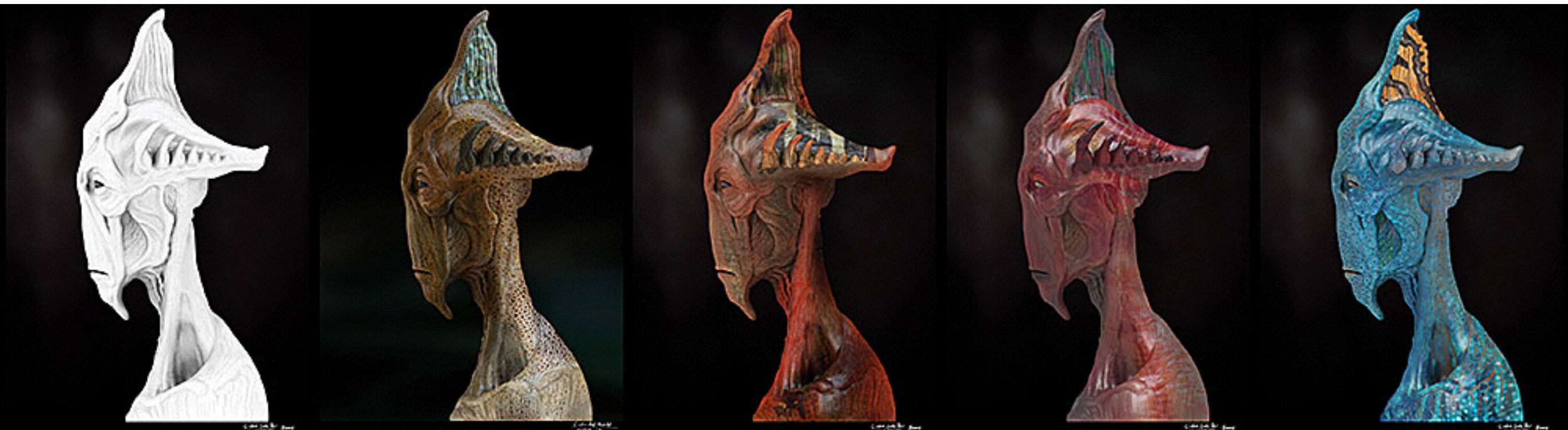


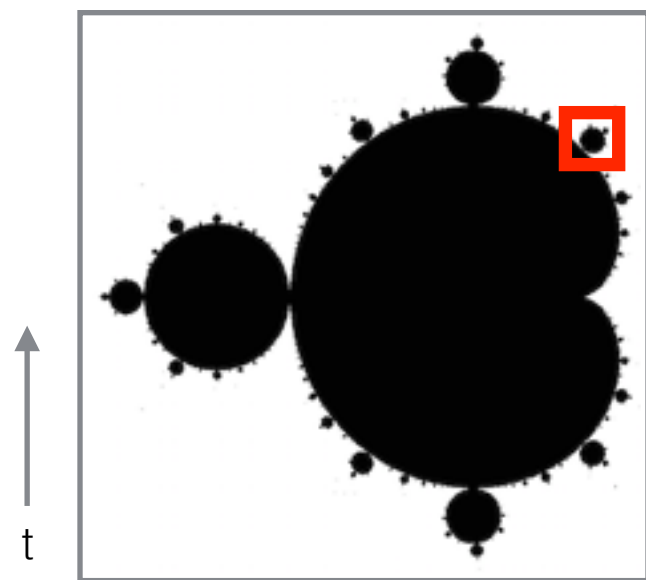


<http://www.thegnomonworkshop.com/store/product/525/Creature-Head-Texture-Look-Dev>

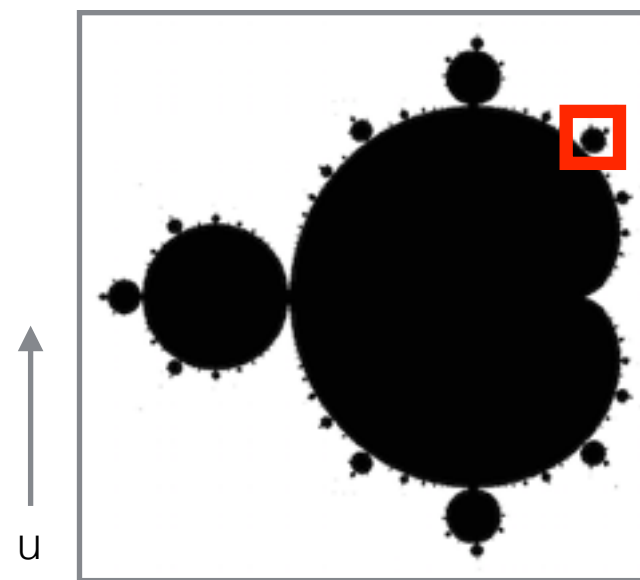
Textures

C. Andrews

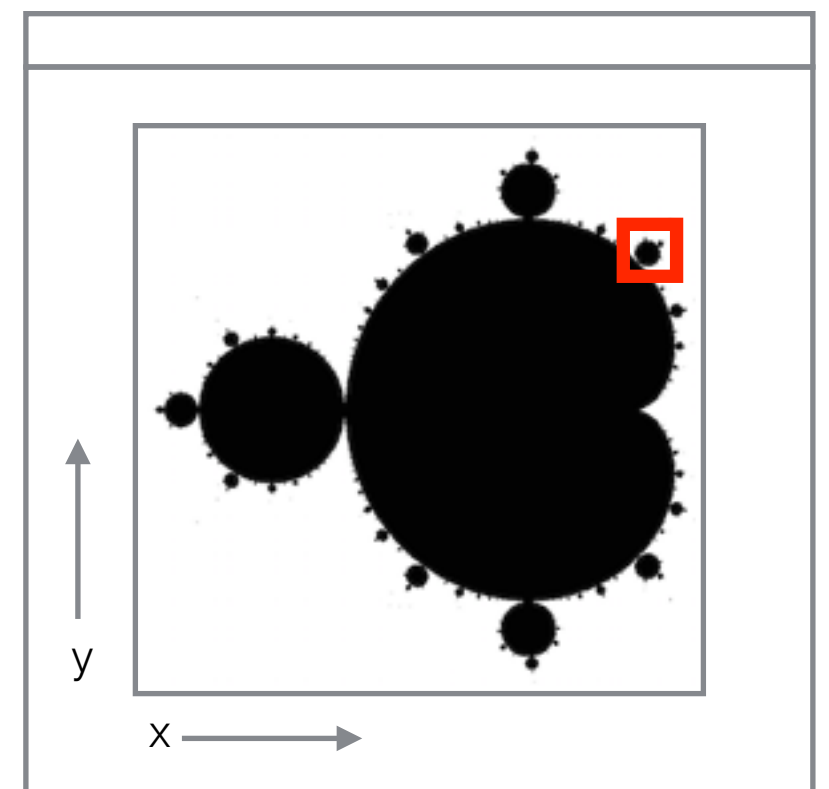
Simplest texture mapping



texture

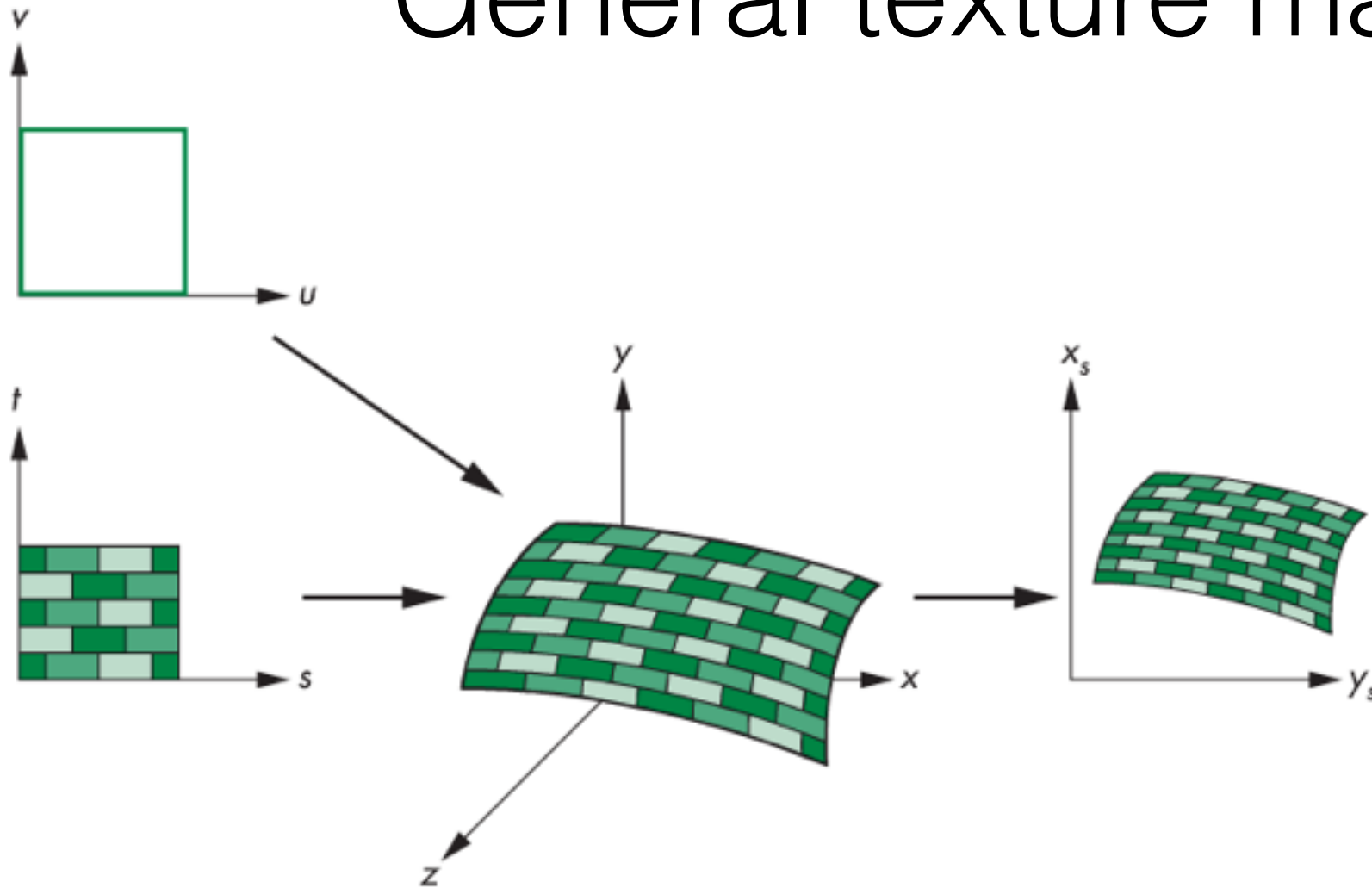


object

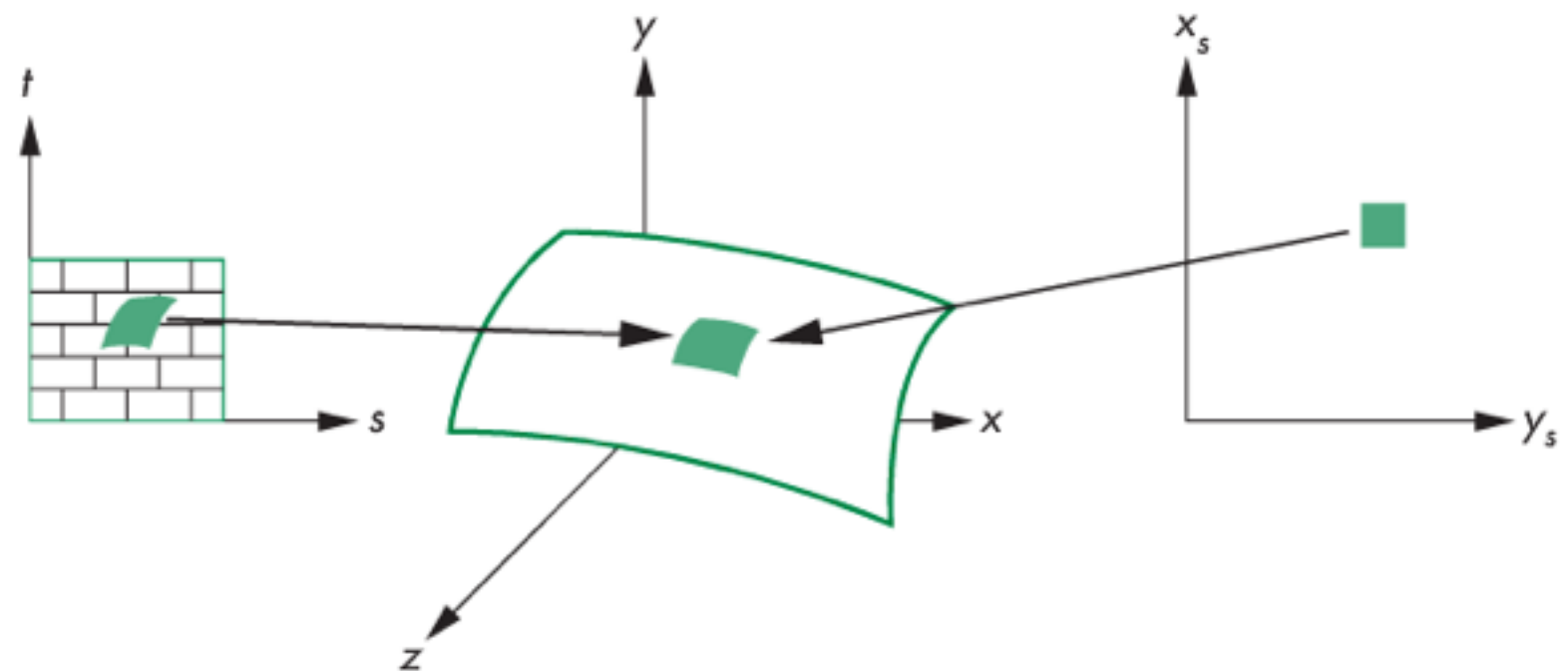


display

General texture mapping

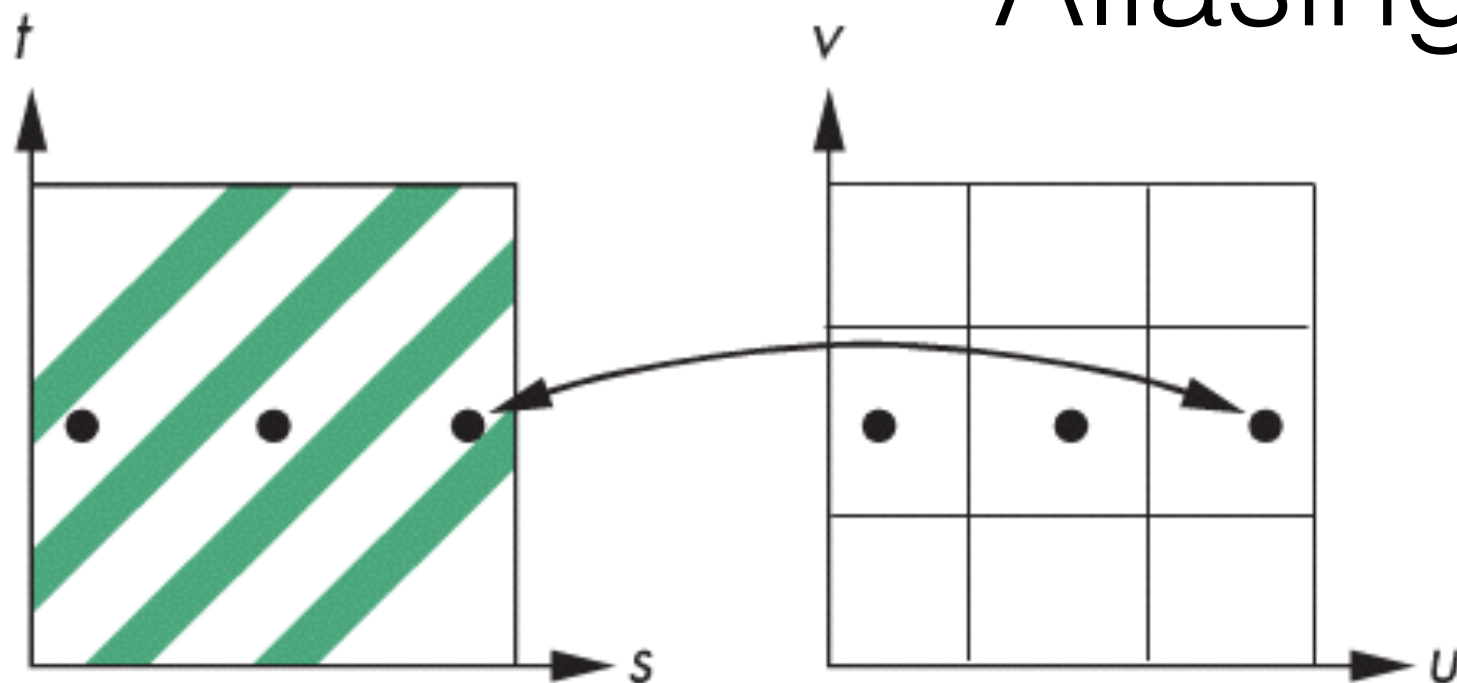


Angel, fig 7.5



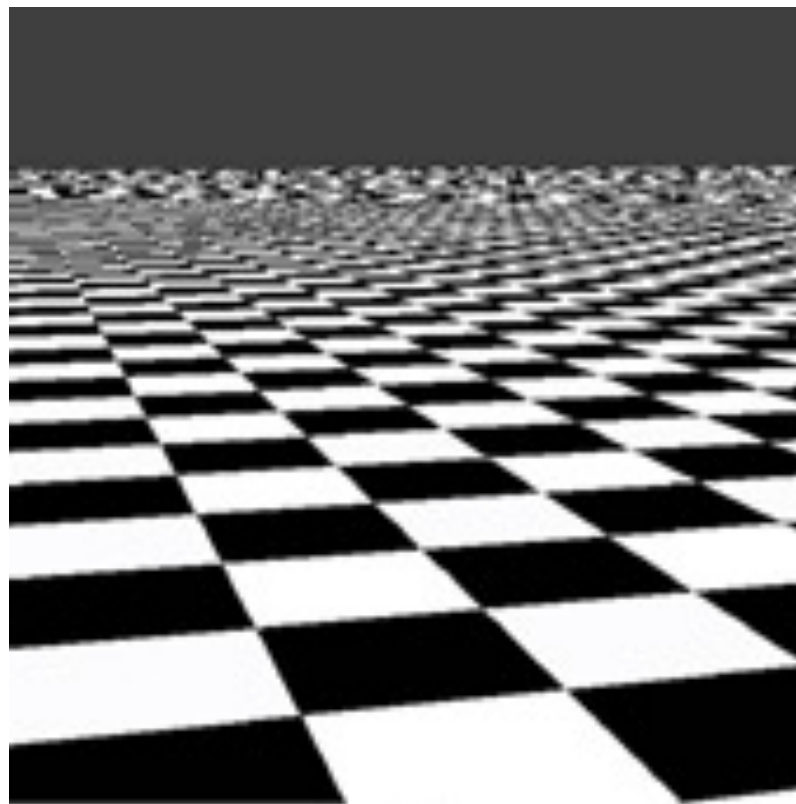
Angel, fig 7.6

Aliasing

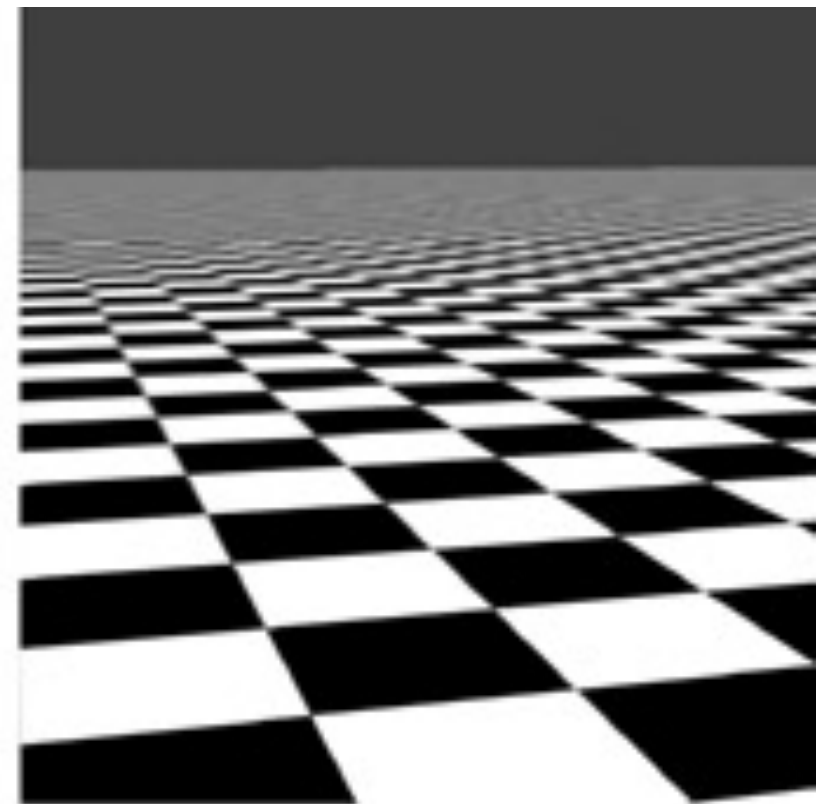


Angel, fig 7.7

point sampled

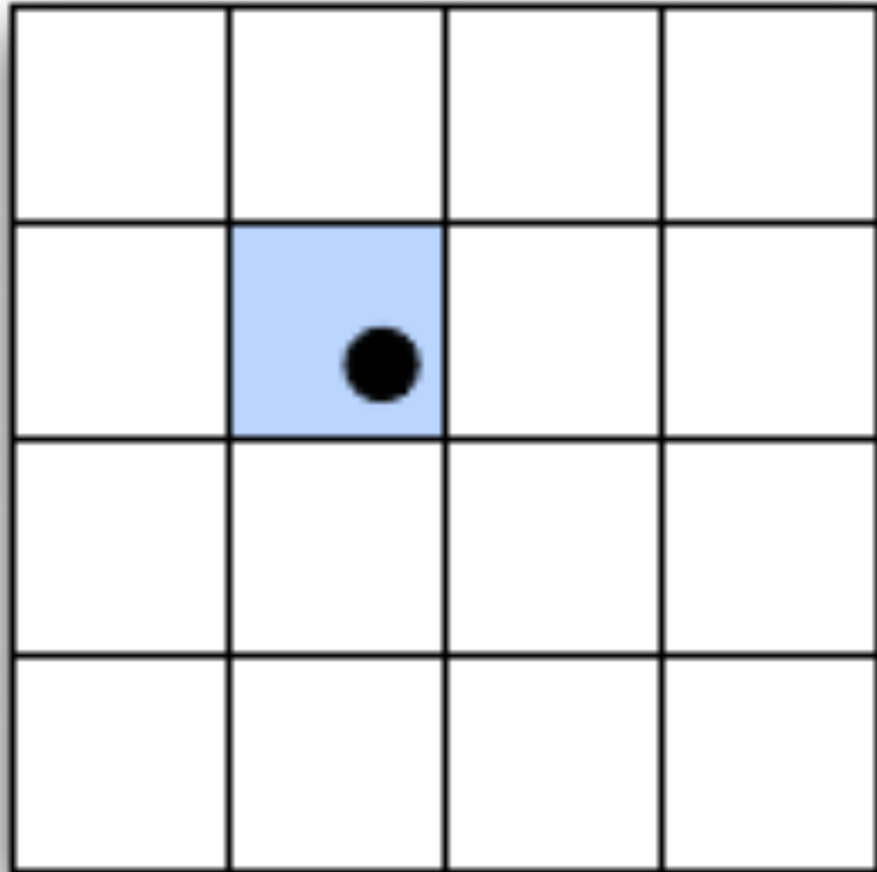


linear filtering

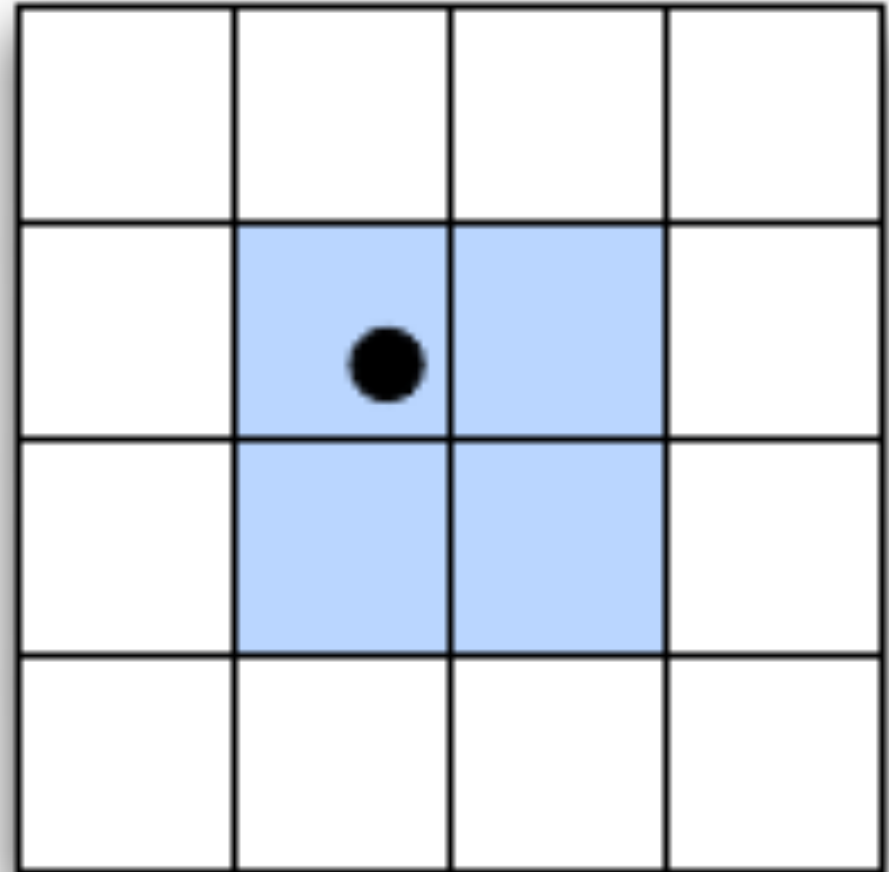


GPU Gems, fig 25-1

Sampling from the texture

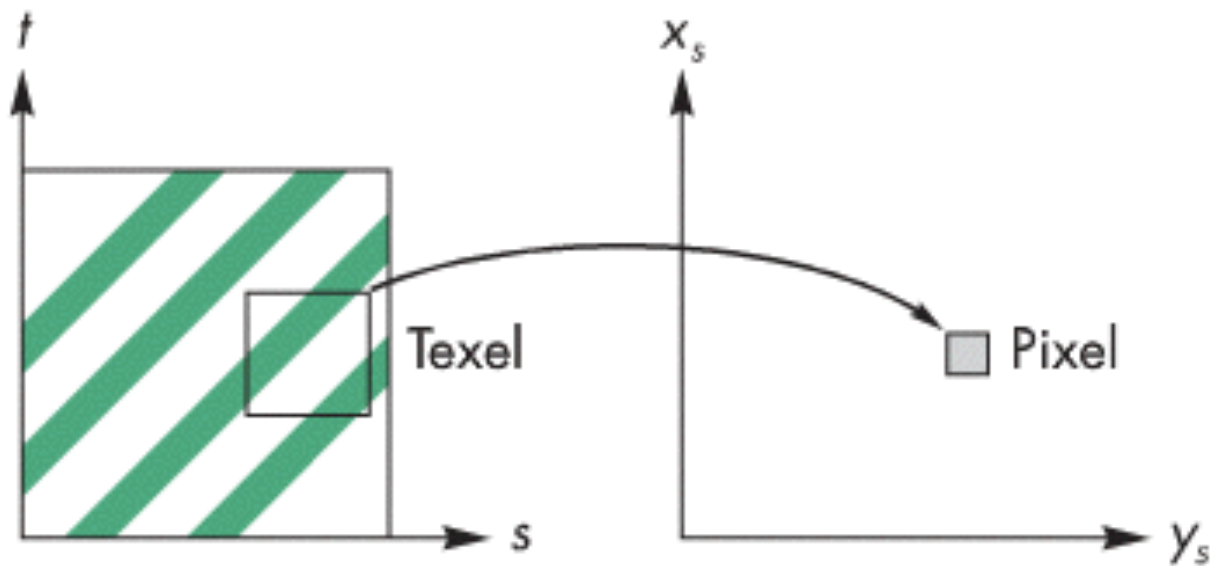


point sampled
(nearest)



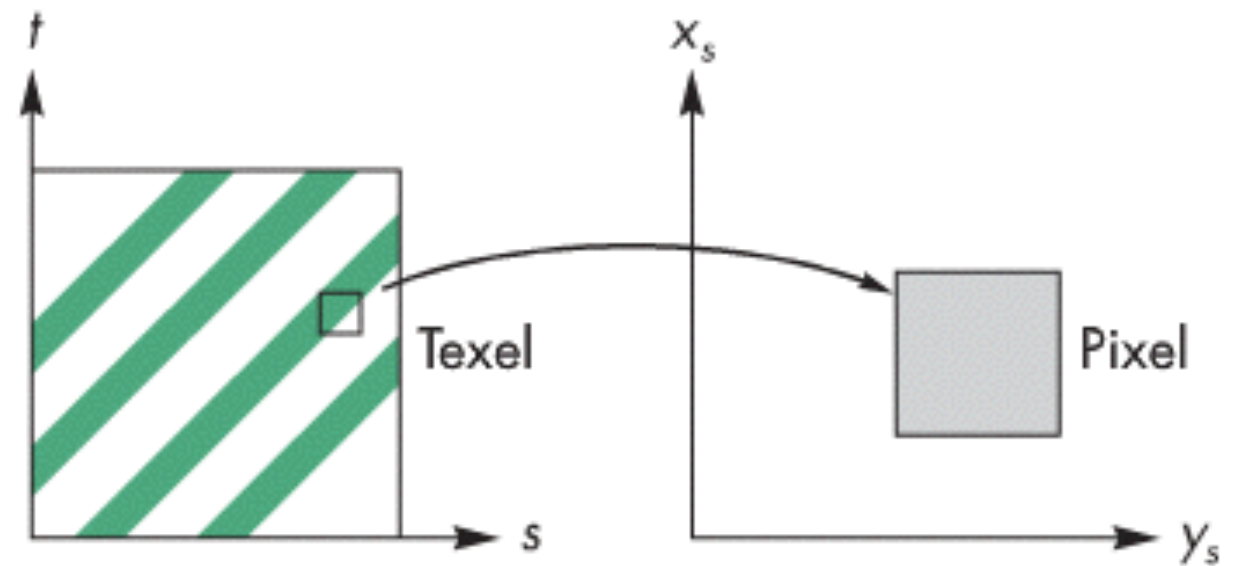
linear filtering

Minification vs. magnification



Angel, fig 7.17

minification



magnification

Mipmapping



Mipmapping

point
sampling



(a)

linear
filtering



(b)

mipmapped
point
sampling



(c)

mipmapped
linear
filtering

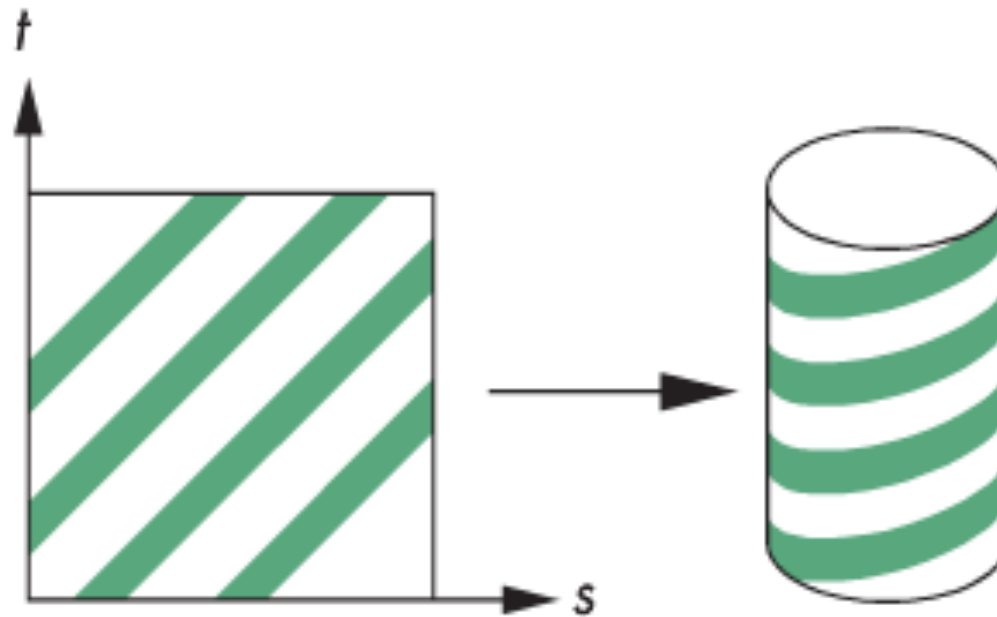
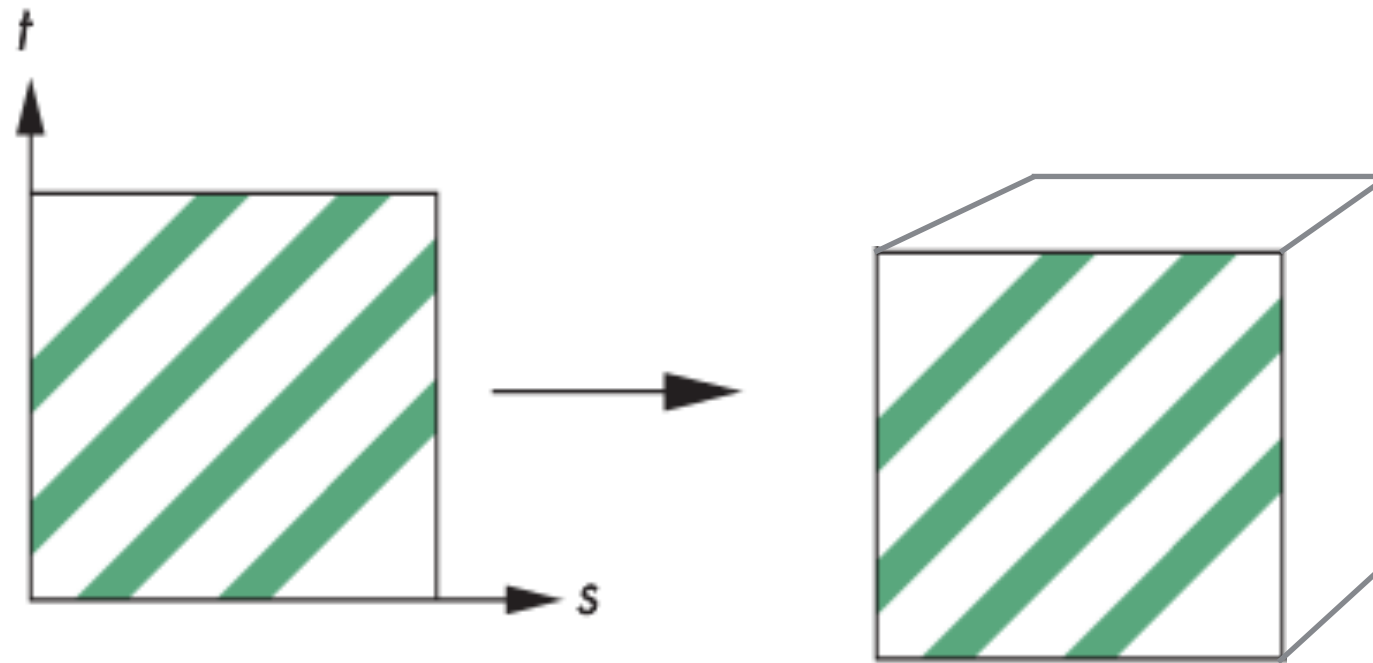


(d)

Mipmapping

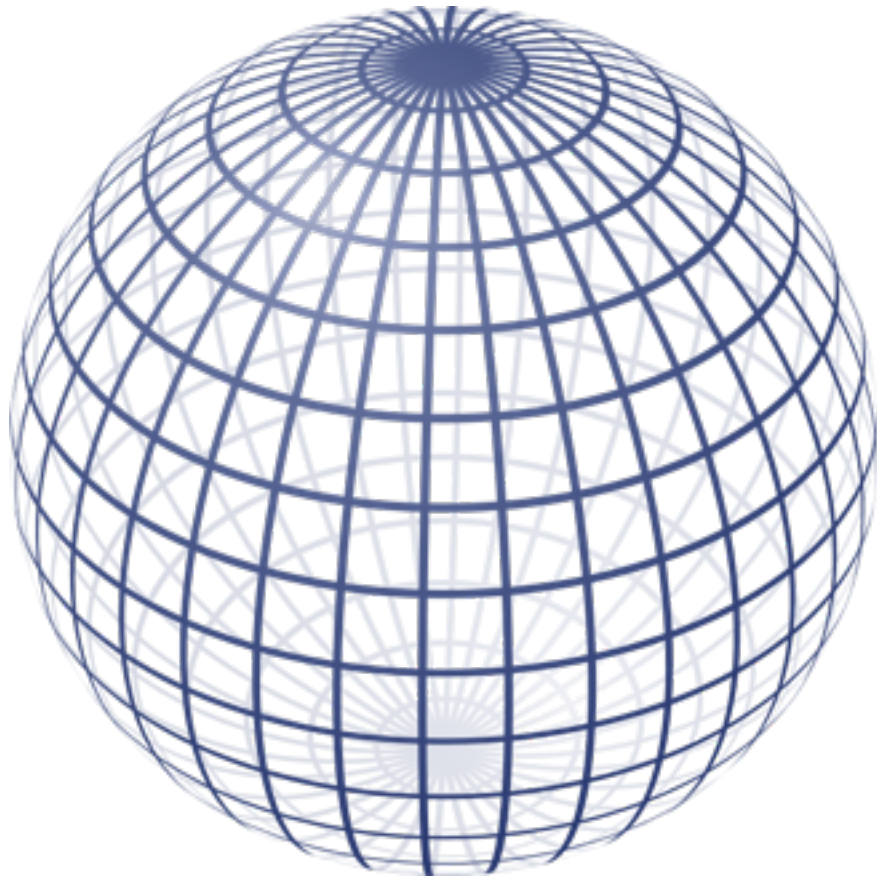


Mapping textures to shapes



Angel, fig 7.9

Sphere mappings



http://en.wikipedia.org/wiki/File:Sphere_wireframe_10deg_6r.s

MERCATOR



YOU'RE NOT REALLY INTO MAPS.

PLATE CARRÉE
(EQUIRECTANGULAR)



YOU THINK THIS ONE IS FINE. YOU LIKE HOW X AND Y
MAP TO LATITUDE AND LONGITUDE. THE OTHER
PROJECTIONS OVERCOMPLICATE THINGS. YOU WANT ME
TO STOP ASKING ABOUT MAPS SO YOU CAN ENJOY DINNER.

WINKEL-TRIEPEL



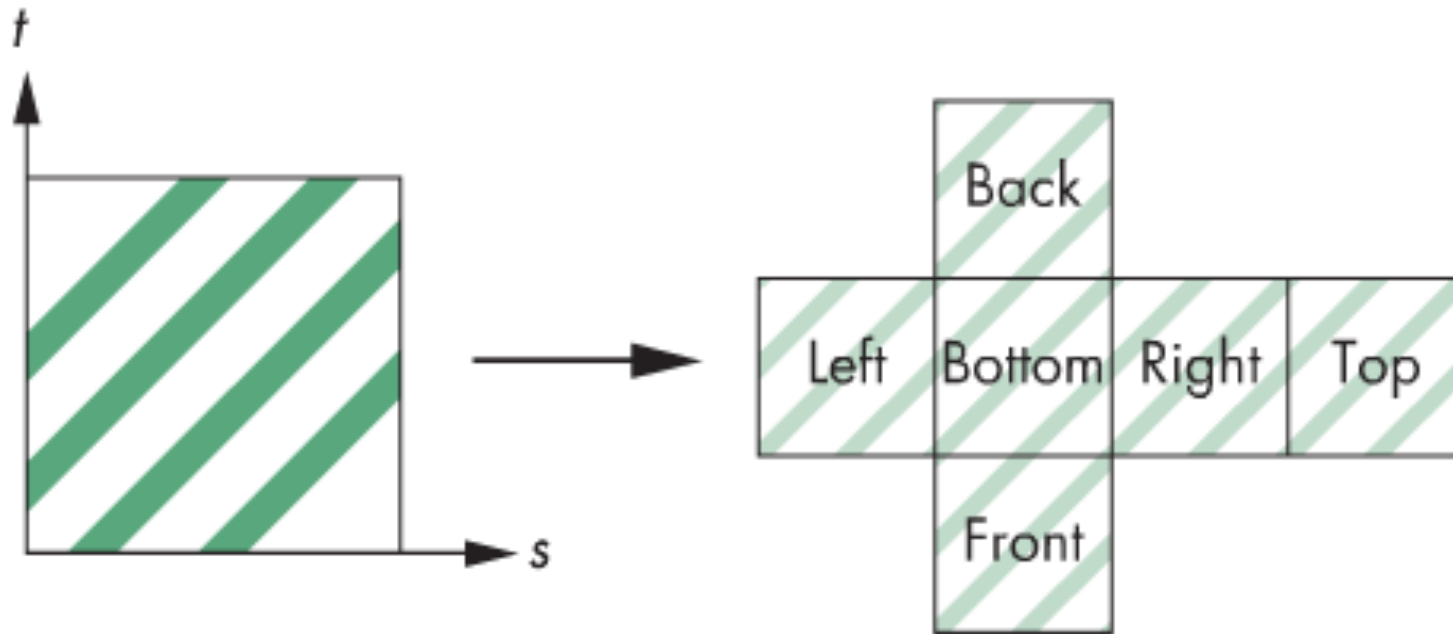
NATIONAL GEOGRAPHIC ADOPTED THE WINKEL-TRIEPEL IN
1998, BUT YOU'VE BEEN A WT FAN SINCE LONG BEFORE
"NAT GEO" SHOWED UP. YOU'RE WORRIED IT'S GETTING
PLAYED OUT, AND ARE THINKING OF SWITCHING TO THE
KAVRAYSKIY. YOU ONCE LEFT A PARTY IN DISGUST WHEN
A GUEST SHOWED UP WEARING SHOES WITH TOES. YOUR
FAVORITE MUSICAL GENRE IS "POST-".

HOBO-DYER

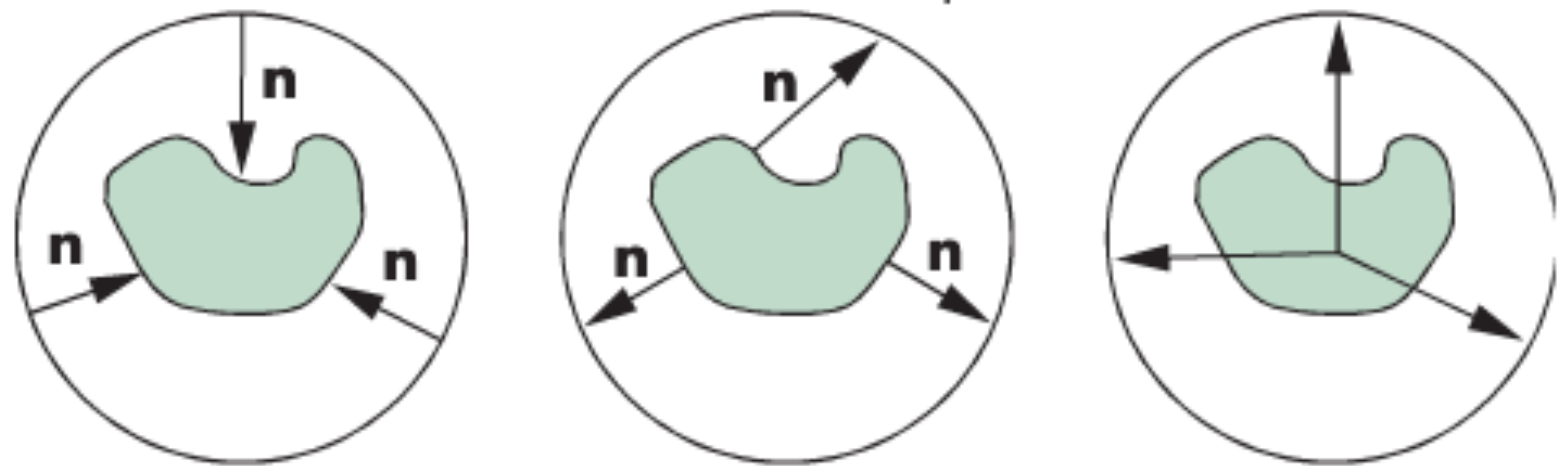


YOU WANT TO AVOID CULTURAL IMPERIALISM, BUT
YOU'VE HEARD BAD THINGS ABOUT GALL-PETERS.
YOU'RE CONFLICT-AVERSE AND BUY ORGANIC. YOU
USE A RECENTLY-INVENTED SET OF GENDER-NEUTRAL
PRONOUNS AND THINK THAT WHAT THE WORLD
NEEDS IS A REVOLUTION IN CONSCIOUSNESS.

Mapping to an intermediate object



Angel, fig 7.10



Angel, fig 7.11

Diffuse texture maps

<http://www.nordicfx.net/>

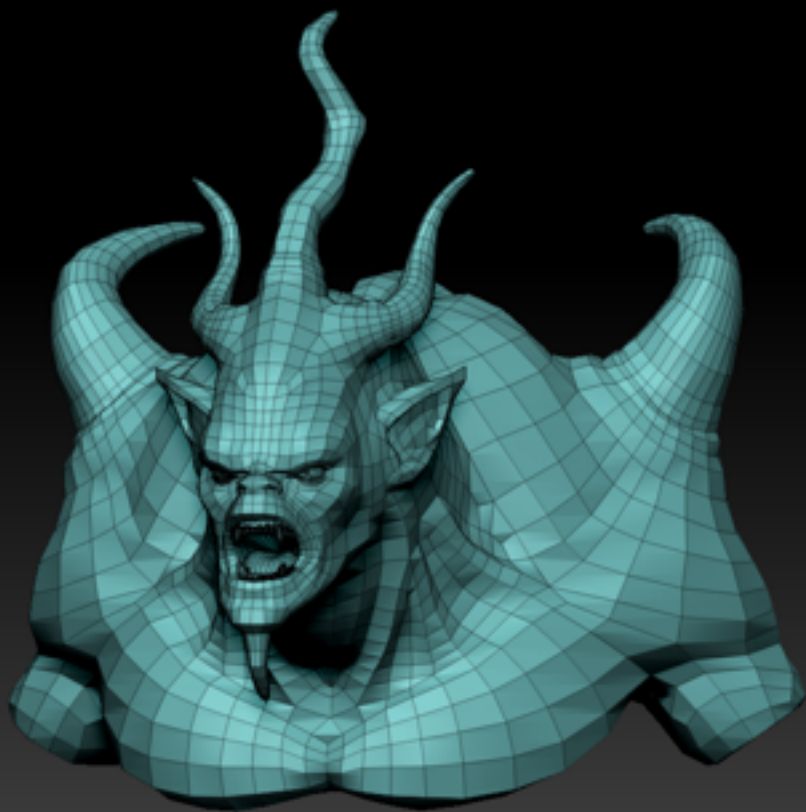


Decals

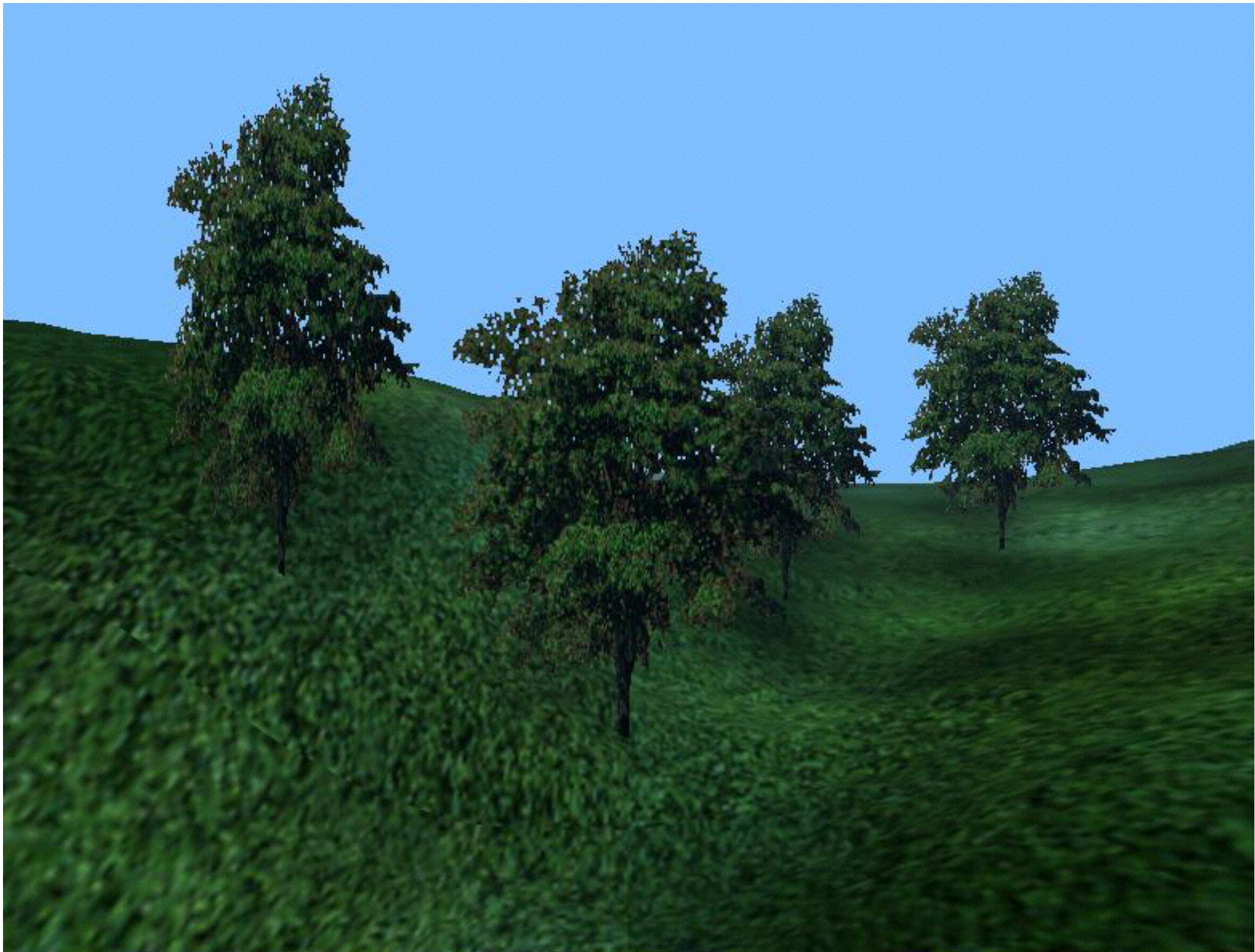


Skin

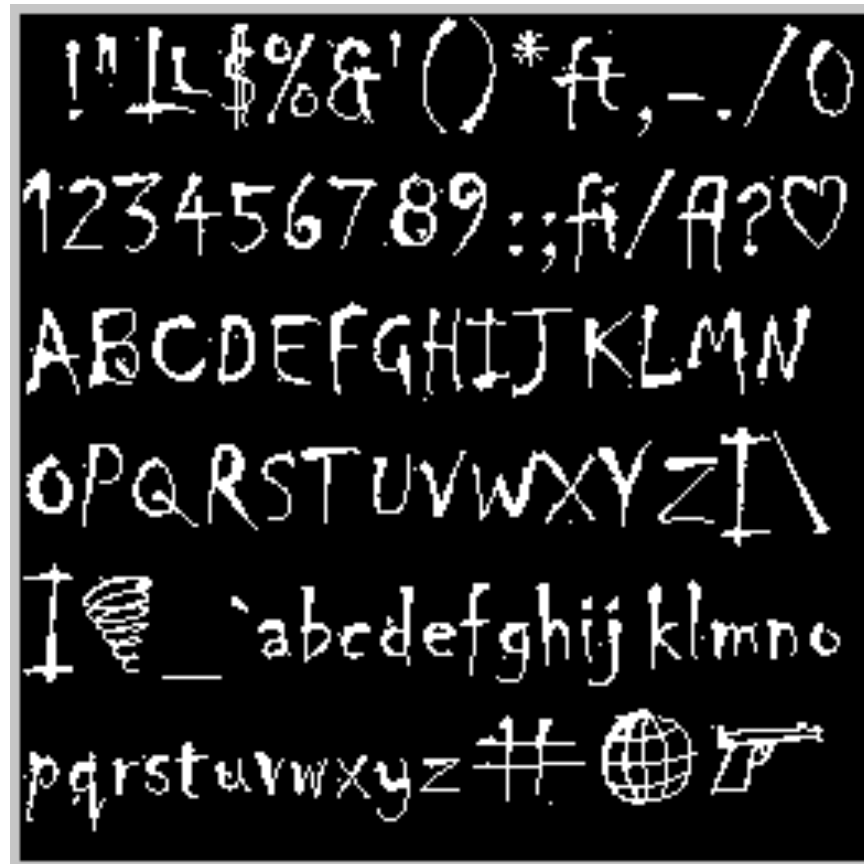
<http://www.livingautomaton.com/3d-work/bale-bust-sculpt/>



Billboarding



Texture mapped fonts



<http://home.pacific.net.hk/~edx/textfont.htm>

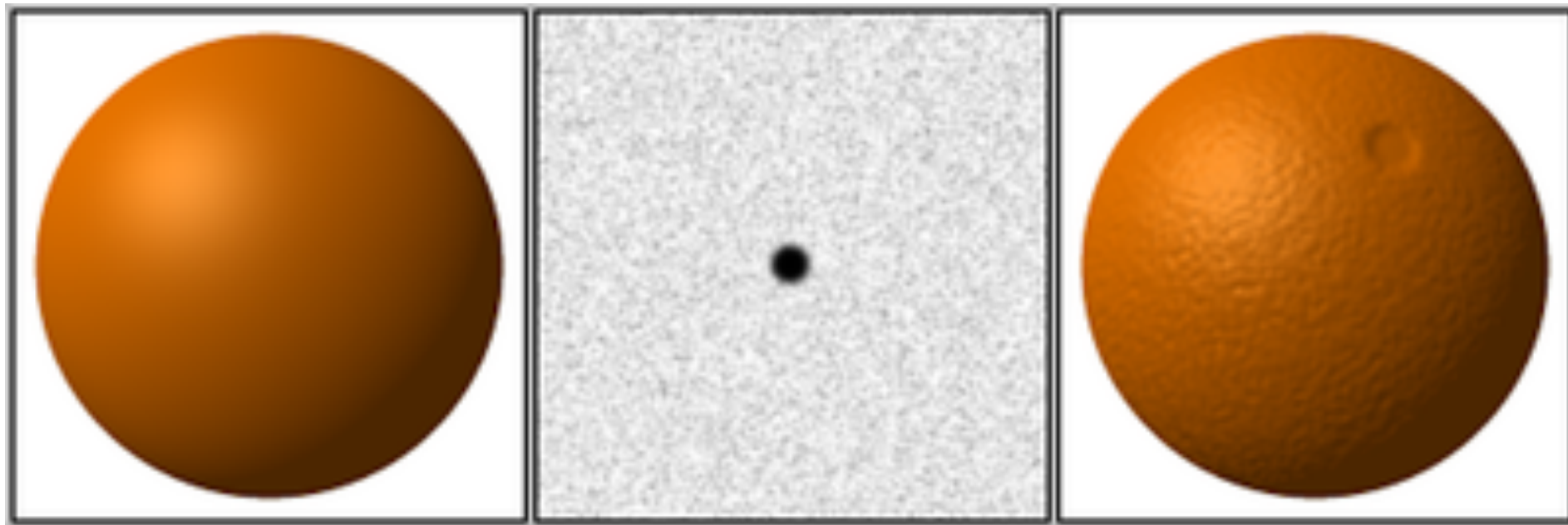


<http://www.tinrocket.com/superspritesurface/>

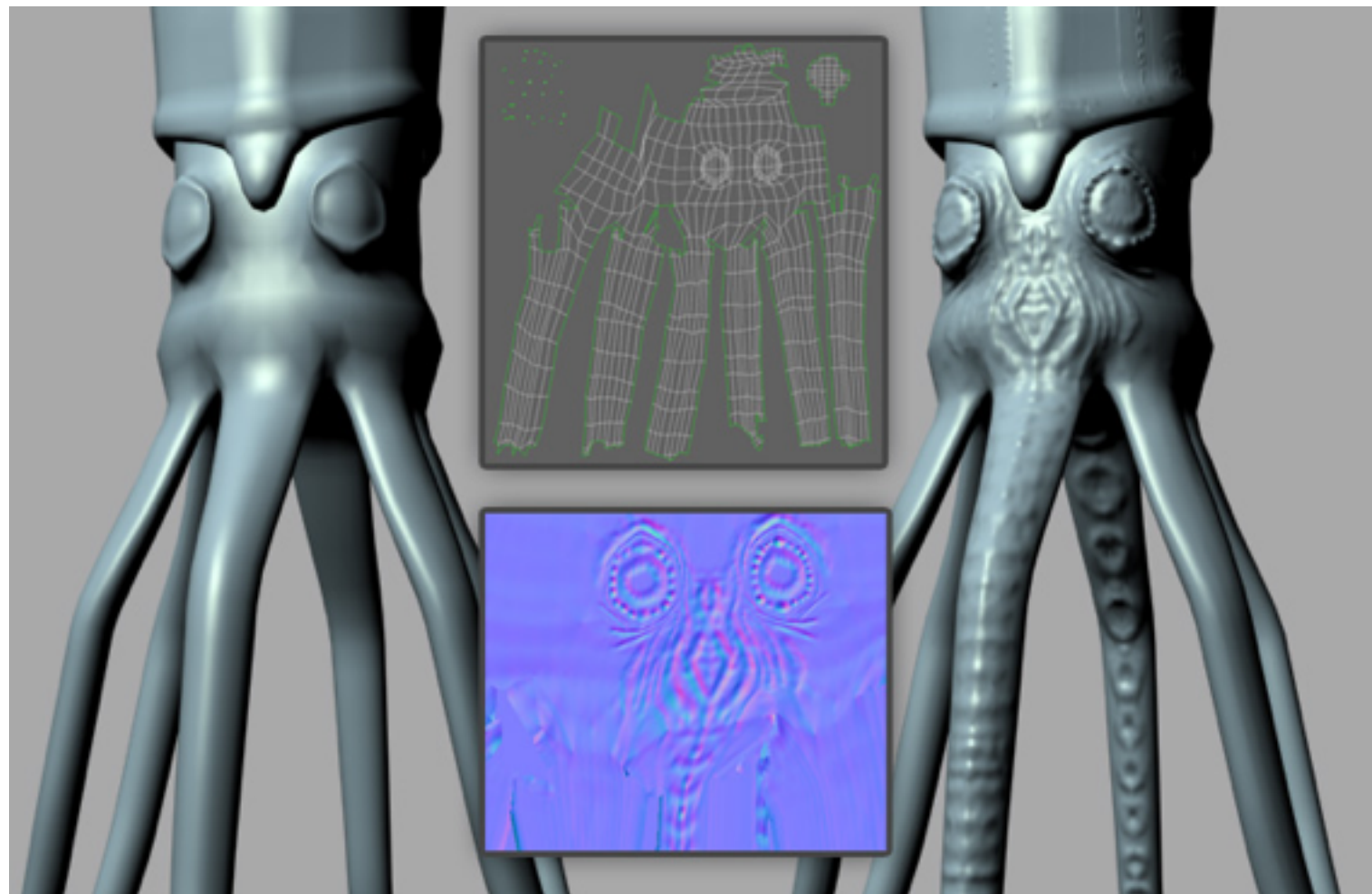


<http://www.tinrocket.com/superspritesurface/>

Bump mapping

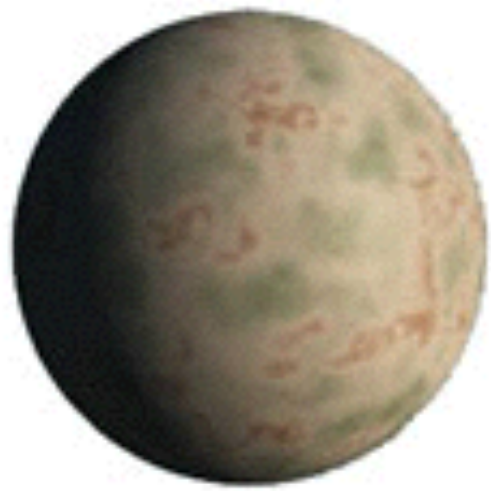


<http://commons.wikimedia.org/wiki/File:Bump-map-demo-full.png#/media/File:Bump-map-demo-full.png>



<http://tom.drastic.net/stuff/mudbox--3ds-max/>

Displacement mapping



Base
Model

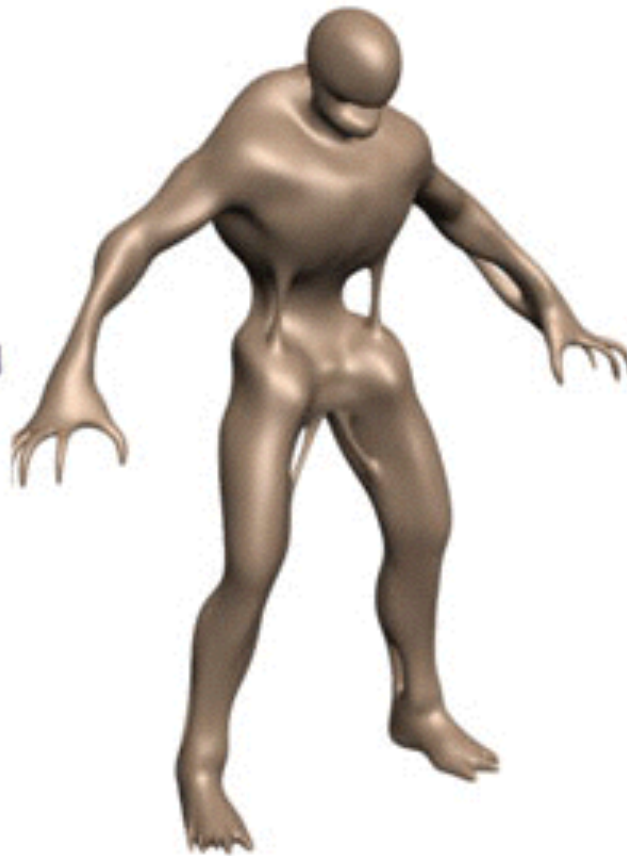
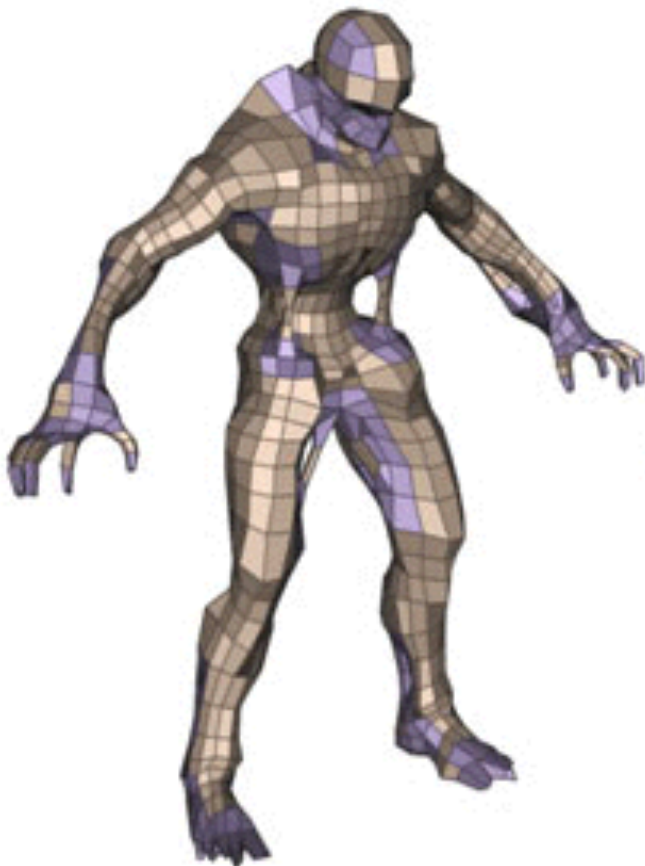


Bump
Mapping



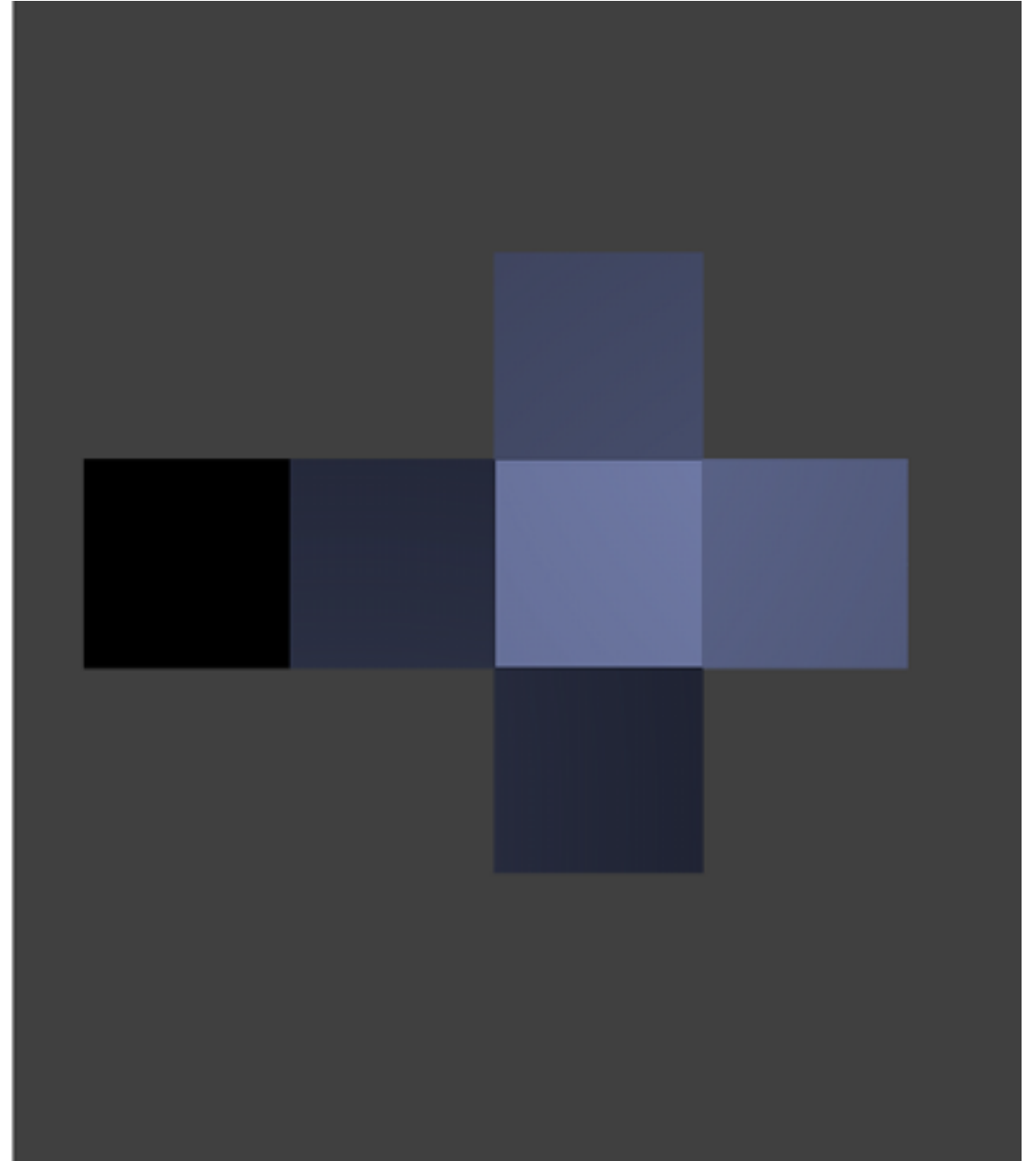
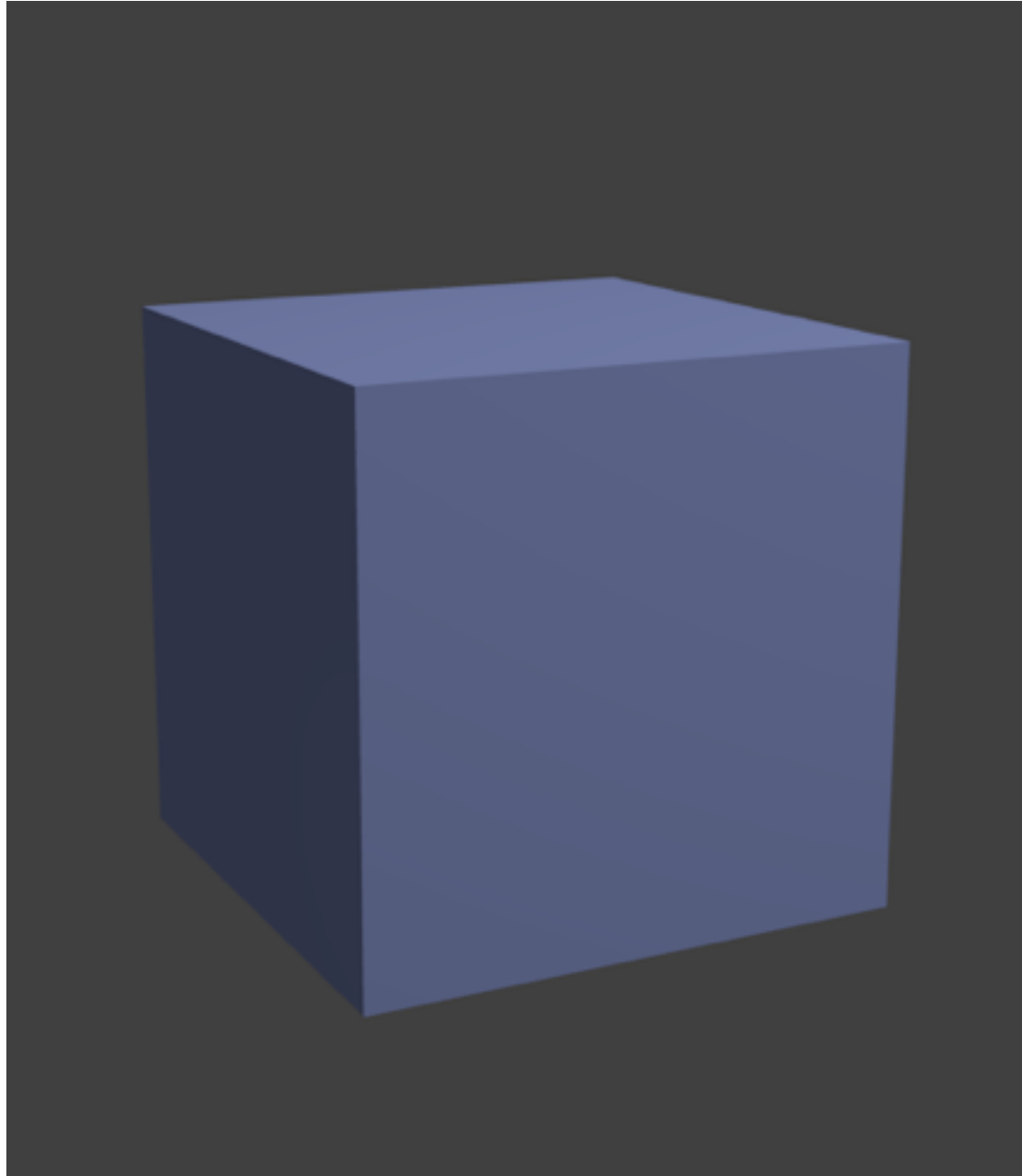
Displacement
Mapping

image courtesy of www.chromesphere.com



<http://www.nvidia.com/object/tessellation.html>

Luminance or light maps

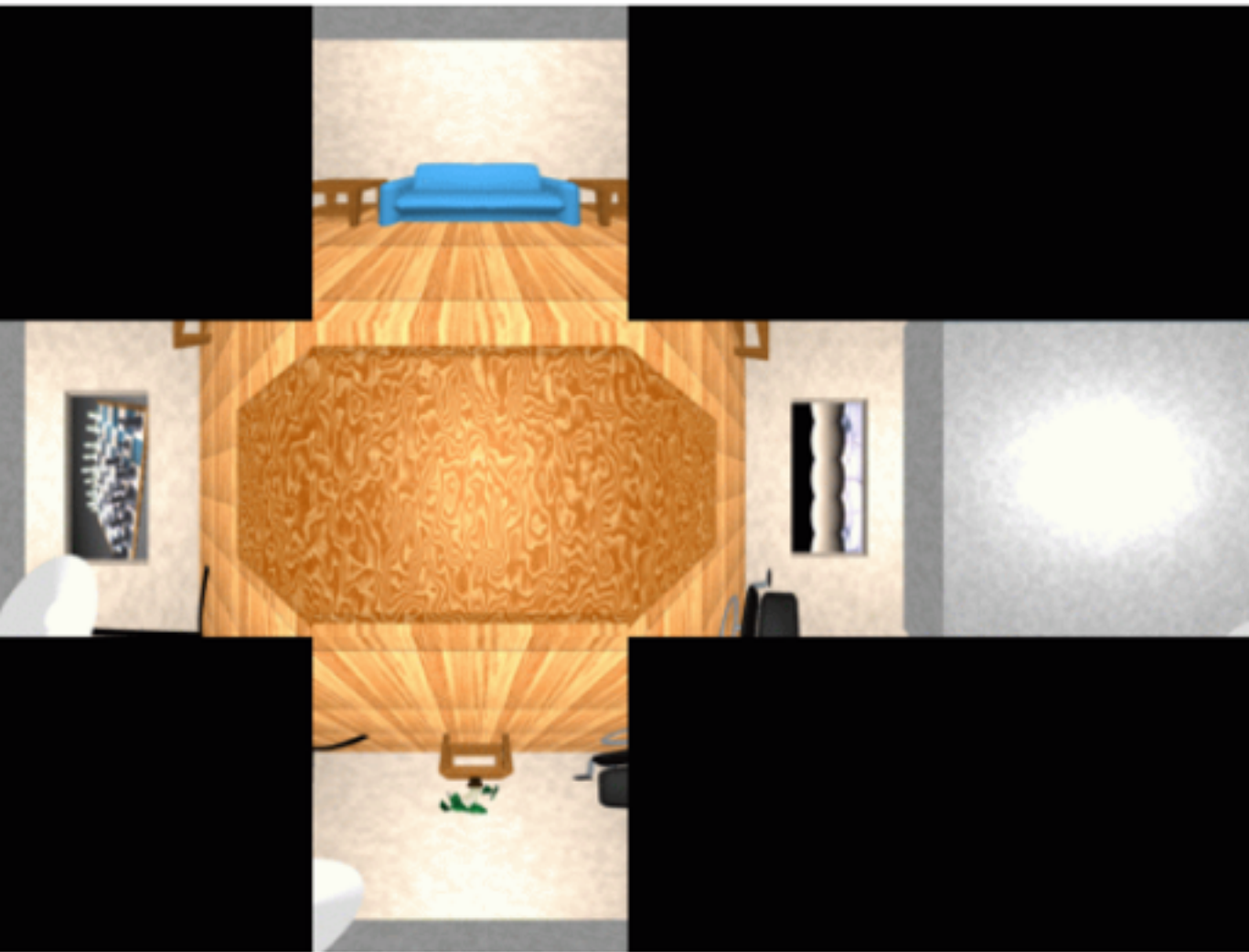


"Lightmap Cube Sample" by Narpas

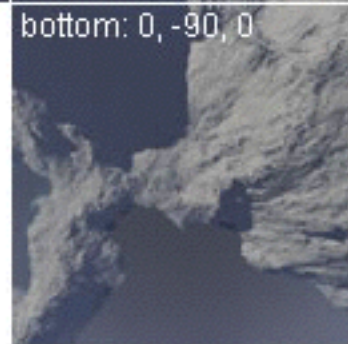
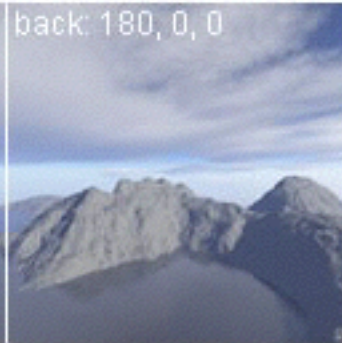
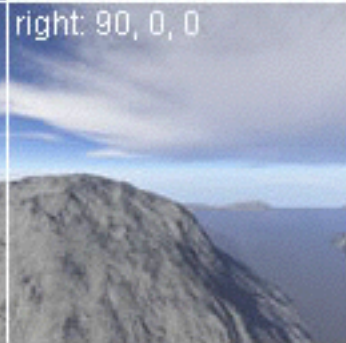
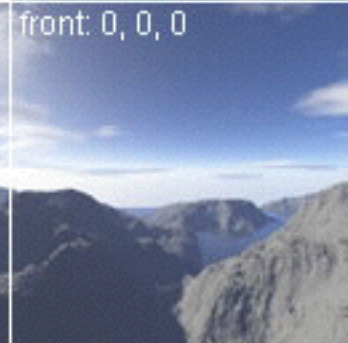
Luminance or light maps



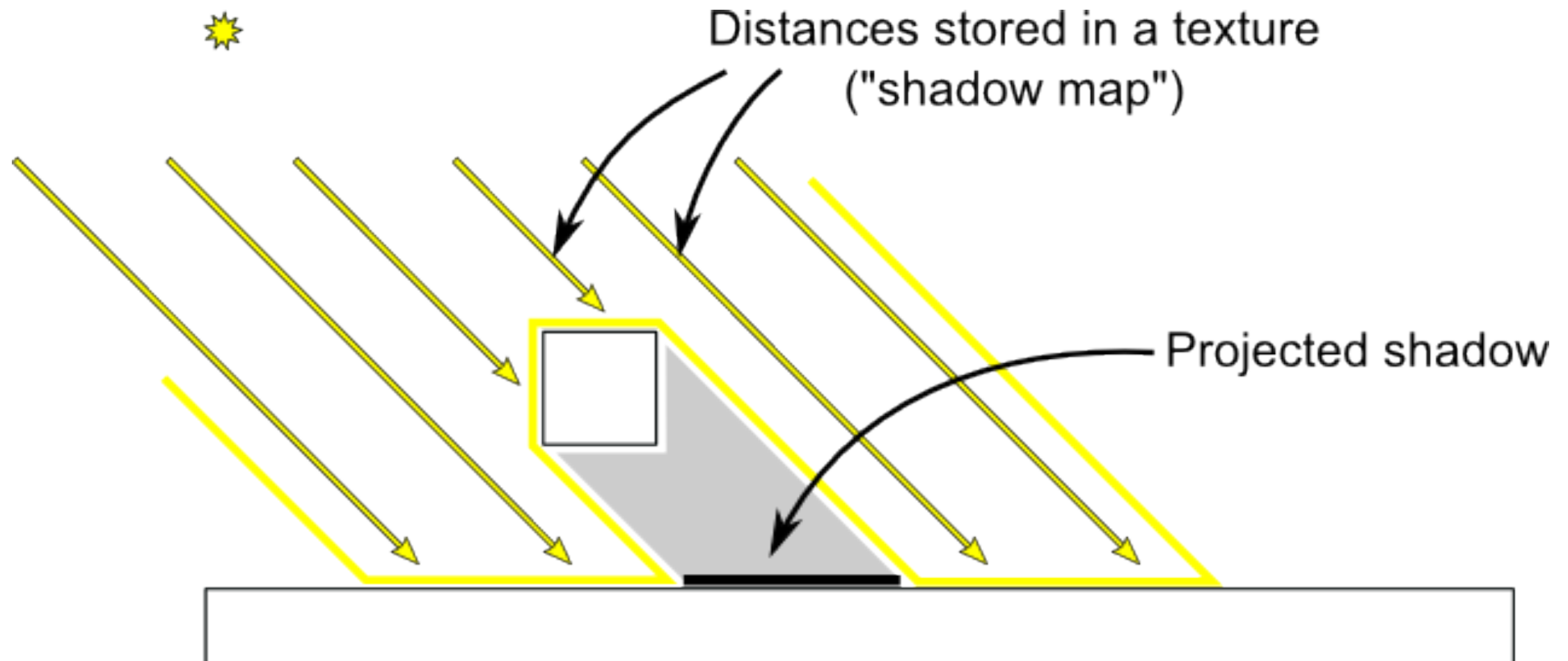
Environment mapping



Sky box



Shadow maps



Shadow maps

