

**Final Report to
National Endowment for the Humanities**

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**"The Quilt Index Phase III:
National Expansion and Data Integration"**

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*Dedicated to Michael Fegan (1970 - 2007) MATRIX Chief Information Officer,
who despite his dedicated work on the Quilt Index claimed to be more of a
"comforter guy."*

1. Project Activities

The Quilt Index Phase III: Expansion and National Integration expanded the electronic reference (<http://www.quiltindex.org>) to create a **critical mass** of data and established and implemented long term protocols for the use of materials and the ongoing addition of new data. In this phase, the initial project partners completed the digitization of their collections, a diverse set of new partners added their collections to the system, Index repository importer programming was designed to integrate new collections from pre-existing databases, and several contributors collaborated to develop on-line galleries contextualizing their collections.

The Quilt Index is a joint project of MATRIX: Center for Humane Arts, Letters and Social Sciences Online at Michigan State University, Michigan State University Museum, and The Alliance for American Quilts. The leadership for this NEH funded project included five project PI's: Director of MSU's MATRIX, Mark Kornbluh through July 1, 2009 succeeded by Dean Rehberger, incoming MATRIX director; Curator of Folk Arts at MSU Museum, Marsha MacDowell; President of the Alliance for American Quilts, Shelly Zegart, succeeded by Executive Director, Amy Milne; Senior MATRIX project manager, Justine Richardson; and MSUM Assistant Curator of Folk Arts, Mary Worrall. In addition, Ph.D. student Amanda Sikarskie was assigned to MATRIX and to the Quilt Index project supported by a graduate assistantship from MSU's program in American Studies in the College of Arts and Letters. Assessment of this grant's effort was done by project evaluator Steve Cohen.

The key set of activities for creating a "critical mass" of quilt objects in the Quilt Index focused on digitizing and adding a variety of new "Contributors", including documentation projects and museum collections, for which the data was held in a variety of formats and conditions. Dedicated web pages within the Quilt Index were created for each contributing organization that include descriptions of their project, acknowledgements, publications and findings from their regional or state-level work (for example, see: <http://www.quiltindex.org/hawaii.php>). The following collections were added to the Quilt Index through the support of this NEH Preservation and Access grant:

- North Carolina Quilt Documentation Project at the North Carolina Museum of History;
- Heritage Quilt Project of New Jersey at the Rutgers University Libraries: Special Collections and University Archives (SCUA);
- Wyoming Quilt Project, Inc.;
- Iowa Quilt Research Project at State Historical Society of Iowa;
- Mary A. Barton Collection -- A collection of quilts amassed by one collector and now housed at the State Historical Society of Iowa;
- Rhode Island Quilt Documentation Project Archives at the University of Rhode Island;
- Mountain Heritage Center at Western North Carolina University (a small but well-researched collection which dovetails with both the North Carolina

Documentation records and with the museum collections added under separate IMLS funding).

- West Virginia Quilt Search at the West Virginia Archives;
- Connecticut Quilt Search Project;
- Hawaii Quilt Research Project;
- Louisiana Quilt Documentation Project at Louisiana Regional Folklife Program;
- Minnesota Quilt Project at Minnesota Quilters Inc.;
- New England Quilt Museum quilts as documented by MassQuilts (access database which sets ground work for all the Massachusetts quilts).
- American Quilt Study Group *Uncoverings* workplan and budget developed (Planning was done with AQSG staff to digitize the abstracts from their flagship journal and to develop a detailed workplan and budget for digitizing and making available the full text and page images of this journal. Funding is being sought for this work.)

At the outset of the project, workplan and budget revisions were revised to meet the grant award amount (the award was \$75,000 lower than the original proposal request.) This process was achieved through the generous leadership of several of the contributors. The Connecticut Quilt Search Project and project leader Sue Reich, offered to contribute all their project activity through internal support and volunteer work, thus meeting all project work goals as well as contributing additional costshare, which assisted projects that did not have the means to provide as much costsharing. The North Carolina Museum of History cut their workplan commitment in half (from 10,000 to less than 5,000 records), plus museum staff at NCMH gained access to a partial database that had been begun during an earlier phase of their state-wide project. Two other contributors (Minnesota and Wyoming) digitized their own slides, rather than having MSU digitize the slides as originally proposed. Thus the rest of the savings were gained from reductions in MSU's budget, and the majority of the workplan was still able to be completed without removing any of the contributors. It also should be important to note that MSU contributed unexpected additional cost-share when, for two years, the College of Arts and Letters assigned a graduate assistantship to the project and doctoral candidate Amanda Grace Sikarskie became a valued member of the management team.

Working with this many staff members and contributors over a four-year period and across large distances required a tight project management plan to address the inevitable challenges, modifications and decisions required. The central directing and project management staff for the Quilt Index remained stable throughout the majority of the project period. Project leaders at MATRIX (Richardson), MSU Museum (MacDowell, Worrall) and AAQ (Milne) along with graduate assistant Sikarskie, met weekly throughout the grant period via telephone conference calls to review project goals, activities, and tasks.

An ongoing challenge was to develop and maintain effective communications with the thirteen contributing institutions. Over the project period there were multiple staff changes at many of the contributing institutions, and others operated with a largely volunteer base of quilt experts from the state documentation groups. Midway through the

project MATRIX implemented a tracking system called TRAC (see: <http://trac.edgewall.org/>) the aids project management and contains an internal project-centered wiki space. QI staff members from all three lead partners began to use this wiki space for maintaining contacts and status for each of the contributors, as well as for centrally posting and archiving our weekly project meeting agendas. This was an important advance, especially in our capacity to record and report on our ongoing activities.

During the course of this project, MATRIX undertook a major upgrade to its digital library architecture. The original, pathbreaking "REPOS(itory)" system was redeveloped into "Project Builder" and then into its current and third generation software system, "KORA". Importer software was also built to transfer data from existing databases into the KORA repository. The loss of key MATRIX staff member Michael Fegan in 2007 required workflow revision and slowed the pace of technical progress, particularly with regards to automating the database importation into the digital repository.

Images:

Each contributor digitized their images using the Quilt Index Imaging specifications, available online at: http://www.quiltindex.org/docs/qi_images_specs.pdf. They created a high resolution TIFF image and stored it on archival disks at the home institution. The project purchased preservation disks in bulk and sent to each contributor that required them. (Some contributors had online storage or disks provided by their digital services provider, if they used one for digitization.) By the time digitization was underway, all contributors that needed them had the capacity to burn DVDs. So the project purchased Mitsui Gold archival DVD-r's (4.7 GB) (rather than CDs which were originally proposed).

High resolution images were converted to large display copies for inclusion in the Quilt Index repository. Over the course of this project period, there have been advances in typical user screensize as well as connection speeds, which facilitated using larger images for the basic display. The full display image was increased to 750 pixels wide. Additionally, through separate funding, the QI added a zooming option at 1424 pixels wide, which several of the contributors funded under this NEH project have utilized.

Quality control and training:

Training and quality control measures include new documentation and updated training materials, a telephone/online training process, and ongoing technical support from staff team.

The contributors that were entering their records directly into the Quilt Index repository were trained early on in the project (after the initial digital repository upgrade was completed). Training, led by Worrall and Richardson, consisted of a set of customized training materials, a one- to two-hour training phone call, and follow up phone and email support from MSU staff. Each contributor digitized a sample set of ten to twenty images and entered five to ten records. These were then reviewed by all parties (the contributor and the QI staff) and issues or questions were resolved. Once these contributors were

trained and had completed the sample set, they were able to work independently digitizing images and entering and verifying records.

The contributor and QI staff work involved with existing databases proved much more time consuming and challenging. While the Quilt Index's "comprehensive fields" are designed to accommodate a wide range of data, each database was unique in file format, scheme configuration and data consistency. The extent of variation required considerable time on each data set to clean data directly or write programming code to find and align terminology, correct spellings, or identify and replace idiosyncratic references, such as to ethnic groups. We developed crosswalking tools, including several iterations of a template form to assist staff and contributors to match the fields. A sample database crosswalk is available at: http://www.quiltindex.org/docs/crosswalk_sample.pdf. Once the database fields were matched in detail to the Quilt Index comprehensive fields, the data was cleaned by contributors and submitted to QI staff. Project managers reformatted the dataset to conform with QI control names and reviewed the cleaned data for discrepancies or necessary programmer notes. After this step, the reviewed and reformatted data went to programmers, who built any additional custom programming necessary for that dataset and ran the importer on a sample set of records (usually the first 500). Project staff and a contributor representative reviewed this sample import for edits and revisions before the final programming output. This iterative development cycle included multiple reviews by various individuals knowledgeable about the particular dataset as well as staff members knowledgeable about the QI metadata scheme and database set up. This cyclical development process, though time consuming, resulted in significant quality control and successful final output and transfer.

Copyright and IP:

The copyright and intellectual property issues inherent in presenting art objects online were addressed in a variety of ways. First, the parameters of original documentation projects usually included a waiver form indicating that the images and information recorded would be made available to the public for research and educational purposes. The quilts presented in the Quilt Index always include metadata about the contributor (institution or documentation project). Private ownership information has not been entered, or has been excised from the ingested databases. Projects that documented quilts from museums or historical societies contacted them. Metadata include specific information connecting those quilts to the owner institutions. Museums and collections-holding institutions that own the quilts have the discretion to present their objects online. Yet their institutional data records often contained information such as donor name and contact information that was not intended for the public. This data was excised from the dataset and not included in the data import, or not entered in the case of those hand-entering information. Responsibility for contacting individual quilt owners remains with the contributor or contributing institution and any specific inquiries that come to Quilt Index staff are referred to the contributor.

Advances in searching and sorting throughout the Quilt Index includes a much more robust advanced search and a dynamic set of browsing options built from existing database metadata contents.

Additional activities supported by this grant included:

*Writing and presenting **Quilt Index** status and research findings to a variety of interested audiences. Over the four years of this grant project, QI was presented at regional and national meetings for scholars, museum professionals, artists, and lay audiences interested in quilts and textiles specifically, as well as general history, Museums and the Web, oral history, folklore and genealogy.

*Collecting contextual or supplemental materials held within the contributor collections. Contributors were encouraged to augment their records with a wide variety of information and subsequent research. A range of relevant and important ephemera materials has been identified.

*Evaluation and assessment of usability of the **Quilt Index** within pedagogical and research contexts. QI staff have continued to conduct regular analysis of user statistics and have implemented regular evaluation instruments to gain better understanding of the QI's audience needs and uses. Informal surveys of usability and user needs have been conducted throughout the project and annual needs and use surveys have been implemented to gauge use of the resource in teaching and research contexts and to maintain an open feedback mechanism with our core user groups.

*Dissemination broadly to scholarly audiences. The Quilt Index has reached beyond the core quilt and textile scholar user groups to engage scholars in a wide range of fields and interests. A portal specifically designed around specific topics relevant to H-Net user communities was created in the Quilt Index wiki. This page contains suggestions for teaching and research use, as well as quilts identified according to the interests of specific scholarly lists and research pursuits:

http://www.quiltindex.org/~quilti/wiki/index.php/H-Net_Member_Portal

2. Accomplishments

The attached evaluation report by Steve Cohen contains is a chart detailing the accomplishments of the digitization process. The total records digitized and entered in the stored repository surpassed the project goals. All contributors continue to have the right and responsibility to manage their records in the Quilt Index, including adding additional information or uploading additional detail images or new photography as it becomes available.

Two contributors (Rhode Island and Wyoming) are still in the process of supplementing and verifying their stored repository records to make them visible on the public site. Approximately 300 remaining Rhode Island records (of 889 total) are being reviewed and verified by Dr. Linda Welters, Director of the Department of Textiles, Fashion Merchandising and Design at University of Rhode Island. Expected completion is March 31, 2010. The Wyoming records have been verified and metadata is being supplemented by the volunteer documentation team. There were 387 records with complete data

information displaying live on the public site by December 31, 2009. The remaining 2600 records contain the digitized image plus metadata including title, measurements, colors, damage, and technical descriptions of the top, batting, binding and backing. These records will be verified automatically by MATRIX programming staff so that the images and basic metadata will be public in January 2010. Wyoming Quilt Project Volunteers will continue to supplement the data records with additional historical information from the documentation.

The launch of the databases and updated website were completed in the final months of the project period. Thus dissemination efforts by all contributors and project partners at MSU and the Alliance for American Quilts will continue after the project period, supported by the scholarly outreach and publicity efforts of the partner organizations and all of the new contributors.

3. Audiences

By December 2009, the Quilt Index was being used by nearly 10,000 (No. = 9,833) unique users per month, with an average of 2.28 visits per visitor and 8.5 pages viewed per visit. Based on our user evaluations, the current users are largely researchers and artists. We find that the evaluation surveys are also a good source of dissemination and publicity. With each annual survey we have found respondents who learned about the Quilt Index from the survey dissemination. Survey responses from the 2009 survey are attached (modified where needed to protect privacy). We are especially encouraged to see the rise in citations and reported uses in graduate research and thesis projects as well as peer reviewed and online publications. There are also some notable educational uses reported, though not yet very many respondents. This could be due to the dissemination venues (i.e. we are not reaching classroom teachers well) or it could be due to the timing of the critical mass uploading. We are initiating a significant outreach effort specifically towards teachers to make use of the newly expanded data. We expect to see the uses by classroom teachers in elementary, secondary and post-secondary levels rise as the critical mass is publicized and as teaching resources and lesson plans are developed as posted on the site (as part of an Institute for Museum and Library Services funded tools project).

4. Evaluation

QI staff conduct periodic analysis of user statistics and have incorporated an annual survey of our core user constituencies. The project has incorporated ongoing communication with cultural heritage professional organizations and scholarly groups related to history, women's studies, quilt and textile studies. This ongoing feedback mechanism has led to improvement of specific records, incorporation of site-wide tools, and planning for future directions of the Quilt Index. Project evaluator Steve Cohen completed an evaluation report, attached.

5. Continuation of the Project

Future Phases: Continued Growth of the Database, Evaluation, and Educational Outreach and Development

We anticipate continued growth of the database as well as outreach and development to humanities and general public audiences. The issues of basic sustainability of the Quilt Index and continual enhancement of its content, technology, and user features have been continually considered from the outset of the initial planning period. First of all, Michigan State University has committed to maintaining the **Quilt Index** and its related applications over the long-term. Project leadership staff at MATRIX, the MSU Museum, and The Alliance have already set in motion actions which are setting the stage for the continual expansion and upgrading of the Index. The Index Task Force and the Index Editorial Board will provide ongoing consultation to guide and assist in development and enhancement actions. Ongoing publicity efforts and monitoring of project feedback will ensure the vitality of the Index, as well as its use by scholars, teachers, and a broad public audience.

In addition to meeting the proposed project goals, QI leaders have progressed on a number of the future directions since this NEH Expansion proposal was developed.

- A Tools and Ephemera project proposal has been funded by the Institute of Museum and Library Services, which is supporting additional interactive tools in the Quilt Index, including the zoom and comparison tools which are already available, as well as a wide range of ephemera materials important to contextualizing quilt objects, such as articles, fabric swatches, and diaries.
- The "Signature Quilt Project" has been included in the Quilt Index and features interactive galleries on more than 60 quilts submitted by a pilot for individual object submissions to the QI. This data includes names inscribed on quilts will be an invaluable resource for genealogists, family historians, and other researchers.
- A Digging Into Data challenge proposal has been funded by NSF, NEH and JISC, permitting three teams of computer scientists to work with the Quilt Index (and two other rich and extensive datasets) to explore humanities issues surrounding authorship. This has exciting implications for research using the Quilt Index, as well as for potential user tools that may be build upon these research results.

Future directions include:

Mapping -- The metadata in the Quilt Index contains location provenance for the quilt's origin as well as the quilter's life. This information offers an exciting opportunity to develop mapping tools that can enhance the research use and provide new visualization and insights to scholars and teachers from a variety of perspectives -- from migration studies to business/economic history. An education-focused proposal that emphasizes African-American materials, includes a pilot component to develop and test a mapping tool with a small set of QI records.

Internationalization -- Both user statistics and survey responses indicate a potentially pathbreaking opportunity for internationalization of the Quilt Index. Quilt collections exist in many countries, with particularly strong collections and interests found in Canada, Great Britain, Australia, Germany, Italy and Japan, as well as fascinating collections in many other countries, including South Africa and New Zealand. A collaborative planning proposal is in development for internationalizing the Quilt Index.

Regional In-Depth Expansion – MSU has been in discussion with the Michigan Museums Association, the Michigan Humanities Council, and a consortium of state-based educational, preservation, and history agencies to develop a project that will engage the public, collection-holding institutions, and educators in incorporating comprehensive regional data into the Index and build relevant educational materials and programs as part of the process and product. MSU has also been in discussions with both quilt museums and those art and history museums holding significant textile collections about submitting a consortium project proposal to include quilt collections from all the southern United States, which would significantly increase the usefulness of the resource for researchers, students and teachers of the antebellum, civil war, and reconstruction periods.

Full U.S. Expansion -- Quilt Index staff are continually fielding inquiries from institutions that would like their data included in the Index. As part of the IMLS-funded portion of Phase III, staff implemented an application process as one strategy for responding to these requests. We discuss with potential contributors options for sources of local, state, and national funding, including such grassroots sources as quilt guilds, state arts and humanities councils, universities, and foundations and organizations. We have sent more than 30 applications directly to interested parties and received four complete proposals to date. We are exploring opportunities to create a matching fund to create incentive for quilt documentation projects from all 50 states to participate.

Educational Capacity --Enriching the research and educational capacity of the Index as well as addressing the desire of other institutions to make their data accessible for users is an important goal. Our evaluation results suggest that there are a number of innovative pedagogical activities already in use by teachers in middle school through university classrooms. Yet there is an important opportunity for growth and particularly for framing materials particularly for specific age groups, subject areas, or topics. QI staff members have begun seeking support through grants for the development of K-12 curricula based on both the data held in the Index and the tools used to search, mine, and present that data.

Individual Submissions -- Much user feedback has included an interest in building the capacity to provide opportunities for individual researchers or research teams to use Index fields for the construction of research projects that will ultimately yield data that can easily be added to the Quilt Index. For instance, in the past year, directors of two distinctly different research and documentation projects approached the Index staff for assistance in setting up databases for their projects. Marilyn Klaus and Sharon Sawatzky, both of Kansas, have adapted the database for their The Mennonite Relief Quilt Project, a project that involves research and analysis about the personal, social, theological, and political history of Mennonite Relief Sale quilts.

Replication -- A number of research groups are interested in testing the use of the Index structure for another thematic, comprehensive, trans-institutional open source digital repository. A national consortium of researchers of American cross-stitch samplers has used the Quilt Index as a model for developing a project proposal. Other potential uses that we are aware of include a cross-institutional, thematic project focused on Native Alaskan doll making. Subsequently other institutions have inquired with interests related

to other thematic collections. An initial exploration is underway to seek National Science Foundation funding to test the Index structure on ethnographic Native American basketry collections.

Serious Games -- A growing use of social networking and networked game playing has implications for the Quilt Index collection, particularly for reaching new audiences. Through gameplay, learners can gain an improved understanding of time and chronology, increased comprehension of the past, and increased skill in analyzing and interpreting the past. A Quilt Index serious game we are seeking support for will use quilts as tools for learning and applying historical methods and skills. Students will build confidence in information processing and conducting playful yet purpose-driven investigations through this game.

Prioritization of these future phases will depend on input from users, counsel from the advisory boards, and, of course, funding.

6. Long Term Impact

Project staff and contributing institutions, as well as scholars, teachers, and researchers have expressed enthusiastic interest in the above-mentioned future directions. We are encouraged to see increasing use in research, teaching, and creative applications of the resource. Our research suggests that a variety of new funding resources from state funding agencies to major private foundations to regional and family foundations to quilt guilds and private donors will be interested in supporting a variety of the new advances. In fact private funding has already supported addition of the Kansas state quilt records, the Mary Gasperik Private collection, the inclusion of "signature" quilts, and applications from Wisconsin, Maine, and Florida. The investment in critical mass from the National Endowment for the Humanities, has certainly solidified the central position of the Quilt Index as a resource for research, teaching and learning.

7. Grant Products

Results of this project are freely available online at <http://www.quiltindex.org>.

High resolution versions of digitized images created for this project are held by each of the thirteen contributors. They are available for institutional uses as determined by the contributing institution. Ongoing distribution and dissemination are underway to national and regional media outlets and through partner and contributors' member and community outreach publications.

A detailed plan for incorporation American Quilt Study Group's flagship textile history journal, *Uncoverings*, was submitted to AQSG and funds are being sought to complete this work.