Patchwork Prototyping a Collections Dashboard

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The Problem
As online aggregations of digitized cultural heritage material grow larger, it becomes difficult to understand the size, scope, and significance of collections as curated wholes. For physical collections, users are able to rely on institutional infrastructures that include mediating librarians, archivists or curators. Usage logs suggest that online users are frequently dropped into the middle of digital collections/aggregations without easy access to contextual cues that help them develop "collections understanding" [1]. This is further exasperated by item-level and collection-level descriptive practices that are not mutually supportive.

This research explores how information dashboards could aid users by providing a "birds-eye" view of digital collections.

Method
To explore the problem space of collection dashboards, we adapted a user-centered rapid-prototyping method known as "patchwork prototyping" [2]. This method bridges the gap between low-fidelity paper-prototyping methods and high-fidelity software prototypes by taking advantage of open-source software and freely available web services such as ManyEyes and the Google Visualization API. Over one hundred digital humanities scholars, librarians, archivists and museum professionals were consulted in conference demonstration venues. Like web-based "crowdsourcing" this recruitment technique required minimal time commitment from individual participants, but allowed us to rapidly generate concepts about what kind of collections dashboard visualizations would be most useful.

Work in Progress
The dashboard above was generated using collection-level metadata from the IMLS Digital Collections and Content OAI-PMH provider. Because this metadata is created by the project, its consistency and coherence made visualization easy. However, just as metadata quality presents challenges for developing search and retrieval services, "unshareable" metadata also raises significant barriers to building automated visualization services [3]. In particular, violations of the Dublin Core 1:1 Principle skew visualizations because statements include properties of both physical and digital manifestations [4]. While this may limit the usefulness of dashboards for end-users, it suggests that they may be valuable as a diagnostic tool for metadata creators.

References