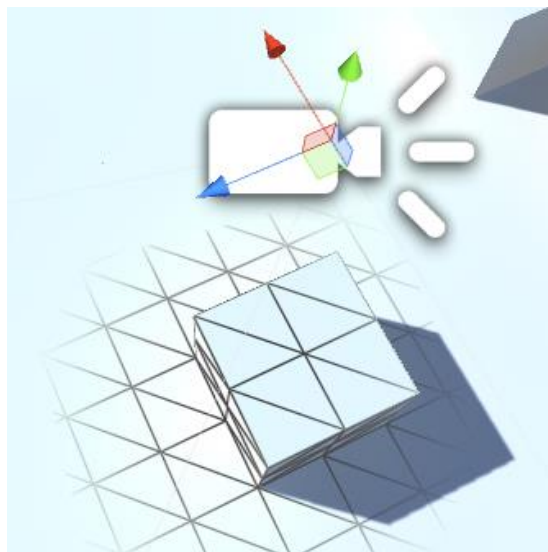


Fig.3 – Wireframe projector

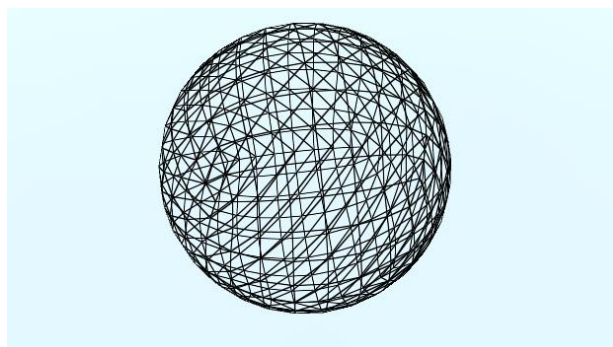


Fig.4 – Default wireframe material

Limitations and Issues

- **Shader Model 2 is not supported (Wireframe shader use [Shader Model 3](#))**
- DX9 shader model 3.0: derivative instructions, texture LOD sampling, 10 interpolators, more math/texture instructions allowed.
- Not supported on DX11 feature level 9.x GPUs (e.g. most Windows Phone devices).
- Might not be fully supported by some OpenGL ES 2.0 devices, depending on driver extensions present and features used.
- **Scripts/Barycentric.cs may fail to calculate barycentric coordinates for large mesh (It depends on vertex count and mesh topology. I suggest you to avoid using meshes with more than 32K vertices).**

Support

If you have any questions, suggestions, you want to talk or you have some issues please send mail to Vadim.Andriyanov@outlook.com or Battlehub@outlook.com.