Session A: A4819 – Site to Site – Site to Web

Troy Conrad Therrien and Chris Barley Thursday 7-9pm 300 Buell North

Architecture is online. Recent achievements in ubiquitous computing, machine intelligence, deep learning, ambient locative media, mobile and embedded devices, machine to machine systems and other forms of the "Internet of Things", coupled with the proliferation of cheap networked sensors and actuators has brought us to a moment in which architects no longer have the comfort of speaking of connected environments in the future tense. The technology for connecting and orchestrating physical spaces digitally are not simply accessible, they have become pedestrian. And still they have yet to fully penetrate either the architectural imaginary or the space of architecture production. This course aims to do both simultaneously.

Methdology

The course will proceed reflexively. We will investigate the necessary means for designing, representing and analyzing architecture online by producing them and using them ourselves in the process. Specifically, we will build a platform for putting architecture online, a collection of networked sentient objects and the protocols and standards that will allow them to communicate digitally with one another and spatially and organizationally with architecture. Unlike the hoards of tech behemoths and start-ups vying to become the platform for this coming wave of techno-social-spatial renewal, we will integrate the languages of technology with architecture. We will collaboratively design and implement a public application programming interface, an API, that integrates architectural representation with technical protocol.

Partnerships: Venice, Office*US*, Studio-X, Experts

We will partner with the seminar "Corporate Avant Garde" (A6453) in taking a hypothetical construct as our object: the US Pavilion in Venice as the site for a hypothetical architecture office, Office*US*. In addition to shared sessions and objectives, we will likewise consider the future of the architecture office as a multifarious space, as part-studio, part-gallery, part-event space, part-publication house, part-factory, part-school, and other parts as yet unknown. We will use Studio-X locations to test our work in a globally distributed network, allowing us to consider questions of culture, language, time, and other misalignments, and to insert our work into a live architecture discourse and practice. In parallel, we will work with a group of technology experts who are responsible for some of the major advances in the field we will enter.

Session A

In Session A, students will design and build the furniture, climate control, lighting, and display systems, surfaces, and other objects to address one or more segments of the above programmatic spectrum of Office*US*. Powered by a $35 Raspberry Pi mini-computer running Node.js on the Linux operating system, these objects will produce and consume digital information, collecting information about and/or producing effects in their environment. Students will also design the technical protocols and representation systems for tapping into these inputs and outputs.

This initial iteration of the platform - objects and their interfaces - will be tested at the end of Session A with a final review in the form of a hackathon. We will invite expert programmers and designers for a day-long event at Studio-X NYC to tap into the platform with the students and both build applications on top of the platform and help to improve the platform itself.

Technology Stack

The technology stack of Raspberry Pi mini-computer powered by the Node.js application/web framework provides a favorable learning curve. The only required programming language for the course is Javascript, a front-end web programming language that Node.js allows to control intensive back-end processes. Javascript is both the most common used language in open source projects, and continues to grow for its combination of power and ease of use. In short, you've likely seen it, maybe even used it, and we are going to teach you to be a Javascript ninja by the end of the course. You will use it to control web servers, to construct a robust RESTful and streaming API, to tap into cutting edge NoSQL databases, connect to a battery of andalog and digital sensors, cameras, microphones, LEDs, servo motors, and a seemingly endless array of other input and output mechanisms.

Collaborative Infrastructure

We will also extensively employ Github in our entire process. Since its founding in 2008, Github has fueled the explosion of open source projects and online collaboration. We will use it to incorporate a lean, iterative design methodology including cloning, forking, pushing and pulling to produce a clean means of collaboration in small groups and as a large class. You will determine new ways for architects to incorporate this process into their design practice, and will likely choose to use the method for a number of other tasks going forward, as so many users have.

The first assignment is to begin researching your given cultural topic (eg. fashion, lifestyle, music, etc) in terms of energy and to use social media as a means of organizing and displaying your research.

Part 1 - Signup

First, sign up for Pinterest, Tumblr and Twitter (if you haven't already). On Tumblr, create a new blog with the title theenergyissue-firstname-lastname.tumblr.com. Follow theenergyissue.tumblr.com from your Tumblr account, follow all boards on pinterest.com/theenergyissue from your Pinterest account, and follow @theenergyissue on Twitter. Then, email us (tct2003@columbia.edu, chris@th-ey.co, cmb2117@columbia.edu) with links to your Tumblr blog, Pinterest account and Twitter username and let us know your cultural topic. We'll then add you as a contributor to the Pinterest board corresponding to your topic and follow you on Tumblr. You should also install the bookmarklets and browser extensions from Tumblr and Pinterest to be able to post content directly from other web sites.

Part 2 - Research

Next, prepare your research. Your focus can be contemporary or historical, but the objective should be to make discoveries that translate into visual content for an online audience. Which is to say, what we are looking for is not simply matters of fact, but matters of concern, points of interest, pop culture, marginalia and startling discoveries. To get a sense of the flavor of the research we are looking for, visittheenergyissue.com and read through some of the tumblr blog posts there. You can also sift through @theenergyissue on twitter. Throughout the next 6 weeks you will be exploring your cultural topic, so the point of each of these exercises is to make discoveries and try to find points of entry for a final project.

Part 3 - Pin 10+ images on Pinterest

In order to incorporate a visual method into your research, you will pin a minimum of 10 images to the Pinterest board of The Energy Issue that corresponds to your topic -- be sure to add a caption to describe the image and why you think it is interesting (though keep it short). You can provide original content (eg. make your own images) or pin things you find on the web or scan from the library, etc.

Part 4 - Post exactly 5 GIFs on Tumblr

Post exactly 5 animated GIFs on your energy issue Tumblr blog using the PHOTO post type. This can be 5 separate posts, a single post with 5 GIFs, or some other combination. Each post should have a caption (50-200 words) describing what's going on and why it's interesting. Be liberal with your use of tagging -- you should use "energy", the tag of your topic (eg. fashion, sports, ocean, etc) and any other tags relevant to your post. Email us before next class with links to all of your Tumblr posts.

You can use any method you like to make your GIFs. The browser extension Christina showed us is MakeGIF.

Thanks for your contributions to class last night. Before moving on to next week's assignment, we ask that you clean up any issues that came up yesterday in conversation with your submission of last week's assignment (eg. being sure to post photo posts to Tumblr, uploading to The Energy Issue Pinterest boards rather than your personal boards, etc.).

Also, a reminder to please let me know by end of day today (6pm) the openings in your schedule next Tuesday and the following Tuesday(Sept 16 and 23). Please also let me know today by the same time if you are able to meet earlier in the day on Thursdays for class (ie. 5-7 or 6-8).

Finally, here's the assignment:

1. (NOTE this is new) Based on comments from last night, either update one of your GIFs from last week, or make a new one

2. Write 100-200 word position statement that responds to:

- What are your goals for this class?

- As an architect (urban designer, planner, etc) intend to use digital/online content to align with these goals?

- Who is your intended audience for the work you will do in the class?

3. Begin to explore Tumblr, Pinterest, Twitter, Instagram and Facebook to see what works, how the medium is designed, and re-blog 2-3 examples of Tumblr posts and re-pin 2-3 Pinterest pins that are exemplary of the type of content you are interested in producing in relation to your strategy from #2 above.

4. Create 5 pieces of ORIGINAL CONTENT for:

- Pinterest (long format -- explore the limits and the sweet spot of the platform)

- Tumblr (animated GIF)

- Instagram (square format image or video)

- Twitter (140 characters, or 1 image and 116 characters... I think)

- Facebook status update post (if you're not on Facebook, you can mock this up in Photoshop)

5. Write 50 words describing each of your 5 pieces of content that describes your thinking/strategy.

Create a video supercut (see http://supercut.org/) of 60-120 seconds using a minimum of 10 found and/or original video clips (though you can use many more if you like) that explores a particular aspect of your cultural category in terms of energy. The supercut should be super precise. The purity of the experiment is to have you attempt to focus on one thing, to explore a hunch you may have about a potential insight into a trope, pattern or trend. The ability to make a supercut will be evidence of your discovery. You won't be bound to this topic for the rest of the class, but think of this as an opportunity to take an interesting find you've made so far and explore it further as a deep dive.

If you haven't already (it was due Thursday evening) please send us your original position statement immediately and begin to develop version 2 for Thursday's class. You should increase the length from an original 200 words to 250-300 words for this version -- this is a strict requirement.

Finally, if you didn't complete the previous tasks, you need to do so by 2pm Friday (the day after class this week). You should do your supercut first, then catch up on your missed assignments. Send Chris and I links to each post by the deadline.