Image Compositing Shader

A game requires the ability to place the player's live image into the game's world. The game requires that the player sits in front of a green or blue screen so that their image can be composited into the game's graphics. A shader is required to compose the player's portrait with a game supplied background image. The game must be able to customise the colour and tolerance of the colour key removal.

Setup

A material is assigned a custom shader. The material is applied to an animated sprite with a green background. In the material property of the GameObject, we can parameter the Key Colour to the chosen green from the background (or any other colour). The Threshold float parameter checked the difference in key colour of every pixel, to how closely they match the one chosen as a key. The slope set the alpha transition from opaque to transparent.

How it works

The shader works by finding how different the colour of each pixel is compared to the keying colour. Usually you want a low threshold which means that only pixels with colours that slightly different to the keying colour are made transparent. As you increase the threshold the similarity required to make the pixel transparent reduces until full threshold where every pixel is made transparent.

If the slope parameter is set to 0 than the pixel is either transparent or not transparent but as you increase the slope the pixels alpha value will transition smoothly from opaque to transparent as the colour becomes more similar to the keying colour.