Making your artwork look good
Cheap tricks for instant profit
Lighting for your game

\[ Y_0^0(\theta, \varphi) = \frac{1}{2} \sqrt{\frac{1}{\pi}} \]
\[ Y_1^{-1}(\theta, \varphi) = \frac{1}{2} \sqrt{\frac{3}{2\pi}} \sin \theta e^{-i\varphi} \]
\[ Y_1^0(\theta, \varphi) = \frac{1}{2} \sqrt{\frac{3}{\pi}} \cos \theta \]
\[ Y_1^1(\theta, \varphi) = \frac{-1}{2} \sqrt{\frac{3}{2\pi}} \sin \theta e^{i\varphi} \]
\[ Y_2^{-2}(\theta, \varphi) = \frac{1}{4} \sqrt{\frac{15}{2\pi}} \sin^2 \theta e^{-2i\varphi} \]
\[ Y_2^{-1}(\theta, \varphi) = \frac{1}{2} \sqrt{\frac{15}{2\pi}} \sin \theta \cos \theta e^{-i\varphi} \]
\[ Y_2^0(\theta, \varphi) = \frac{1}{4} \sqrt{\frac{5}{\pi}} (3 \cos^2 \theta - 1) \]
\[ Y_2^1(\theta, \varphi) = \frac{-1}{2} \sqrt{\frac{15}{2\pi}} \sin \theta \cos \theta e^{i\varphi} \]
\[ Y_2^2(\theta, \varphi) = \frac{1}{4} \sqrt{\frac{15}{2\pi}} \sin^2 \theta e^{2i\varphi} \]
\[ Y_3^0(\theta, \varphi) = \frac{1}{4} \sqrt{\frac{7}{\pi}} (5 \cos^3 \theta - 3 \cos \theta) \]
Don’t bother
Simple stuff

Light

Texture

Color
• No saturated colors, mkay?
Level lighting

- I wonder what’s missing
Level lighting

- Lightmaps. Amazing technology since 1996
Level lighting
Character lighting

- Just don’t
Character lighting

- Keep it simple
What do you want to say?
Simon says

- Fit character into environment
- Or make it stand out
- Attract the eye
- Define moo(d)
How movie people do it?

- Key light
- Fill light
- Rim light

... no random lights, please!
Demo time
Outdoors

- Sun
- Sky
- Sky bouncing off the ground
- Sun bouncing
• Jedi one light must use
• Think!
Bake Ambient Occlusion
Textures
Texture too large

- *Not* too bad for performance
- But your game is larger
- Load time is slower
- Uses more video memory
- Wii, iPhone etc. sensitive to this
Texture too small

- Will see blurred out pixels
- The only downside :)
Texture size

- What size should I use?
Texture size

- *What* size should I use?
- What if Unity could show this?
Texture size

- *What* size should I use?
- What if Unity could show this?
- Well... it can!
Demo time
Colors
Colors

- Washed out
Colors

- Too dark
Color histogram

- Take screenshot
- See histogram
- Color correct
Color histogram

• Histogram
Color histogram

- Clearly lacks in the dark colors
Color histogram

- Adjust to improve contrast
Color histogram

- Can tweak single color channels as well
Color correction

- Apply the same color curves to grayscale ramp
- Color Correction image effect in Unity
- ...
- Profit!
Demo time
Questions?

- Answers!