

***TouchDesigner Workshop:
interactive visuals for performance
Beginner and Intermediate level
22-23 april 2017 10am-5pm
SITEWORKS 33 saxon st. Brunswick 3065***

download free version here (Mac or PC):

<https://www.derivative.ca/099/Downloads/Default.asp>

TouchDesigner interface basics:

<https://www.derivative.ca/Education/BestWorkshopVideos088/>

Day1 morning

TouchDesigner overview - explanation of operator types, audio input, demonstration of a sound reactive work, use of external tracking devices (leap motion), perform mode (think powerpoint!), interface construction and projector output

Case study

“Leap motion puppet”

using the leap motion controller to animate a digital puppet - ramp is animated by analysing incoming audio signal.

Animating an image with audio

d1_ex1: analysing audio peaks - analyse CHOP - lag CHOP

compare pre and post lag values - merge CHOP - trail CHOP

read an image and use audio values to animate- moviein TOP-transform TOP-composite TOP

add a button to transform image in y - button component-trigger CHOP

what is noise? Switch to animate with noise CHOP-switch CHOP

How to save and share your component

d1_ex2: using the webcam - videoin TOP

underwater effect - noise TOP - speed CHOP - displace TOP

use an animated black and white image to animate time-timemachine TOP

texture 3d TOP - timemachine TOP

d1_ex3: 2 methods for converting audio to image - chopto TOP - audiospectrum CHOP - displace TOP

d1_ex5: 2 methods for converting audio to geometry - line SOP - chopto SOP - audiospectrum CHOP

Day1 afternoon

Introduction to 3d

d1_ex7: 3d scene - light COMP - camera COMP - render TOP - box SOP

Lighting - spot lights - projector maps

d1_ex8: audio reactive face animation - create 2 face textures, apply as material to sphere

animate with audio-sphere SOP-analyze CHOP-logic CHOP-switch TOP

importing geometry - animating with audio-camera, light COMP-render TOP

transforming geometry - animate 2 shoes with audio-create floorplane-grid SOP-lighting

d1_ex9: demo of character rigging in houdini-import puppet geometry and animate with mouse

Panel CHOP - uv coordinates

leap motion - animate head with leapmotion channels-leapmotion CHOP-leapmotion TOP

Day2 morning

Case Study: ANF-93 <https://vimeo.com/109052990>

Audio Particles

d2_ex1: compositing noise CHOP and wave CHOP with audiospectrum CHOP
-lookup CHOP - pattern CHOP - explanation of samplerate.

d2_ex2: we use the audio spectrum as vertical emission velocity for particles - particle SOP

converting between image, CHOP and geometry (part 2)

d2_ex4: using an image to displace points on a grid - grid CHOP - topto CHOP - sopto CHOP
displace points on an animated cylinder along its normals - tube SOP - switch SOP

More python

d3_ex7: changing keyframe values in a DAT using chop execute DAT

d4_ex4: create a table of random positions and colors with a python script for random placement of a light - Ray SOP - creep SOP - a video mapping trick for making a light travel along a surface.

Day2 afternoon

Case study: "playing with fire" - interactive installation - particle attractor and kinect

<https://vimeo.com/70735873>

Particles and kinect

d3_ex2: particle attractors tracked to hands - kinect world space/screen space - point SOP
particle SOP

geo instancing

d2_ex6: record mouse movements and instance geometry - trail CHOP
geometry component - instancing
add attenuated noise - noise CHOP - pattern CHOP
GPU vs. CPU - geo instance vs. copy SOP

d2_ex7: geo vortex - use animated noise to control rotation, ramp to control opacity and colour
- noise CHOP - speed CHOP - ramp TOP - topto CHOP
- GPU transparency in TouchDesigner

GLSL

d2_ex5: Shadertoy importer - how to write a GLSL vertex shader for displacement

d3_ex3: rendering kinect rgb point cloud input

PBR

D2_ex3: into to PBR rendering - soft reflections, ambient occlusion.

Substance shader - shader writing tool - substanceshader TOP

Payment Details

<https://www.trybooking.com/book/event?eid=273685>