VIRTUAL FASHION COLLECTIONS FOR THE NEW MILENEUM: INTERDISCIPLINARY APPROACHES TO DEFINING DATA STRUCTURES.

Kathi Martin
Assistant Professor, College of Design Arts
Drexel University
33RD & Market Sts.
Philadelphia, PA, 19107
Phone: 215-895-4917, Fax: 215-895- 4917, martink@drexel.edu

Abby A. Goodrum, Ph.D.
Assistant Professor, College of Information Science & Technology
Drexel University

ABSTRACT

The work of fashion designers and fashion scholars in the digital age includes the production of visual images, the creation and management of databases and the ability to use advanced network and information technologies to improve access to digital images and information. The College of Design Arts and the College of Information Science and Technology are partners in creating a program designed to provide electronic access to a Historic Costume Collection and to train students to work in an interdisciplinary team to create virtual museum collections for the 21st century.

This paper reports on the first phase of this collaborative work to identify user-based heuristics for classifying objects in the historical fashion collection. Working in consultation with systems, museum, library science, and fashion professionals, and following the guidelines of the Museum Educational Site Licensing Project (MESL), data descriptions were developed to allow flexible searching of the collection across domains. The lack of standardized classification structures or universally accepted vocabulary for fashion collections has led to the adoption of a hybridized collection of terms from Fairchild's Dictionary of Fashion, VRA Core Categories, LC Descriptive Terms for Graphic Materials, The Encyclopedia of Textiles, Fabric Glossary by Mary Humphries, Vocabularly of Basic Terms for Cataloguing Costume, and the Longhouse Reserve Classification of Textiles.

The focus of this paper is a presentation of the data description template, and reporting of preliminary results from a study conducted to evaluate the template's use by indexers from two domains: fashion design, and library science.

INTRODUCTION

The Drexel Historic Costume Collection had its beginning in the 1890s when members of the Drexel family began assembling a collection of notable garments, accessories and textiles. The collection represents 200 years of historic costume and fabric design. Among the items are eight gowns by Charles Worth. One gown, complete with kneeling pillow, was created for Minnie Drexel Fell Cassatt's* presentation to the Austrian Court. The extensive lace collection has been featured in an outstanding resource book on this textile (Veksler, Bella, Lace: The Poetry of Fashion, 1998.) Shoes, millinery, parasols, gloves and other accessories in the collection present an opportunity to study an entire period ensemble. The collection is estimated to contain approximately 7000 items, although that number may prove to be much greater after a complete inventory of accessories and textiles is completed.

While some documentation of the collection exists on a few 3 x 5 cards, the bulk of the collection is undocumented. The basic need is to bring the Historic Costume Collection out of the closet so that it can be accessed by a variety of users. Creating a searchable database of digitized images and supporting documentation for each piece offers a means by which the collection may be accessed by students, scholars, designers and other interested individuals around the world.

From the earliest stages of the joint initiative to create a digital archive and website for Drexel's Historic Costume and Textiles Collection, it was apparent that there would be a need to define data structures in a manner that would support both data entry and data retrieval. Moreover, data definitions would have to support the diverse backgrounds and skills sets of designers, technologists, and scholars. Determining a shared vocabulary from this varied user group and developing a comprehensive, understandable hierarchy to categorize the items from the collection became our first priority.

REQUIREMENTS ANALYSIS

To begin to address this situation we undertook an analysis of potential users and resources. The purpose of the analysis was to provide a user-centered framework for designing the database and to identify low cost methods for delivering the database. Agrant of $4200 was secured from the College of Design Arts to create a working prototype for the web site. The prototype requirements are a web enabled archival form, design of the database, digital images of 15 items from the collection in 3d panorama and design of the interface. The analysis involved nine steps:

1.Define our mission and responsibilities.
2.Identify population to be served (users).
3.Identify users' needs.
4.Define access points based on needs of users.
5.Identify internal as well as external sources of database creation and support.
6.Identify internal (free) resources for data input (catalogers).
7.Evaluate consistency of catalogers/identify training needs.
8.Develop the database using a small sub-set of items from the collection.
9.Evaluate pilot-test database.

Interviews with students and faculty at the College of Design Arts as well as feedback from fellow fashion design educators at the ITAA (International Textile and Apparel Association) conference held in Dallas in October, 1998, and the CSA (Costume Society of America) Symposium in Santa Fe in May, 1999, identified three primary user groups. For all groups of the user population defined, a questionnaire was used to identify areas of interest, needs and uses. Additionally, we sought to identify frequency of Web site use for these interests. The following is a brief summary of these user groups and their information needs as identified in the questionnaire.

Designers (Fashion) and Designers (Textile/Fabric).

These two groups' conceptual models are formed by their design school training and/or by their work experiences. Their search for information on the history of costume is accomplished primarily via books, articles and museum visits. Exposure to visual representations (plates, slides and actual garments) is very important. They cite their own hands-on work with fabric and clothing as being very important to them. Similarly, work done in tailoring, draping, pattern making and construction skills was considered more important than information gleaned from books or museums. Detailed depiction of sundries, finishes, linings and construction of historic costume of all eras is a valuable point of inspiration for the designer of contemporary garments and absolutely necessary for the authentic replication of historic costume. While some members of these groups are using CAD and the WWW for information gathering and work-related activities, the majority are not.

Students

Our mission as a University-based collection is primarily to educate. Responses from students in our own program were therefore extremely important. Our design students shared many of the same information needs and attitudes as the designers groups. They are more comfortable using the Web for research and in using CAD for the mechanical aspects of design and pattern making. In addition to the questionnaire, we interviewed and observed a fashion design graduate student conducting research on a Charles Worth gown in the collection. This student exhibited a greater need for supporting documentation and published materials. A number of questions were raised for which there were no ready answers. Why is the kind of information from one garment to the next so inconsistent? How do I find out more about the Drexel family and where the owner of the gown fits into the family hierarchy? What other gowns do we have that were designed by Worth, and for whom were they designed? What other types of garments were being designed at this time?

Scholars (Historians, Archivists and Design Faculty)

Scholarly research in historic costume extends the need to examine the actual objects both visually and physically. Photographic surrogates are seen as less useful than the objects themselves. The lack of adequate depiction of minute detail and textures and the inability to see all sides of an object, including the inside, were reasons cited for needing access to physical objects. Scholars required greater need for supporting documentation including journal articles, books, historical information, provenance and exhibition catalogs. These groups used the Web for research less often than libraries and museums, citing a lack of full-text historical manuscripts and exhibition records available.

DATA DEFINITIONS

In examining the needs of our user populations, several themes emerged. First, all users require access to some form of visual surrogate of the object. While this surrogate is not considered an adequate substitute for visual inspection of the actual object, many see it as an important mechanism for determining if an object is worth the time and effort required to inspect it personally. Second, users require access to multiple views of a garment, including inside seams and details of construction, closures, embellishments, weave, etc. Third, many users require additional supporting documentation and would welcome access to provenance and bibliographies of published sources of information on a garment.

In order to support the visual information needs of our users we have decided to have each object digitally photographed in 360 degree multiple views. These still images will be morphed into a 3-dimensional navigable space using QuickTime VR. As a first step in providing a searchable database, we devised a cataloging form to document each garment in the collection and to link to the visual surrogates. The cataloging form was created by adapting existing classification structures for art images, fashion and textiles to the needs of our users. We borrowed extensively from the Core Categories for Visual Resources (VRA Core), the fields used in the Museum Educational Site License Project and the Longhouse Reserve Fabric Classification Guidelines to create an amalgam of existing, specific and non-specific historic costume fields that we as historians, designers, scholars, students and librarians determined to be necessary.

We initially defined over 200 fields and rules for their data entry. These fields cover three general categories:

- Accession Information: type of item, primary and secondary designers,
- storage location, accession number, URL, donor, provenance, etc.
- Descriptive Information: fabrics, style, genre, region or country of
- origin, accessories, patterns, embellishments, etc.
- Additional Documentation: books, articles, photographs, videos etc.

In order to support data entry by untrained students from a variety of disciplnes, a Web-based template was designed as a front end to populate the database. The template is comprised of the following elements:

- Record Creation: simple to use forms-based cataloging that provides pull-down help screens for each field
- Record Edit/View: provides entire record for editing or further processing
- Record Export: provides mechanism to export data in comma deleted format for upload to other database.

A portion of the template is reproduced below:

Although the template itself is simple to use, choosing appropriate terms to describe garments and their construction, fabrics and their construction, and designer or manufacturer names poses numerous challenges. Although sources of controlled vocabulary exist, knowing which source to use and how to use it has been problematic. For example, terms used to describe garments and their construction may be taken from the following sources:

- Art and Architecture Thesaurus
- Dictionary of Costume
- ICOM (International Council of Museum's) Guidelines

While these sources taken together provide excellent coverage of costume, knowing which source to use and knowing how to use it consistently has proven difficult. For example, what is the difference between a corset and a bustier? Between a slip and a camisole? Between tap pants and boxer shorts? Is it enough to catalog all of these as underwear? Are the terms used contemporary enough to access the databas from a non fashion professional's search? Similarly, there exist multiple sources

for controlled vocabulary used to describe textiles, fabrics and their construction. The difficulty here lies in describing multiple ways of creating and embellishing textiles. For example, a fabric may be constructed by weaving together strips of leather and cotton, which may then be dyed and finally embellished with feathers and beads.

In order to facilitate consistent and controlled terminology for both data entry and retrieval, we are developing a hierarchy of categories for garments from the most general classifications, menswear or womenswear, innerwear or outerwear, one piece or ensemble, above, below, or above and below the waist, etc. to the final, definitive, descriptive term. The subcategories are displayed in easy to use drop down menus.

An example from the womenswear pop-up thesaurus menu is presented below.
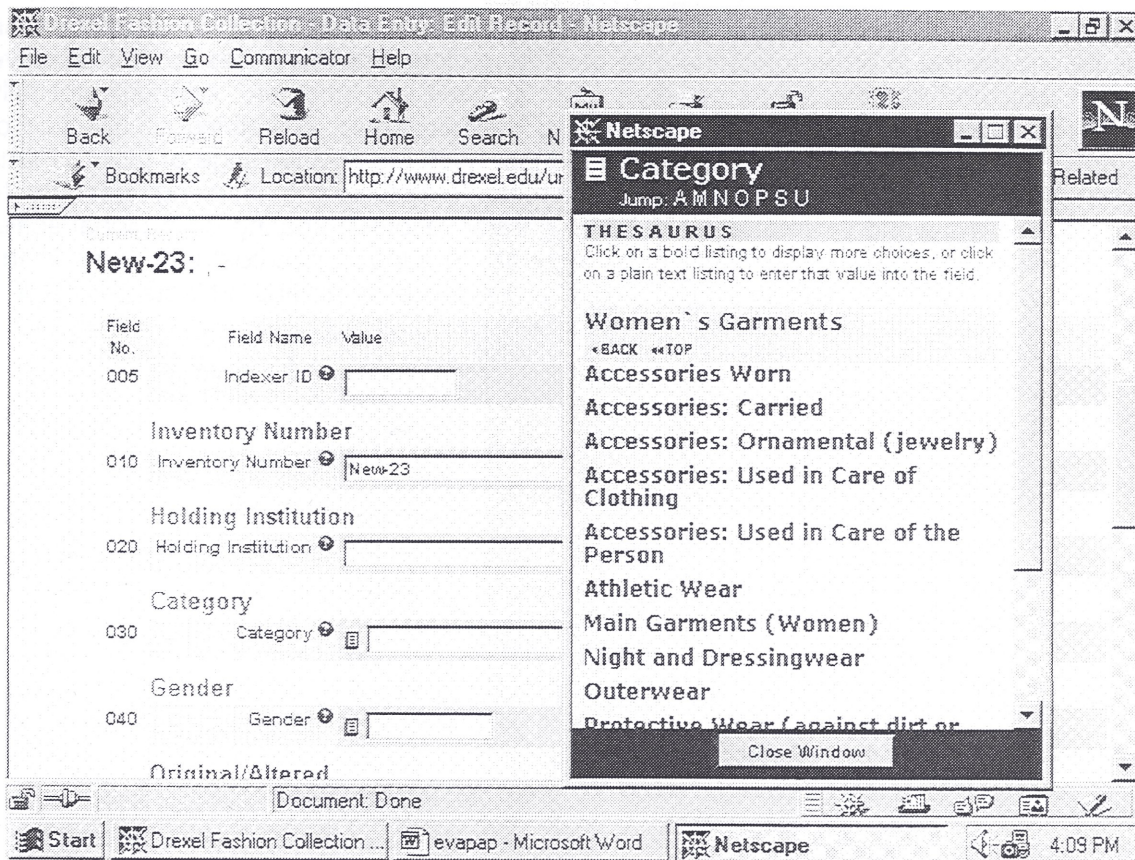
EVALUATION

In order to evaluate the utility of the template as a mechanism to increase consistency of term use by indexers, tests are being conducted with four groups: (1) students in fashion design, (2) students in library science, (3) professional indexers, (4) professional designers and design scholars. Each group is comprised of five participants who have been instructed to work independently of one another. Each participant in each group has been assigned the task of using the web-based template to "index" or catalog the five objects from the collection. The same five objects have been assigned to each participant, and each has been given color photographs and short textual documentation for each object.

Questions addressed in these tests include:

- How much consistency in term assignment is present among members of each group?
- Which group demonstrates the most consistency among its members?
- How much consistency in term assignment is present between groups?
- Which groups demonstrate the most overlap in term assignment?
- Are there categories for which consistency of term assignment is greater?
- Are there objects for which consistency of term assignment is greater?

Results of these tests will be presented in future papers.

SUMMARY

Controlled vocabulary, shared conceptual models, and an understanding of visual information needs must all be considered in order to standardize the information structure necessary for effective dialogue between user and database, and between one database and another. Although not fully realized, we are nearer to the goal of creating a standard mechanism for describing a collection of historical costume and for retrieving these records in a manner useful to a wide range of tasks. Plans for the future of this project include providing our database structure and indexing template to collections from around the world in an attempt to foster greater resource sharing on a global scale. We also hope to adapt the database and data entry template to support non-costume items in the Drexel collection, and to test the utility of this structure for a wide range of art and artifacts.