Introduction

Harvard SEAS is a strange place.

Think about it. A young school, not fully detached yet from FAS and GSAS, no official departments yet with pseudo-departments in the concept of "teaching areas", teaching areas that don't directly match the degrees offered, and often no clear path from your first day in the door to the sheepskin at the end. It's often said that SEAS is in startup mode -- and that's definitely reflected in its structure, or lack thereof.

The SEAS Academic Visualizer (SEASAV) is an attempt to give structure where there's very little. It focuses on *connections* -- how research interest areas connect to degrees, how degrees connect to teaching areas, how teaching areas connect with faculty. The hope is that by drawing these connections in a very clear and visual manner, we can funnel visitors to more in depth content and help them understand how SEAS works.

Project History

The SEAS Academic Visualizer was attempted once before, in the spring of 2013, through hiring an outside freelancer, but the Office of Communications wasn't quite satisfied with the results. SEASAV 1.0 was a tabular depiction of our content; when you clicked on a name in one column, the other columns would close up to show only content related to that item. It worked, but it didn't give a feel for the interconnectedness of SEAS at a glance, and it only connected items in adjacent columns -- which meant that specifically that Faculty were not connected to degree programs, a potentially useful connection to know

In Fall 2013 we observed that CS 171 would be offered in the Spring of 2014 and available to Extension School students. We were ready to try again, this time with all the design and implementation in-house.

About the Developer

As the primary developer for the SEAS public-facing website, it was decide that I would take the class and apply what I'd learned to SEASAV. I'm a web developer with nearly 15 years of experience in everything from good old hand-tagging of XHTML to dealing with XML/XSLT/XPATH-based content management systems to developing custom Drupal modules. I had had some experience with javascript and jQuery, but none with d3.

More interesting, perhaps, is that my BS in Computer Science came with a rider -- Studio Art. Art taking a good portion of my free time (everything from professional pet portraiture to volunteer traditional feature-film animation), the combination was perfect for a foray into data visualization.

Meet the Team

While this project might not be owned by an in-class group due to its nature as a work-related project, there is still a team involved. For the purpose of the class, it might be best to think of

this team as my clients -- they provide me with feedback, data, and good questions. While we'll seek feedback from a larger group after the completion of the semester, the core group is as follows:

- Paul Karoff, Executive Director of Communications, SEAS: Project sponsor. Bounces ideas and helps clear the way for obtaining data.
- Eliza Grinnell, Communications Project Manage, SEAS: Design sounding board and local branding expert. Source for SEAS-related graphics.
- David Hwang, Assistant Dean for Education, SEAS: Master of data relating to SEAS programs and teaching.

The team will be kept up to date on all progress for the duration of the project and will determine when it's ready to go live on the SEAS web site.

So what *are* We Trying to do here?

Put simply, we're trying to take a confusing place and make it make sense. It can take years for people on the inside to understand SEAS structure -- prospective students don't have that kind of time. We have a limited shot at their attention and time, and we need to use it as best we can. Pages of text, argued and fought over and lengthened repeatedly by various stakeholders aren't going to do it.

We need something that says right out: We have an unusual, interdisciplinary structure -- but you CAN find what interests you at SEAS, and we can help you find it.

Our Data

- Our Data
    - The website
        - What we're using the data for now
        - What we needed to add to make this work
    - Data manipulation
        - The Drupal module (what it does)

The First Steps

- The first steps
    - Initial network design
        - Problems
    - Initial square design
        - Problems
    - First run radial design

- Implementation
    - The final design
    - The Drupal module (how it works)
    - The D3 code
- Evaluation
- Future considerations
- Conclusion