

The Decorated Pig thread has many material examples which are very useful when trying to understand the Node editor. Here are some more materials that may help other Cheetah novices. Materials 1-22 were made in version 5. (The only new node in version 6 seems to be “Instance,” for particles).

Examples 26 — 30 extend the concept of a procedural material to include tools and scripts which physically affect the structure of the pig body.

Most of the materials I am posting are simple, with a minimum of nodes, and make little use of the math nodes (because they’re over my head). Lots of trial and error, plus fine tuning.

Several include an Image node to complement the procedural textures. Although the image is embedded in the material, I will attach the image and the UV Editor settings also to make it easier to duplicate and understand the effect.

1-2

The gold and copper are as close as I could get to the real things.

3

Turbulence — Multiply — Reptile
Squareroot bumpmap

4

Carbon Fiber

Sphere UV map for approximately spherical pig

carbonfiber.jpg
4x_UV.jpg

5

Dots + Marble + Car Paint

6

State (position) + Cosine + Gradient stripes

7

World Map

Two images with a Squareroot node enhancing the bump map

world_phys_lg2.jpg
bwworldmap.jpg
7x_UV

8

Wireframe + Emissive + Transparency

(redundant color nodes)

9

Dots (intensity = 4) — Iso Wirefram — Membrane

10

Two wireframes, Index of Refraction 1.5

Useless weirdness

11

Wireframe: Iso + Emissive + Transparency

Chinese lantern + piñata hybrid

12

State (position) + Directional + Turbulence + Dots + Gradient

Camera max samples set at 2 X 2 gives it a grainy texture; default 4 X 4 smooths it out too much.

13

State (eye) + Reptile + Gradient

14

State + Pulsetrain + Gradient

15

Too many gradients? It's complicated.

16

Image = gradient = Transparency

Trying to use a gradient node for transparency doesn't work, but an image node with a picture of a gradient does.

attached:

gradx16b.jpg

x16UV.jpg

16_UV

17

Voronoi + Add + Cellnoise + Gradient

18B

Image = gradient = Emissive

Trying to use a gradient node for transparency doesn't work, but an image node with a picture of a gradient does.

attached:

grad.jpg

x18UV.jpg

19B

Image = stripes

1980s High-Tech revisited

Slow render time

attached:

x19.jpg

x19bUV.jpg

20 + x20eyes2

State + Power + Gradient

Eyes: Intensity = 2.2 Diffuse, 2.6 Emissive

21

Marble + Gradient

22

Directional (X2)+ Carpaint

Noise + Tangent — Bumpmap

Camera max samples set at 2 X 2 to retain sparkly highlights

23

procedural dots + image = Composite node

image = .PNG with a transparent background

attached: PNGtransbkgd.png

24

All 21 math nodes + State, Composite, Gradient, Image
useful for trial-and-error experimentation

I find the math nodes confusing, so this is how I plugged in many combinations
and settings to see how they affected a material.

25

State + Step gradient = posterized grays

State node = I N

Step gradient to diffuse & emissive

HDRI background off

Camera background = gray

Note: To get the flat shading set the Render Preferences Gamma to maximum 3.

25.5

Two variations of #25, for the body and the pedestal.

Transparent camera background, + Photoshop

attached:

Poster-Pig-1C.jpg

26

Thank Hiroto for this one:

Not really a material, but almost as simple:

- 1) Change the body CC Subdivision from 3 to 1
- 2) Collapse the body
- 3) With the body selected, add Hiroto's Polygon Reduction.js tool
- 4) Leave the default setting at .5, Apply. Wait.
- 5) Delete the original body
- 6) Add Wireframe .01 Linear Iso
- 7) Change body Smooth type from Constraint to Flat

Hiroto's Polygon Reduction.js script:

<http://www.tres-graficos.jp/blog/files/article.php?id=56>

Put it into the Tool scripts folder

27

Thank Hiroto twice for this one:

- 1) Change the body CC Subdivision from 3 to 1
- 2) Collapse the body
- 3) With the body selected, add Hiroto's Polygon Reduction.js tool
- 4) Leave the default setting at .5, Apply. Wait.
- 5) Delete the original body

- 6) With the Pig selected, add "Polygon 2 Spline" script
- 7) Make the "body-reduc.0.500" a child of the script
- 8) Collapse "Polygon 2 Spline"

Note: What might happen is the body disappears. "Undo" fixes it. This seems to be a consistent phenomenon. Quirky, but predictable. I'm probably skipping something. Experiment.

- 9) Move the "body-reduc.0.500" above "Polygon 2 Spline"
- 10) Collapse "Polygon 2 Spline" again
- 11) Below Camera, add a Sweep
- 12) Add a Circle spline as the first child to the Sweep (= profile)
- 13) Leave the circle at Position 0,0,0, and scale it to around .03
- 14) Move "Polygon 2 Spline" to be the second child of the Sweep (= path)
- 15) Adjust the scale of the Circle
- 16) Delete the "body-reduc.0500"

Hiroto's Polygon Reduction.js script:

<http://www.tres-graficos.jp/blog/files/article.php?id=56>

Put it into the Tool scripts folder

Hiroto's Polygon to Spline script:

<http://www.tres-graficos.jp/blog/files/article.php?id=36>

Put it into the Splines scripts folder

27.5

Variation of #27

27.6

Variation of #27

28

Particle mesh + random glowing colors

Instance node = random colors

Solid node Intensity = 2.38 = Emissive

Particle mesh = pig body, surface, random

Particles = (2400) .04 balls

attached: x28_mesh.jpg

29

Body:

Subdivide CC3, Collapsed

Point mode — Optimize .08 (welds/deletes points)

Particle Mesh = Body

Hiroto's Particle Connector script:

Target Particle = Particle mesh

Distance threshold = .45, curve = .57

Sweep = .01 hexagon + Particle Connector

Hiroto's Particle Connector script:

<http://www.tres-graficos.jp/blog/files/article.php?id=81>

Put it into the Splines scripts folder

30

Body:

Subdivide CC3, Collapsed

Point mode — Optimize .08 (welds/deletes points)

Polygon to Spline script

Isosurface

Isovalue = .75

Resolution = 80

Hiroto's Polygon to Spline script:

<http://www.tres-graficos.jp/blog/files/article.php?id=36>

Put it into the Splines scripts folder

31

Double pigs

Inner pig has wireframe mat with emissive color node = 2 (>1 = glow)

Outer pig has a Crumple modifier

Scale = .95 to compensate for crumple

Crumple

Offset of .055, Frequency = 24

Material: Transparency = Tungsten, Diffuse = Magnesium

32

Default Pig render settings

Crumple

Offset .05, Frequency 24, scale = 8 8 8

Body scale = .98 to compensate for offset

Material:

State I-N,

Power = 3 (greater than 1 makes outer profile more transparent),
linear gradient (white at left, mostly black)

Noise Scale 16, position 1 (experiment)

Diffuse Magnesium

Trans blur .2 (softens; .5—1 makes edges hard)