COLLEX

a flexible environment for collecting and exhibiting digital resources

13 May 2004 : Version 1.0 : Bethany Nowviskie

BACKGROUND

Tool-building work at ARP is meant to support six basic scholarly tasks, while opening rich digital collections like NINES and the Rossetti Archive to the interpretive interests of teachers and students. The six tasks (*arranging*, *comparing*, *transforming*, *discussing*, *commenting* on, and *collecting* texts and images) are addressed in a variety of ways by our toolset. **Juxta** is a collation environment that handles *comparison* and *comment*. **Ivanhoe** is a *transformational* tool that also permits *comment* and *discussion*. **Collex** – the tool described here – is an authoring and display environment that allows users of digital archives to assemble, annotate, and exhibit virtual collections of texts and images. It therefore addresses the two remaining research tasks of *collecting* and *arranging*, while also permitting users to *comment* on their private collections and to make those collections and comments public in the form of curated exhibits.

DEFINITIONS

A *collection* is a user-created list of references to electronic objects (generally texts and images) stored in a research archive. These references may be general (pointing to the entire object) or, in the case of XML-encoded texts, may point to certain fields within the object. Collections are unordered sets (subject to algorithmic re-orderings) and may be annotated and shared.

An *exhibit* is a user-created presentation commenting on and referencing one or more collections. Where collections are unordered reference sets, displayed in a default system interface, exhibits are deliberately structured and designed for rhetorical purposes. Exhibits are meant for online publication but can also be formatted for printing.

REQUIREMENTS

Basic requirements for the Collex environment fall on two fronts: interoperability and user interface. Collex should be a plug-in environment applicable to any digital resource that uses XML to encode its textual data and that stores its images as discrete files on a server. It should use XForms and Xpath to build collections and exhibits (stored as XML), and users should have the option to edit default XSL stylesheets driving exhibit display, or to export their creations for editing and display in other environments. Material must be available to users for collection while they browse an archive as well as through a dedicated search interface. A resource may be collected with a simple pointer ("add this object to my collection") or users may specify particular fields in an XML file that they want to collect ("collect this object and record its author, genre, and date"). Also required is a simple system for allowing users to log in, save and return to their work, and share both collections and exhibits. In peer-reviewed venues like NINES, a vetting system for exhibit submission may be desirable.

BUILDING COLLECTIONS

Use Case #1: Browsing NINES

A scholar is browsing the NINES holdings in Romantic poetry and wishes to save some poems to read later. He clicks a small icon next to the title of the poem or (in cases where he wants to collect the whole document) at the top of the page. When he clicks the first of these icons, he is prompted to log on, which he does by creating and confirming a user name and password. From this point on, when he browses NINES, he does so within a frame that shows recently collected items at the bottom of his screen and gives access to the Collex interface. With the collection of each item, the user is prompted to enter some text as annotation. When he's finished browsing and collecting documents (or at any point in the process), the user can open the full Collex interface to access collected objects, sort and re-organize collections (chronologically or alphabetically either by title or author/agent), edit text annotations, create further annotations and presentational structures that transform collections into exhibits, and optionally make these exhibits and associated collections available to the public either in a straight-forward way or through a system for peer review (see Use Case #3 below).

Use Case #2: Searching the Rossetti Archive

A professor (a repeat user of Collex) wishes to assemble an instructional packet for use in a course on the Pre-Raphaelites. She logs in to the Collex system from a link on the Archive's main page, opens the full Collex interface from the frame at the bottom of her screen, and determines that none of her existing collections is appropriate. She knows which works she wants to include, and therefore opens a

search engine integrated into the Collex tool and searches for her desired objects. The search output appears with collection icons or radio buttons next to listed objects. If she wants to collect one or more objects as a whole, she only needs to indicate that by selecting their buttons. If she wants to collect a certain element within the object (for instance, a single poem within a book), she must navigate to the object and select the collection icon on the desired element. Once she has finished building her collection, she opens the area of Collex that supports exhibit design, creates an exhibit (see Use Case #4 below), and chooses which output format is most useful for her students. She can make the exhibit available to them online at a particular Archive-supported URL, export the XML and XSL that drive the exhibit and mount it on her own server, choose a default XSL:FO stylesheet that formats the exhibit for printing as a course packet, or elect any combination of these outputs.

CREATING EXHIBITS

Use Case #3: Scholarly Publication

The scholar in Use Case #1 above is satisfied that he has assembled an interesting collection of NINES materials and has annotated the collection in useful ways. He would now like to augment his commentary and structure the collection in order to highlight certain trends in Romantic verse, with a view toward publication in NINES. In other words, he wishes to create an exhibit. His first step is to open a dialog interface that allows him to select which of his saved collections is to be exhibited, and whether he wishes his text annotations and pre-defined sorting parameters to be imported along with the collection(s). In this case, he chooses

his collection of Romantic poems and asks that they keep the chronological order he has defined for them. He also imports his object annotations for reference, knowing that he will re-write them in the Collex exhibit interface. When the import process is complete, a new area of Collex has opened up. This space permits selective re-orderings and removal of objects, allows the user to edit his existing annotations, and provides fields in which introductory commentary and commentary on collection subgroups can be placed. When the scholar has finished commenting on and organizing his exhibit (a process which includes choices about linking, excerpting, and display – ie. should images appear in pop-up windows or inline? should collected poems be referenced with a title and hyperlink, or should their text appear in full?), he is given an exhibit pre-view, utilizing the default NINES stylesheet. This gives him the opportunity to make changes to his exhibit or, optionally, to access, clone and alter, or wholly replace the stylesheet associated with his exhibit. When he is happy with the appearance of the exhibit, he has two options. He can make it freely available on a portion of the NINES site earmarked for un-vetted exhibit contributions, or he can submit it to the editorial board for Romantic scholarship for peer review and possible publication as a NINES-endorsed exhibit. Both of these actions can be taken from the exhibit interface to Collex. The scholar saves his exhibit and logs out.

Use Case #4: Pedagogical Material

The professor in Use Case #2 above has built a collection of Pre-Raphaelite texts and images for her students to study as part of a college course. She would now like to sort the collection according to the particular themes that structure her

syllabus and present each object with some commentary meant to guide her students' reading. In other words, she wishes to create an exhibit. Her first step is to import her collection into the exhibit interface to Collex. She brings the collection in without any annotation and as an unordered set. She begins her work by defining a few key terms relevant to her syllabus (ex. "ekphrasis," "gender," and "economies") and relating each of the objects in her collection to one of the terms. She then sorts the collection and uses this structure as the basis for her exhibit. She writes some commentary on each object and also writes a short introduction to each of her three groups. At the head of the exhibit itself, she pastes her course syllabus. After checking that the default exhibit stylesheet for printing renders her work properly, she prints a copy, which she can then have reproduced for students. (An ideal version of Collex would allow her to send the exhibit off to a partnered press for short-run digital publishing.) She also posts her work to a section of the Rossetti site reserved for pedagogical exhibits, using in this case a default stylesheet for online display, and notes the URL for her students' reference. The professor saves her exhibit and logs out.

USER INTERFACE SKETCHES

Collecting While Browsing

Collecting While Searching

Framed Collex Field

Full Collex Interface for Collections

Full Collex Interface for Exhibits

Browsing Collections and Exhibits

Sample Collection Output

Sample Exhibit Output

XML SCHEMA

Sample Collection File:

```
<collection cid="0001">
    <collector>My Name or Group's Name</collector>
    <perspective>generic category label for sorting, like "art historical,"
"bibliographical," etc.</perspective>    <title>Title for this Collection</title>
    <keyword>repeatable, and other collection metadata tags can be placed here
as needed</keyword>
    <updated>standardized date here</updated>
    <commentary>commentary on this particular collection
(optional)</commentary>
    <contents>
        <group gid="001">
            <title>required if optional groupings are used</title>
            <groupnotes>optional commentary and/or linking to
RAWs</groupnotes>
            <object oid="001" path="path/to/a/RAD/or/RAP.xml">
                <archiveinfo>
                    <title />
                    <type />
                    <author />
                    <date />
                    <genre />
                    <model />
                    <any_other_Archive_field_you_pull_in />
                </archiveinfo>
                <thumbnail>path/to/an/image.jpg</thumbnail>
                <annotation>My notes on this object with minimal
rendering and links.</annotation>
            </object>
        </group>
    </contents>
</collection>
```

Sample Exhibit File:

```
<exhibit eid="001" stylesheet="01" >
    <curator>My Name or Group's Name</curator>
    <perspective>generic category label for sorting, like "art historical,"
"bibliographical," etc.</perspective>    <title>Title for this Exhibit</title>
    <keyword>repeatable, and other exhibit metadata tags can be placed here as
needed</keyword>
    <updated>standardized date here</updated>
    <commentary>
        <unit uid="01">
        <title>optional, if titles for each commenary unit are desired</title>
        <p>Words words <link
path="path/to/a/RAD/RAP/or/RAW.xml">link to Archive file</link> words
words.</p>
        <p>Words words <objectref collection="0001" group="001"
id="001" display="inline, popup, or list-link">link to collected
object</objectref> words words.</p>
        </unit>
    </commentary>
    <collection cid="0001">
        <description>A collection stored elsewhere to be sucked in.  This tag
is for my own commentary on it in the context of this exhibit.</description>
    </collection>
</exhibit>
```