Introduction and Overview
Drawing on the Web

Graphics on the Web

Introduction and Overview
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Introduction and Overview

Raster Graphics

GIF: Graphics Interchange Format
JPEG: Joint Photographic Experts Group
PNG: Portable Network Graphics
APNG: Animated Portable Network Graphics
WebP: A new image format that employs both lossy and lossless compression
Drawing on the Web

Vector Graphics

Introduction and Overview

SVG: Scalable Vector Graphics

CSS (vector-like capability)
The Internet and the Web

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.
Introduction and Overview

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

—William Gibson
Introduction and Overview

The technologies discussed in this class are evolving. They are agreed upon standards but not evenly implemented. Modern browsers support almost 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.
This class deals with the... • Recently possible... • Not universally established... • Rich with creative potential... domain of graphics for the open web.

It’s called Drawing on the Web because most everything we will do is—or could be—rendered in the web browser itself (unlike static image formats).
Drawing on the Web

Introduction and Overview
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.
Outline

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

HTML and CSS

Introduction and Overview

Review foundations

Explore new modes of implementation
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Introduction and Overview

SVG

- Scalable Vector Graphics
- Hand-coding
- Illustration software
- Creating an icon system
- Integration with CSS
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CSS Animation

Introduction and Overview

Transitions
Transforms
Animation
GitHub

Iterative approach to creative code

Maintain snapshots of work

Project collaboration
Drawing on the Web

Introduction and Overview

JavaScript

Review essentials
Enhance interactivity
Animation techniques
Objects, properties, and methods
The HTML canvas element allows you to draw raster graphics on the fly.

All canvas drawing is done with JavaScript.
Drawing on the Web

WebGL

Introduction and Overview

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

This course is not:

- A beginner-level class
- An advanced programming class
- A comprehensive introduction to JavaScript
- A game development class
- Fixed/static
“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

The art happens here

MTAA ca. 1997

www.mtaa.net/mtaaRR/off-line_art/snad.html
Introductions

Joshua Clayton
Clinical Associate Professor
jclayton@cs.nyu.edu

Office hours
• Thursday, 10:30–11:30 a.m.

Room 420, Warren Weaver Hall
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Drawing on the Web

Introduction and Overview

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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 encouraged in class during project development sessions.

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.
Drawing on the Web

Syllabus: Grading Rubric

Introduction and Overview

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

The syllabus, reading, and first assignment are posted to class website.

[link](cs.nyu.edu/courses/spring20/CSCI-UA.0380-001)