BEAUTIFY

www.kronnect.com

Contents

Introduction

Thanks for purchasing!

Beautify is a full-screen image processing effect that improves the image quality in real time producing incredibly crisp and vivid scenes.

Beautify uses several intelligent algorithms in a single-pass resulting in a very fast image effect:

- Analyses local pixel contrast, enhancing visual features and producing sharp images.
- Reduces or completely removes banding in gradients, usually seen in sky boxes due to color quantization.
- Adjusts pixel saturation, boosting pixel color without over saturating the image.
- Factory presets or global effect slider, which takes care of all effect details in one step.
- Beautify implements several heuristics to prevent artifacts over edges or thin objects, like wires.

Beautify is very easy to use, just add the image effect to your camera, choose a preset and that's all.

It works with forward and deferred rendering paths as well as linear and gamma color spaces.

Two shader variants are included, one optimized for mobile.

Demo Scene

A simple demo scene is included to demonstrate the different presets and their effects on Unity terrain and skybox.

Quick Start

1. Add the Beautify script to your main camera in your scene.

2. Choose one of the preset and that's all!

You can of course customize any of its parameters to match your game mood and requirements.

Beautify parameters

General Settings

- **Quality**: chooses the shader variant. The mobile variant uses less texture fetches and includes some extra optimizations which results in a faster performance with less accuracy.

- **Preset**: quickly choose a factory combination of values for the parameters below.

- **Compare Mode**: shows a side by side comparison of Beautify effect.

Image Enhancements Options

- **Sharpen**: sharpen intensity. A higher value will produce a dramatic result but can show some undesired artifacts with thin objects or whitish backgrounds. Use the following extra settings to control those artifacts:
  - **Min/Max depth**: allows you to choose the depth range where sharpen will be applied. Decrease max depth to remain skybox untouched. Increase min depth to cause an effect similar to depth of field.
  - **Max Depth**: will compute depth difference around pixels to detect edges. When the depth delta is greater than this value, sharpen will not occur. This will protect thin objects like standalone wires or lines.
  - **Luminance Relaxation**: sharpen is more subtle on high contrasted areas. This parameter tunes this relaxation. Reduce this value to preserve thin edges or bright areas.
  - **Clamp**: irrespective of sharpen intensity or above params, clamp controls the maximum effect applied over a single pixel.
  - **Motion Sensibility**: reduces sharpen effect while camera moves/rotates. This option can reduce flickering and produce a cheap motion blur effect. Set this value to 0 to disable this option.

- **Dither**: dither function shifts pixel RGB values according to a pseudo-random pattern to reduce banding.
  - Min Depth: by default, dither is applied to entire image. Use this parameter to make dithering only occur beyond given depth (set this value near 0.99 to make it only affect sky).

Color Grading Options

- **Vibrance**: controls the intensity of adaptative saturation. This algorithm takes into account current saturation of each pixel, so low saturated pixels receive more importance than high saturated pixels.

- **Daltonize**: similar to vibrance but mostly accentuate primary red, green and blue colors to compensate protanomaly (red deficiency), deuteranomaly (green deficiency) and tritanomaly (blue deficiency). This effect does not shift color hue hence it won't help completely red, green or blue color blindness. The effect will vary depending on each subject so this effect should be enabled on user demand..

- **Contrast** & **Brightness**: these two paramters adds a final contrast + brightness adjustment to the image.

FAQ

Can Beautify work with other image effects?

Yes – however you need to experiment with image effects order. Beautify works better after Tonemapping and before Antialias. It can work alone as well.

A typical effects stack would be:

- **HBAO / SSAO**
- **Bloom**
- **Tonemapping**
- **Beautify**
- **Antialias (SMAA preferred)**

Skybox banding is not completely removed. What can I do?

Enable HDR in your camera to improve dithering effect and banding removal.

Support

Please visit kronnect.com for questions, support and more info.

Change Log

V1.4: Current version
- Internal shader optimizations

V1.3: 16/MAY/2016
- New compare mode
- Motion sensibility option
- Daltonize option

V1.2: 7/MAY/2016
- Minor changes in presets based on feedback from community
- Min/max depth slider now only affects sharpen (not dither)

V1.1: 3/MAY/2016
- Added min/max depth range

V1.0: 18/APR/2016
- First release

Other Recommended Assets

Don't miss these other assets to enhance your game experience. Visit kronnect.com to learn more about these and other amazing assets!
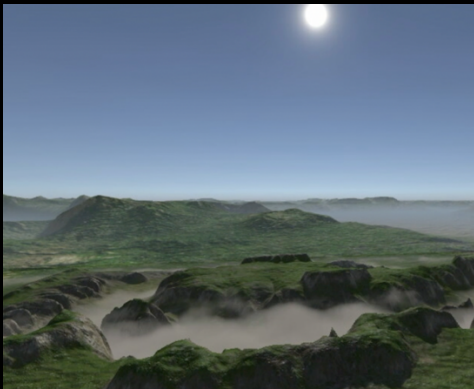
Compass Navigator Pro

Compass Navigator Pro adds a "Skyrim"-like compass bar to your UI, including smooth fade in/out, various bar designs, +11 icons in two variations (+22 icons) and nice features.

http://kronnect.me/unity/w3/portfolio-asset-compass-navigator-pro.html

Volumetric Fog & MIst

Volumetric Fog & Mist is the enhanced version of **Dynamic Fog & Mist (which is also included in the package)** and has been designed to provide a better looking fog and **cloud formations with support of lighting and glow effects.**
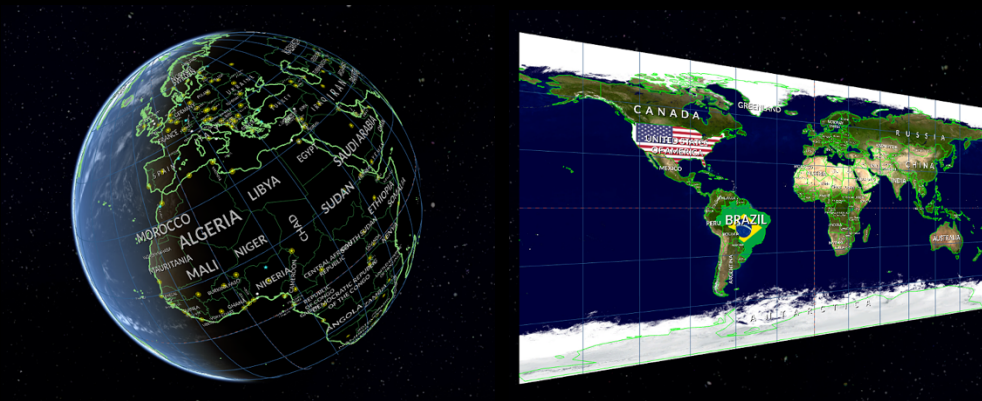
http://kronnect.me/unity/w3/portfolio-asset-volumetric-fog.html

Terrain Grid System
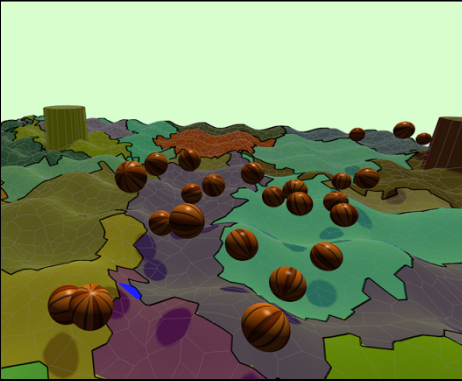
Terrain Grid System is an advanced grid generator and territory/cell highlighter/fader for both **Terrain and 2D grids**.

World Political Map Series & World Map Strategy Kit

World Political Map Series is a collection of advanced mapping assets for Unity. Used by many companies and agencies across the world to visualize data, resources, interact with the user, etc.

World Political Strategy Kit is a complete framework for building AAA strategy games, including cool 3D PBS dynamic viewport for map, hexagonal grid, path-finding, real elevation, and much more.

http://kronnect.me/unity/w3/portfolio-asset-world-map-strategy-kit.html

HBAO

Horizon Based Ambient Occlusion (HBAO) is a post processing image effect to use in order to add realism to your scenes. It helps accentuating small surface details and reproduce light attenuation due to occlusion.

https://www.assetstore.unity3d.com/en/#!/content/54780