

Google Summer of Code 2007 Visualizations

Data Visualization (Themes : Aspects) for Manakin

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Timeline Visualization

The timeline visualization will be a Manakin theme that can easily be integrated into other themes. Due to the nature of themes (their ability to have JavaScript embedded) the timeline can be accomplished without the need for an Aspect. The purpose of the timeline is to show the items in the repository in such a manner that users can better understand the contents of the collection.

I began to look into client side timeline libraries. The best one I found was Simile's Timeline. This package is able to create an aesthetically pleasing timeline, and is done using JavaScript.

The goal is to create an XSL page that will take the DRI document, parse out the date information, pass that data to the Simile's Timeline JavaScript, and display the timeline on Manakin's produced XHTML page.

At this time there are some design questions about creating the timeline. 'Hot Zones' in which the scale of the timeline is distorted to space out tightly grouped objects is possible. The difficulty is in using XSLT to determine tightly packed indicators on the timeline, and to thus stretch that section of the timeline.

Map Visualization

Similar to the timeline visualization the map visualization will be accomplished with a Manakin theme. In essence a Manakin theme is an XSL file that is used to convert the DRI document into a document suitable for presentation. This XSL file will have JavaScript embedded into it. The XSL will parse out location information from the DRI document, and create markers on a map view. Like the prior visualization the goal of this is to give the user a partial understanding of the collection.

To accomplish the map view I have decided to use the Google Maps API. I've read the documentation on the API and at this time feel it will be able to accomplish my needs.

Slideshow (User Bookshelf) Visualization

In my original proposal I proposed a third visualization, a graph view. Upon initial meeting with my mentor we both agreed that this visualization seemed out of place. Together, we came up with the idea of a slide show/user bookshelf component. This would require me to create a Manakin Aspect, and possibly a theme.

As of right now the design of the bookshelf is very preliminary. In essence the user would be able to place an item on their bookshelf. If the user selected their bookshelf they would be able to see items they have selected. They would also be able to see a slide show of the items.