ABSTRACT
In information system, there are many techniques for extracting data, such as semantic elements from author, title, or subject tracings from MARC or other records, to express relationships within the data. The addition of visualization techniques stimulate the viewer because the graphic design of the data forms a purposive communicative act. Applying Sperber & Wilson’s theory of relevance helps explicate a model of feature integration applicable to image-driven, user-guided exploration of digital collections. The model, implemented as an alternative search engine in a college library, is being tested in late 2012, and may result in creating a well-founded methodology for exploring repurposing digital objects for greater user engagement.

Categories and Subject Descriptors

General Terms

Keywords
Meaning construction; relevance theory; contextualization

1. INTRODUCTION
Several factors combine to encourage reusing digital objects for greater user engagement with digital resources, or to facilitate digital library objects for other needs, such as creating personal sub-collections, or enabling innovative explorations of the collection in engaging ways [1], such as thematic collections, image-driven queries, etc. As the result of several focus groups conducted using humanities and social sciences faculty and students, a candidate interface was created and is being tested.

Rather than create only an aesthetically engaging interface, the interface’s interactive behaviors and content were mapped to Sperber and Wilson’s theory of relevance [2], a consistently popular model of language [3]. In brief this theory, often used as a counter to Grice’s models [3, 4], is governed largely by two factors: contextual efforts adding, strengthening, weakening, or canceling new info and the effort needed to process data, to recovering facts.

Another main consideration in their theory is the relationship between speaker/hearer, or in information systems activities, we translate to system designer and system user. The designer and users roles are flexible, at times passively receptive, other times more actively searching for salience. This process, called explicature, has subactivities, such as “bridging”, where the viewer tries to interpret [semantic and visual] references which establishes a sequence of preattentive and focusing behaviors: e.g., recalling previous discourse and engagements, the influence of the immediate situation, and calling upon stored knowledge; “enrichment” [5] or providing missing components needed for interpretation, higher-order [non-communicative] explicatures, and weighing weak/strong implicatures. The latter consists of implicated premises, the part of context that the viewer must construct to recover the implicated conclusion, which is the main point of the “utterance”, and the implicated conclusions [2, p. 194-8], which tie the hearer’s/viewer’s passive engagement to the speaker’s/designer’s intentionally created message. In this way the message - visual and interactive in an interface - also binds the message’s interpretive possibilities, and hence responsibility, back to the speaker/designer.

2. RESEARCH
This project focuses on three components: integrating records from existing stores to create a test bed collection, expressing user interests via the interface realizing Sperber & Wilson’s theories, and measuring the affect these have on users’ ability to “recover facts”, effect of salience, and implicated conclusions. As user experiences with visual resources and interfaces expand and appreciation for them grow [6], some types of information visualization techniques [e.g., 7] are likely solution to ensuring the usefulness of records and for improving the user experience.

2.1 User interests
Between late 2008–early 2011, a series of seven focus groups were conducted with students and faculty. The motivation for these meetings was the end-users’ dissatisfaction with available systems. As a result of the focus groups a great many issues emerged. Of these, we were able to model some responses to their concerns with (1) the “silos approach”, or having to draw from multiple, independent information storage and retrieval systems, (2) too much drilling down in the interface to make decisions about resources, (3) inability to engage “more physically” with visual objects, and (4) exploring rather than just searching/browsing for materials.

Consequently, the users wanted to retain searching for known entities for resource identification and location, but wanted also...