Graphics on the Web
Graphics on the Web

Raster Graphics

GIF: Graphics Interchange Format
JPEG: Joint Photographic Experts Group
PNG: Portable Network Graphics
HTML5 Canvas (renders directly)
WebP: A new, lossless and lossy image compression format for the Web
Graphics on the Web

Vector Graphics

Flash (SWF files)

SVG: Scalable Vector Graphics

CSS (vector-like capability)
The Internet and the Web are separate but related things.

The Internet is a massive network of networks, a networking infrastructure that connects computers globally.

The Web is a way of accessing information over the medium of the Internet, an information sharing model that is built on top of the Internet.

The Web is just one of the ways that information can be disseminated over the Internet but it is the one we are focused on in this class.
Graphics on the Web
State of Flux

“The future is already here—it’s just not evenly distributed.”

—William Gibson
Graphics on the Web
State of Flux

The technologies discussed in this class are not all established standards. They are mostly agreed upon but not evenly implemented.

Most modern browsers support everything we will do, but not everyone uses up-to-date, modern browsers (and that’s ok).

Web graphics technologies are, as ever, in a state of flux.
Drawing on the Web

Class 1
Introduction and Overview
Drawing on the Web

Project-Orientation

We will explore the ways in which code can be applied to generate interactive, Web-based graphics.

We will not be focusing on just one language or technique, but several.

While we will spend the most time in JavaScript, this will be during the second half of the semester.

You are encouraged to integrate multiple techniques in your work.
Drawing on the Web
HTML and CSS

Class 1
Introduction and Overview

Review foundations
Explore new modes of implementation
Drawing on the Web

SVG

Scalable Vector Graphics
Hand-coding
Illustration software
Creating an icon system
Integration with CSS
Drawing on the Web
Version Control and Collaboration

GitHub
Iterative approach to creative code
Maintain snapshots of work
Project collaboration
Drawing on the Web
JavaScript

Introduce essentials
Become familiar with syntax
Enhance interactivity
Animation techniques
Drawing on the Web

HTML Canvas

Using JavaScript with HTML5

The canvas element allows you to draw graphics on the fly

We will use the JS library, p5.js
Drawing on the Web
WebGL

Drawing in three dimensions on the Web
Websites as places rather than pages
We will use the JS library, three.js
Drawing on the Web

Outline

HTML and CSS
SVG
CSS Animation
Version Control and Collaboration
JavaScript
HTML Canvas
WebGL
Drawing on the Web

This course is not:

• A complete beginner-level class

• An advanced programming class

• A comprehensive introduction to JavaScript

• A game development class

• Fixed/static
Net Art

“Net art, like Process Art, Performance art and Happenings, is less an object for contemplation than an event or action that takes place over time.”

—Mark Tribe/Reena Jana
Simple Net Art Diagram

MTAA ca. 1997

The art happens here

http://www.mtaa.net/mtaaRR/off-line_art/snad.html
Net Art

Examples

Misconfigured ASCII Drawing
1995, Jodi

http://wwwwwwwwwww.jodi.org/
Net Art

Examples

Fukushima Sequence
2003/2015, Joshua Clayton

http://sequence.joshuaclayton.net/
Introductions
Introductions

Me

Joshua Clayton
Clinical Assistant Professor
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Office hours
• Monday, 2:00–3:00 p.m.
• Thursday, 11:00 a.m.–12:00 p.m.

Room 420, Warren Weaver Hall

cs.nyu.edu/cs/faculty/clayton
Introductions

You

• Name

• Where are you from? (or where do you identify most closely with)

• What are you studying at NYU?

• What interests you about this class?
Syllabus
Syllabus

Attendance

You are expected to come to all classes and arrive on time.

Please let me know in advance if you will be out for any reason.

Please let me know if you miss class due to illness.

Computers are welcome in class but not required.

If you ever feel overwhelmed or need extra help, I will be available to you.
Syllabus

Texts

Using SVG with CSS3 and HTML5: Vector Graphics for Web Design

Eloquent JavaScript: A Modern Introduction to Programming

Mass Effect: Art and the Internet in the Twenty-First Century
Syllabus

Assignments

There will be seven assignments and one final project.

Details of each will be posted on the class website.

All assignments are due before class, submitted via NYU Classes.

Do your best to turn work in on time. 10% will be deducted for each class day after the deadline.

No assignments will be accepted after three classes or after the final exam.
Syllabus

Grading Rubric

Assignments: 40%
Midterm exam: 20%
Final project: 20%
Final exam: 20%