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GIS Seminar: Agent-Based Shenanigans
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Project Proposal

A Dynamic Agent-based Sitemap-Visualization Plug-in for WordPress

Blogs! One of the frustrating things about writing a blog is that once things get pushed past page three or so, unless someone finds them in a web search, they're pretty much dead to the world. This can be frustrating if you're trying to engage new visitors to the site who might be equally or more interested by older work.

I currently have about 15 pages of posts, 80 in total, and I've spent a tremendous amount of time writing them. Many of them are foundational, setting the stage for posts that have come later. I'd really like people to engage with them and read the blog less linearly through time. To this end, I'd like to put them all in the same place, arranging them attractively and sensibly, letting people navigate my writing as though each piece is a stop on a subway map, a place in a growing city of thought. The post categories and post tags in WordPress, the now omnipresent blogging and general web content management system should allow me to do just that.

I propose to use metadata from each of my 80+ posts to construct a randomly dynamic, though static(not strongly responsive to direct user input), 'map' of my blog that:

- Shows metadata clearly and engagingly, primarily by grouping posts by category and sub-category
- Provides meta-information to users such as with a JavaScript OnMouseOver event
- Gives some indication of the ways categories interact with each other and how strongly they're related. (posts consistently in both categories?, many overlapping tags?, posts that link between each other?)
- Grows
- Tells me something about my work that I didn't already know
- Is stylistically a cross between the DC Metro map and the London Tube map

I want to accomplish this by making each category into a 'transit line', the posts being 'stops'. The sub-categories are 'branch lines' off the main trunk. Strongly related posts might be served by two lines or have a 'transfer tunnel' or something like that. There might be 'land-masses' or 'zone boundaries' grouping stops in the same conceptual 'area'. A long silent spell from the blogger might be represented by a growing body of water or a desert somewhere on the border of the map. Basically, I want to apply every cartographic trope I reasonably can to something completely aspatial.

How is this agent-based modeling? Because both the input and the end result should be pretty complex, I'm going to use a lot of iterative decision making processes to let the categories and places locate themselves on the grid kind of like a game of musical chairs. I want to use a lot of randomness to create a completely new result each time that will inevitably emphasize new parts of the data and be more engaging and intriguing for users, perhaps even pleasantly maddening if they really try to explore it a lot.

On the back-end, the map will use PHP and probably javascript to create a Scaleable Vector Graphic(SVG) image. SVG is essentially just a flavour of XML, so it can do all the fun things websites

can do like have links and events and interaction. It's also readable by all modern browsers and can be indexed in search engines.

This project would be written as a plug-in for WordPress, and thus would be extensible to other blogs. Once enough testing and debugging was done, the plan would be to make the code available to the general public. There are currently more than six million active WordPress sites, so that isn't quite as boring as it sounds. Also, people on the Internet freaking love fantasy rail maps, so they'd probably eat this up if it turned out well.