

**2007 FINAL REPORT AND EXPENDITURES FOR  
LIBRARY SERVICES AND TECHNOLOGY ACT (LSTA) GRANT**

Submit one electronic copy and one signed and dated original to:

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Due to the State Library Agency 30 days after close of the grant program

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**Minnesota LSTA FFY2007-Final Report.** Follow the exact form, contents and pagination provided. A separate report must be completed for each LSTA project for which you received funding.

**1. Name and address of grant recipient:**

MINITEX Library Information Network, 15 Andersen Library, 222 21<sup>st</sup> Ave. S., Minneapolis, MN 55455-0439

**2. Name, title, phone, fax and e-mail address of grant administrator:**

Keith Ewing, Project Director, Learning Resources & Technology Services, St. Cloud State University; 320.308.4824; [kewing@stcloudstate.edu](mailto:kewing@stcloudstate.edu)  
Mary Parker, Project Administrator, MINITEX, University of Minnesota; 1-800-462-5348; [m-park1@umn.edu](mailto:m-park1@umn.edu)

**3. Name of Project:** Expanding the Minnesota Digital Library: Continuing to Grow a Statewide Resource

**4. Grant was obtained under:** *State of Minnesota Five Year State Plan for the Use of Library Services and Technology Act (LSTA) Funds - Fiscal Years 2003-2007 and the LSTA Priorities for FFY 2003.*

- a. Federal Project purpose number:    \_\_ 1 \_\_
- b. LSTA Plan Goal number:            \_\_ 2A \_\_
- c. LSTA Plan Activity letter:         \_\_ 4 \_\_
- d. Federal Congressional District(s)   \_\_ 1, 2, 3, 4, 5, 6, 7, 8 (all) \_\_

**5. People Served:** Give the actual (real) number of end users directly served by this project.

During the 1 July 2007 through 30 June 2008 period 88,671 unique visitors to "Minnesota Reflections" made 1,864,300 page views (single images may be viewed multiple times). The number of unique visitors represents about 2% of the state population, but is a 145% increase over the previous fiscal year.

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## 6. Narrative report for project.

### A. Project Purpose:

In its application for LSTA grant funding, the Minnesota Digital Library (MDL), a loose consortium of libraries, historical societies, archives, museums, and organizations, identified two primary goals for the for the 2007-08 grant cycle:

1. continue digitizing primary resources and making them available to the public and
2. research and develop additional technical ways we can serve the organizations and people of Minnesota.

For the first goal we set a target of 6,500 digitized objects, including a mix of photographs, texts/documents (including transcriptions and translations where appropriate), and maps. By the end of the grant period we had digitized 7,420 objects, exceeding our target by 12%. In addition, we were able to attract fourteen (14) new institutions as participants in the digitization effort. Among the new institutions are the Basilica of St. Mary in Minneapolis (120 objects), five country historical societies (Crow Wing, Jackson, Mille Lacs, Morrison, and Waseca), and eight special collections or libraries..

The second goal included several ambitious projects:

1. **Pachyderm expansion.** In previous grants, the MDL contracted with Sandbox Studio to create a prototype “exhibit” and two “learning objects” using the openSource Pachyderm authoring application, developed by the New Media Consortium under an IMLS grant. For this grant cycle, we again contracted with Sandbox Studio to train a group of educators, technologists, and historical society staff in developing multimedia presentations using Pachyderm. Training and consultation took place during March and April 2008; nine projects were published on the MDL website in June. Several of the projects were demonstrated at the MDL Annual Conference at the College of St. Benedict. All participants expressed considerable excitement about using Pachyderm and several have continued to develop new content using Pachyderm.
2. **Minnesota Reflections Comments.** Since inception, the MDL has wanted to provide a method whereby users could comment upon objects in *Minnesota Reflections*. The structure of CONTENTdm does not support this and because of complications when upgrading to new versions of the software is not “friendly” to modifying the base code. MDL contracted with Eric Celeste to investigate and implement a “simple” resolution to support user comments without infringing too much upon the CONTENTdm code. The prototype was implemented in January 2008 and went public in March. While not overwhelming, the response has been positive. Many of the comments added or corrected information contained in the image metadata; may simply offer thanks for making the objects available. We have been most pleased by the absence of both “spam” and inappropriate comments.
3. **Wide-area searching.** Another long-term interest of the MDL has been the ability to provide users a single interface to widely dispersed databases of similar cultural heritage content. *Minnesota Reflections*, the primary public development of the MDL, was never intended to be a “central” database; the expectation was that those who were able would digitize, manage, and distribute content from local servers. The wide-area search goal was to facilitate access to these dispersed databases through a single search site. MDL contracted with Eric Celeste to research several options and implement a prototype. An initial wide-area search engine, Minnesota Finder, based upon a Google Mini search appliance, was demonstrated at the MDL Annual Meeting in June and later the same week released to the public. The late implementation of this project precluded both user feedback and project assessment under this grant.
4. **Preservation of born-digital documents.** This was the most ambitious project identified in the grant proposal. After considerable research and wide discussion, The MDL reluctantly determined that this project was beyond the financial and personnel resources of the MDL at this time and under this grant.

We are pleased to report that all projects achieved a successful initial implementation. However, our assessment has determined several areas of improvement to enhance functionality and usability. User feedback has identified additional areas for enhancement or improvement. The easiest way to note the success of the further development of *Minnesota Reflections* and the integration of new services supported by this grant is the 147% increase in the use of *Reflections* over the previous fiscal year.

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**B. Project Activities/Methods:**

1. *Maintain and upgrade software licenses and computer hardware as needed.*
  - a. “Minnesota Reflections,” the primary public product of the MDL, runs on CONTENTdm, version 4.2010. Every version upgrade requires the MDL to recreate all of the local customizations to the interface that increase usability. During the FY2006 grant cycle, the MDL invested considerable effort in a usability study, upgraded to CONTENTdm version 4.2010, and integrated usability findings into the interface rebuild for the version 4.2010; this work was undertaken during Summer 2007 and completed in September 2007. The MDL management team does not feel an upgrade to the current CONTENTdm version 4.3 release, with limited additional functionality, is warranted at this time.
  - b. The MDL completed the installation of seven (7) additional 400GB Serial ATA 7200 RPM disk drives in May 2007. This brings us to a total of eleven (11) 400GB SATA 7200 RPM drives or nearly 4 TB of storage. Expansion of storage capacity was not undertaken in this grant cycle.
  - c. During the FY2006 grant cycle, the MDL increased the CONTENTdm license to allow for 50,000 total objects. At the end of the current phase of digitization, we used about 75% of the license; we may need to begin negotiating with DiMeMa for an upgrade of the license during the next grant.
  - d. MINITEX, on behalf of the MDL, provides technical support and houses a server running pmwiki software to support a “Minnesota Reflections” social engagement investigation (see below).
  - e. MDL acquired a Google Mini Search Appliance to support the investigation of wide area searching (see below); MINITEX houses the server and provides technical support.

2. *Continue digitizing collections of primary resources from across Minnesota.*
  - a. Thirty-seven (37) projects, representing a mix of photographs, maps, and texts were added to *Minnesota Reflections*. Sixteen (16) of the projects came from institutions in the 9-county Minneapolis-St. Paul metropolitan area; the other twenty-one (21) came from “outstate” institutions—one (1) from the northwest, two (2) from the northeast, one (1) from the west central, six (6) from the east central, three (3) from the southwest, and eight (8) from the southeast. Fourteen (14) of the participating institutions, 38% of the total, were new contributors.
  - b. Distribution of participating organizations for this grant period:

County historical societies	13	(34%)
Area historical societies	5	(14%)
Special archives	11	(30%)
Public libraries	4	(11%)
Other	4	(11%)

- c. Target goals and actual digitization by format:

<i>Format</i>	<i>Goal</i>	<i>Actual</i>	<i>Percent of Goal</i>
<b>Digitization</b>			
Images	3,750	3,450	92%
Document pages	2,250	2,400	107%
Maps	1,000	1,570	157%
<b>Total</b>	<b>6,500</b>	<b>7,420</b>	<b>114%</b>
<b>Cost</b>	<b>\$71,250</b>	<b>\$80,048</b>	<b>112%</b>
<b>Transcription/translation</b>			
Pages	400	1,195	299%
<b>Cost</b>	<b>\$4,000</b>	<b>\$12,270</b>	<b>307%</b>

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- All images (100%) were digitized by the MDL scanning centers. The University of Minnesota scanned 73% of images and 29% of document pages; the Minnesota Historical Society scanned 27% of images, 71% of document pages, and 100% of maps.
  - To accommodate the increased digitization and transcription costs, MDL shifted \$5,000 from metadata assistance. The Outreach Coordinator discovered that organizations looking for metadata assistance primarily wanted to have someone complete the MDL metadata spreadsheet. After learning that the metadata expectations were not as technical as anticipated, the organizations' concerns were alleviated.
  - A further \$10,000 was moved from the "born digital" investigation to digitization. After considerable discussion and investigation into the "born digital" issue and its complexities, the MDL determined that the allocation was insufficient to support any level of investigation and consumed more time and manpower than was available.
3. *Update current standards and best practices and provide training to organizations statewide in two dimensional digitization standards and best practices.*
- a. As a result of the usability study in Spring 2007 and as a result of continuing direct discussions with participants, we continue to revise metadata requirements and ingest processes. After considerable discussion, current standards and best practices that guide MDL operations, in particular the adoption of the J2K standard for images in the previous grant cycle, were determined to be adequate for the current grant. A detailed review of standards and best practices will be part of a review of the database environment and expansion to accommodate additional formats (e.g., audio and/or video) in the next grant cycle.
  - b. The majority of the "training" provided during this grant cycle was provided by the Outreach Coordinator through one-on-one sessions, sometimes in-person, but frequently over the phone. Rather than "training" per se, the more appropriate term should be "consultation." The one "training" session, provided by the Outreach Coordinator, occurred during the MDL Annual Meeting at the College of St. Benedict and was attended by 27 people (9 of 11 people completing evaluations rated the session as "excellent" or "good").
4. *Provide project outreach and project management services and coordination to ensure statewide participation in the development of the Minnesota Digital Library.*
- a. St. Cloud State University continues to contract with the MDL to provide outreach and management services for the project. Marian Rengel continues as Outreach Coordinator and Keith Ewing as Project Director, with Ms Rengel handling the majority communications and day-to-day of project management. Ms Rengel visited with many librarians, archivists, and representatives of historical societies and museums to encourage or negotiate participation in "Minnesota Reflections," including current and past participants in the project. In addition, she made several presentations about the project to local groups and statewide meetings, including regional library directors, MEMO, discipline-based secondary school organizations, and multi-type library coordinators as well as two presentations in early January to K-12 teachers participating in a *Teaching American History* grant project.
  - b. Overcoming resistance to participation requires patience, diligence, and persistence. This is largely undertaken at a one-on-one level through the efforts of the Outreach Coordinator. Much misinformation about the MDL continues to need correction and is best handled personally. Through personal interactions, Ms Rengel has been particularly adept at alleviating concerns, correcting misunderstandings, and negotiating appropriate actions and responses.
  - c. The MDL Annual Meeting was held in June 2008 at the College of St. Benedict. A formal evaluation questionnaire was provided to each attendee; fifty-one (51) returned the evaluation (approximately 50% of attendees). Of those who returned evaluations, 48 rated the overall program as "good" or "excellent," and 49 rated the speakers and information presented as "good" or "excellent." Of eight small topic sessions, only three sessions received one "poor" rating; all other ratings were "good" or "excellent." In response to a question about how well the MDL is "fulfilling its vision to work with local, regional, and statewide collections to support education, scholarship, and entertainment," 46 people gave a rating of "good" or "excellent."

*Explore requirements, needs, and resources for handling born-digital objects.*

- d. Discussion of born-digital content continues in both the MDL management team and the vision committee. This is a difficult area of study when few current participants have a need to address born-digital content, there is little mandate to do so, and potential costs could be high depending on archiving requirements. More importantly, the Minnesota Historical Society received a National Digital Information Infrastructure and Preservation Program (NDIIPP) two-year grant from the Library of Congress to “explore methods to provide online access to legislative materials in digital form.” (See <http://www.mnhs.org/preserve/records/legislativerecords/index.htm>; an earlier grant to MHS from the National Historical Publications and Records Commission (NHPRC) also addressed preservation of digital legislative information.) This project will establish some baseline XML standards and metadata schema that should be flexible enough to expand to other electronic records produced by other levels of state government. MHS participation in this grant is focused on state legislative records; the Washington State Archive, participating in a parallel grant, is exploring “the way governments conduct business and present challenges for capturing, preserving, managing, storing and making accessible electronic records.” (see [http://www.digitalpreservation.gov/news/2008/20080403news\\_article\\_wa\\_state.html](http://www.digitalpreservation.gov/news/2008/20080403news_article_wa_state.html) and <http://www.digitalarchives.wa.gov/Content.aspx?txt=intro>)
  - e. Despite the significant amounts of critical electronic data that has already been lost and after considerable discussion, the MDL determined that the complexities, costs, and manpower requirements to initiate an investigation into this issue were greater than allocated in this grant. Consequently, the allocation for this component was moved to digitization and transcription/translation.
5. *Explore technical aspects of social computing project that will allow visitors to Minnesota Reflections” to comment on the objects in the collections.*
- a. The “Social Side of Reflections” has been a strong interest of the MDLC since inception. Early in the current grant, the MDL negotiated a contract with Eric Celeste, formerly AUL for Technology at University of Minnesota, to develop a means to allow people to comment on individual objects in “Minnesota Reflections” without infringing upon the metadata. During November and December, working with an advisory group drawn from MDL steering committee members and supported by IT staff at MINITEX, Mr. Celeste developed and implemented a comment site (<http://views.mndigital.org>) based on pmwiki software running on a server at MINITEX and integrated it with “Minnesota Reflections.” Use of the comment site was made available to the public on 14 January 2007 and announced to the MDL listserv; broader announcement took place in late January, although the general public had already discovered the comment link. “Minnesota Reflections” with comments was included in the “23 Things on a Stick” project with the multi-type library cooperatives and MINITEX.
  - b. At the end of the formal evaluation period (end of March 2008), the system had captured 52 comments on 50 images from 22 MDL collections; this was an average of one comment for every 5,300 visits to *Minnesota Reflections*. In comparison with more well-known sites, e.g., Flickr and YouTube, the overall quality of comments was extremely high.
    - 33% of comments offered additional information about the image
    - 23% offered personal insights, including names of family or stories behind the image
    - 17% provided corrections to the descriptive metadata for the image; these were shared with the collection owner and corrections were made
    - 8% requested further information or copies of images
    - 9% were general comments about the MDL project or thanked us for providing a comment tool
    - 13% were test postings most likely from people learning how to use the comment system.
    - No spam or obscenities were received during the evaluation period, or since.
- At the end of Mr. Celeste’s contract, the MDL Outreach Coordinator and MINITEX technology staff assumed responsibility for monitoring and addressing comments when required. The current comment system could be maintained indefinitely without much effort. The MDL has committed to continuing the investigation and provide better integration with *Minnesota Reflections* and with the wide area search during the next grant cycle.

- c. A full report on the *Reflections* Comments project will be available on the MDL website in the future.
  - d. One possible way to improve the “social participation” with *Reflections*, noted by Suzanne Fischer on the Public Historian blog (<http://publichistorian.wordpress.com/2008/01>), would be to support user “tagging” (personal subject headings). We will explore this further during the next grant cycle.
  - e. As a consequence of this project, the MDL has signed on as a participant in an expansion of the Steve Museum Social Tagging Project (see <http://steve.museum>), an IMLS grant proposal from the New Media Consortium.
6. *Explore work with creating learning objects for K-12 teachers by providing funding to train teachers to develop their own curriculum using “Minnesota Reflections.”*
- a. The MDL continues to work with the University of Minnesota on further development and enhancement of Pachyderm software as an authoring environment for creating learning objects. Todd Digby represents the MDL in working with University of Minnesota; Scott Sayre, of Sandbox Studio and current chair of the Pachyderm Advisory Council, also represents the MDL in furthering the development of Pachyderm. Support for advancing the development of Pachyderm came through a \$25,000 grant from the Minnesota Learning Innovations Council, associated with iSeek, and a \$10,000 grant from the Minnesota State Colleges and Universities, directed through the Office of the Chancellor and St. Cloud State University.
  - b. MDL contracted with Sandbox Studio to install and configure Pachyderm software on a server at the University of Minnesota to provide an environment for training and authoring multimedia resources. Sandbox Studios continues to administer, in partnership with the University of Minnesota, the Pachyderm application on the MDL Pachyderm server. On behalf of the MDL, Sandbox Studio has also worked with Pachyderm programmers in the development of Pachyderm 2.1.0 to provide expanded capabilities within all templates and to assure compliance with federal 508 accessibility requirements.
  - c. Sandbox Studio recruited nine (9) participants: five classroom teachers from K-12 (primarily secondary educators), two technology coordinators (one K-12 and one higher education), one historical society museum educator, and the MDL Outreach Coordinator to receive training. Three of the participants were from Minneapolis, two from St. Cloud, and one each from Moorhead, Rochester, Bemidji, and Cold Spring. Each participant signed a “contract” that stipulated MDL expectations, copyright issues (both use of content in multimedia presentation and the MDL’s use of the multimedia presentation developed), and MDL’s commitment to provide trainees with continued access to Pachyderm after completion of the training program. Each participant received a ring-binder of training materials. The training program ran from 14 March through 18 April and included a two-day workshop of directed learning at the University of Minnesota, followed by one-on-one meetings with the Sandbox Studio trainers (including in-person, telephone, and online consultation), and a final in-person meeting for “presentation” and discussion of projects. Several of the projects were demonstrated at the MDL Annual Meeting. All of the completed projects are available online at [http://www.mndigital.org/ed\\_assets/MDLPachydermProjects08/](http://www.mndigital.org/ed_assets/MDLPachydermProjects08/).
  - d. Evaluation was an essential part of the Pachyderm training project. Both the level of instruction and quality of training materials were well received; participants most appreciated the directed work time in the computer lab. Two prominent sources of frustration arose from the lack of unique identification numbers for individual images in *Minnesota Reflections* (an issue the MDL needs to investigate further) and the lack of integration between Pachyderm and the J2K images used by the MDL (an issue that needs to be addressed by the Pachyderm consortium). Because this was an MDL directed project, two participants were frustrated by the lack of content in *Reflections* to support their intent; all participants were eager for additional content in *Reflections* to use in Pachyderm presentations. Understanding and use of available templates presented a challenge for most participants; more familiarity can resolve how the templates can be used to present content effectively or manipulated to be more quiz-like. As a result of the evaluations, MDL is working with Sandbox Studio to improve the training, particularly more guided instruction in the early training, more examples of effective template application, and additional time for directed learning. Training on additional applications that could be used to create or modify content for inclusion in Pachyderm, e.g., Photoshop or iMovie, would also be beneficial but is outside the scope of Pachyderm training

<b>Minnesota LSTA FFY 2007-Final Report</b>	(Follow the exact form, contents and pagination provided.)
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- e. Two teachers have subsequently requested and been granted additional account space on the MDL Pachyderm server for their students to create projects.

- f. A full report on the Pachyderm project will be available on the MDL website in the future.
7. *Build on the integration of “Minnesota Reflections” into the MnLINK Gateway and explore how we can create universal access to distributed digital collections across Minnesota.*
- a. Early in the grant cycle, in a carryover project from FY2006, the MDL worked with MINITEX and OCLC/PICA on integrating “Minnesota Reflections” into the MnLINK Gateway during the previous grant; that investigation stalled as OCLC/PICA encountered problems related to the harvest and display of compound objects—individual pages of a compound object are treated as “unique” objects unrelated to the compound object.. At the end of the FY2007 grant, a resolution to this problem had not been identified. In late July 2008, as this report was being written, the MDL learned that the harvesting needed to include a parameter (cisosuppress-1) in order to suppress individual pages of a compound object. While a solution to the problem has been identified, OCLC needs to provide the development necessary to incorporate the parameter into the OAI harvester they employ.
  - b. As with the born-digital project noted in 5.a. above, the “universal access” project, better called a wide area search project, has been discussed by the MDL management team and Strategic Planning and Visioning Committee at great length over several years. Much of the discussion during the current grant cycle was on the long-term suitability of the Autonomy IDOL platform currently in development by Minnesota Historical Society as part of the Great Rivers Cultural Heritage Network (<http://greatriversnet.org/>) grant from the Bush Foundation and used as the primary search for several MHS databases (see <http://greatriversnetwork.org/mhs/keywordfinder.php>). We discussed two possible ways of creating universal access: utilizing Z39.50 “federated” or “metasearch” searching versus consolidating locally loaded data, otherwise known as “extract, transform and load” (ETL). MHS has focused attention on integrating the Minnesota Maps Online into the IDOL search environment. Minnesota Maps Online (<http://www.mnhs.org/collections/digitalmaps/index.htm>) uses the same CONTENTdm environment as *Minnesota Reflections* and was partially funded by MDL. MHS continues to work on mapping and integrating external databases into the IDOL search indexes.
  - c. With the work described in 8.a. above stalled, the MDL Management Team investigated two additional options to support wide-area searching of cultural heritage resources. The MDL contracted with Eric Celeste to undertake the investigation of alternative wide-area search strategies.
    - i. We rapidly established a couple “ground rules” for this investigation. The ground rules greatly constrained the options for adequate solutions. Most important was minimizing the effort institutions with local databases would need to undertake to participate; whatever work an institution had to do also needed to benefit the local institution regardless of the outcome of the wide-area search project. Due to time constraints, we did not explore using Heretrix, Lucene, and Solr to build a custom environment fulfilling MDL needs—we didn’t have the time to create the specifications let alone learn how to code Lucene and Solr. What follows here is a description of how we implemented a prototype wide-area search.
    - ii. We discovered that many local databases reside in the “dark web,” unexposed to Internet search harvesters. Overcoming this problem, convincing them that their collections should be open to harvesters, required some “political” finesse rather than technical expertise. We further decided not to require any structured metadata or coding in local databases and to minimize or eliminate any field mapping on our end.
    - iii. The first option explored the use of the Google “Custom Search Engine” (CSE) which supports searching a “custom” set of websites. Two serious flaws with CSE rapidly emerged. First, results sets are severely restricted and were rapidly exceeded when more than one database was searched. Second, Google CSE only returns textual results, a severe impediment when searching primarily image resources. Third, Google CSE emphasizes “page” results rather than object (image) results; most content management systems such as CONTENTdm, the basis of *Minnesota Reflections*, use generic page titles for all images making CSE search results unusable. Mr. Celeste investigated options to manipulate the search results to present a better display for users.

<b>Minnesota LSTA FFY 2007-Final Report</b>	(Follow the exact form, contents and pagination provided.)
System/Library__Minnesota Digital Library__	

- iv. The method employed was to write a PHP shim to take the results from the Google search and deliver them to the CSE page, then use a Javascript to manipulate the results. While the results

- of this effort were not acceptable (see <http://mdlwas.clst.org/search.html>), it did show that rewriting Google results was feasible.
- v. The final option was to acquire a Google Mini search appliance (GSA); the acquisitions was possible with an approved redistribution of LSTA funds from infrastructure support to automation hardware. The GSA is designed for corporate enterprise searching, but nothing prohibits searching any set of websites other than the license limit on the number of pages to be indexed. There were three challenges to configuring the GSA for MDL: first, determining the proper indexing instruction; second, modifying the XSLT style sheet to accommodate a more image-friendly search result page; and, third, developing the Javascript to post process results to insert thumbnail images and other relevant information. Mr. Celeste worked with *Reflections*, along with a database at the Pennington County Historical Society, another from the East Ottertail County Historical Society, and the MHS *Minnesota Maps Online* as initial harvest targets. There were some unanticipated curiosities with the GSA—for example, GSA can create an XML sitemap, but can't follow one; consequently we had to create HTML sitemaps instead. The PCHS photos database was “protected” by robot exclusions that had to be removed in order to be harvested by the GSA; the MHS database had to have a special exception created for the MDL GSA. Opening databases to harvest, often a more political than technical problem, is a critical component to the further development of the wide-area search.
  - vi. The Google Mini works far better than expected. The main objective now is to work with other potential partners in adjusting their local practices to facilitate harvesting and in exposing their local database to the Google harvester to increase the number of indexed resources available through Minnesota Finder. This would also allow us to continue to monitor the GSA performance and the number of indexed objects increases.
  - vii. The prototype wide-area search, *Minnesota Finder* (<http://search.mndigital.org>), is available to the public, but is the subject of ongoing research and development. An interim report is available at <http://eric.clst.org/MDL/WASPrototype>.
  - viii. The MDL Outreach Coordinator and MINITEX staff assumed responsibility for monitoring comments at the end of the contract period with Mr. Celeste.
- d. For the past two years, MDL has been working with MINITEX to migrate Reflections records for inclusion into OCLC WorldCat. Because CONTENTdm is marketed by OCLC, the assumption was that this would be a fairly easy process. In the previous grant cycle we were able to assign OCLC library codes to each participating institution; early in this grant, that process was completed (except for new institutions in this fiscal year). Because MDL uses an enhanced Dublin Core (DC) metadata scheme, supported by CONTENTdm, there have been complications in mapping MDL DC records to WorldCat's MARC format. Carla Dewey Urban and Sara Ring at MINITEX have worked with OCLC to achieve the best quality mapping to MARC and assure good search results in WorldCat. The completion of this process is anticipated by early Fall 2008.
  - e. While not directly addressing the single-search intent of a universal access point, MDL representatives have been working with MINITEX to develop a Web interface that coordinates access to three disparate services under the MINITEX umbrella: “Minnesota Reflections,” “ELM: the Electronic Library for Minnesota,” and “MnLINK Gateway.” This provides a more unified access to the variety of complementary online resources available to everyone in Minnesota. Work on this project is ongoing.
8. *Explore and begin to develop standards and best practices for preservation of digital collections.*
    - a. The MDL through the UofM adheres to best practices for data backup, storage, and refresh. We currently rent long-term storage space on UofM servers. How we begin to document these practices, coordinate best practices with other interested parties (e.g., MHS and MINITEX), and publicize that information needs to be addressed.

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**C. Project Outputs:**

**Digitization**

<i>Format</i>	<i>Goal</i>	<i>Actual</i>	<i>Percent of Goal</i>
Images	3,750	3,450	92%
Document pages	2,250	2,400	107%
Maps	1,000	1,570	157%
<b>Total</b>	<b>6,500</b>	<b>7,420</b>	<b>114%</b>

**Pachyderm training**

Nine (9) people received training and produced 9 multimedia “learning objects” available through the MDL website. All participants felt the training was extremely beneficial and the Pachyderm software very useful in creating “learning objects.”

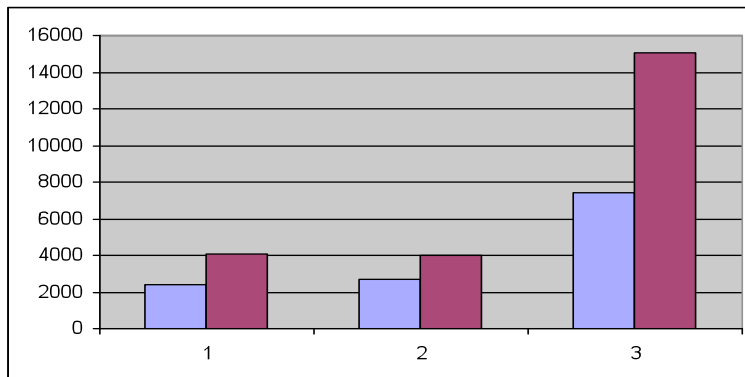
**Minnesota Reflections Comments and Minnesota Finder wide-area search implemented.**

Since implementation in March 2008, without widespread promotion, *Reflections* Comments has received one comment for every 5300 images viewed. Minnesota Finder was implemented in June 2008, too late in the grant cycle to receive meaningful use statistics.

**Minnesota Reflection usage during grant period**

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth (in GB)
Jul-07	3389	4990	47031	275730	3.82
Aug-07	2903	4890	60601	385788	5.48
Sep-07	4348	12514	81757	582586	22.62
Oct-07	7186	17367	101396	635760	13.51
Nov-07	8322	17919	114925	743893	9.82
Dec-07	8893	18059	180410	851740	13.08
Jan-08	8662	18187	184416	1051422	14.89
Feb-08	8672	16444	210712	949467	16.08
Mar-08	9036	18743	259306	1010863	19
Apr-08	9791	19982	314237	1159759	21.3
May-08	8547	15848	159629	880986	13.47
Jun-08	8922	15642	149880	692262	11.29
FY Avg.	7389.25	15048.75	155358.3	768354.7	13.7

To put these statistics in historical context, the chart below shows the increase in annual average “unique visits” (left column) and “total visits” (right column) to *Minnesota Reflections* over the past three fiscal years.



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**D. Project Outcomes:**

The most direct measure of MDL outcomes are demonstrated by the increased use of Minnesota Reflections. During the next grant cycle, 2008-09, the MDL is committed to researching the impact of MDL resources and service upon users. The size of the collections and variety of resources has reached the level where this can begin to be studied. It is unlikely that the MDL has had an impact upon the life condition of users, but our intent is to preserve, inform, and entertain.

Where we can measure impact readily, we have done so. For example, assessment was an integral component with the Pachyderm training. Nine people learned a new application and developed a “learning object” with the application. Six of the nine continue to use Pachyderm to create new projects and at least two are teaching their students how to use the application. Through a post-training questionnaire, we learned that of the nine trainees, eight felt the training was good or excellent and all nine felt the software was a valuable tool to learn.

**E. Other Results**

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**7. Expenditures** on the project from all sources (Break down expenditures for all funds used on the project to include LSTA funds):

	<b>Federal-LSTA</b>	<b>State Funds</b>	<b>Local Funds</b>	<b>Member Funds</b>	<b>Other</b>	<b>Total</b>
Personnel – Project staff						
Library Materials						
Online Resources						
Equipment and Furniture	\$6,990					\$6,900
Telecommunications				\$1,000		\$1,000
Telecommunications Equipment						
Automation Hardware	\$4,105	\$5,060				\$9,165
Automation Software	\$3,900	\$3,744				\$7,644
Staff Development						
Supplies	\$1,658	\$1,699				\$3,357
Contractual	\$208,272	\$30,095		\$35,000		\$273,367
Other						
Totals	\$224,925	\$40,598		\$36,000		\$301,523

**8. Continuation: See Directions**

If there is any aspect of the MDL project that causes the most anxiety, it is sustainability. Obtaining continuous financial support continues to be a critical concern for the MDL. Mark Ritchie, Minnesota Secretary of State, spoke to this concern during his keynote address at the MDL Annual Meeting. Despite tight economic times in the state legislature, Bill DeJohn has been able to provide a limited amount of support through the MINITEX budget. The amount is insufficient to build upon our success or expand to meet new opportunities; it is barely sufficient to sustain what we have already accomplished. We continue to evaluate both our mission and a variety of funding options. A recent inquiry from IMLS to pursue a grant to support our Pachyderm initiative is intriguing, but would require us to refocus our mission away from digitization toward library education. We are apprehensive to alter our mission so radically and leave those who have generously shared their collections without adequate support. MINITEX will request additional funding from state government in the upcoming budget year for these services so we can reduce the dependence upon LSTA funding.

**Minnesota LSTA FFY 2007-Final Report**

(Follow the exact form, contents and pagination provided.)

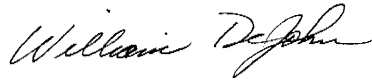
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**9. Attachments:** Attach to this form any materials relevant to this project evaluation, such as survey questions, comparative statistics, news clippings, testimonial letters, reports and reactions from participants or residents of the community. If your project resulted in bibliographies, brochures, handbooks, A.V., catalogs, etc., **attach a minimum of three copies of each item.**

**10. Signatures:** We, the undersigned certify that the data and information contained in this report are true and correct to the best of our knowledge and belief.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Library Board President/School Superintendent/University Dean



7/31/08

\_\_\_\_\_  
Date

\_\_\_\_\_  
Library Director/Media Specialist  
William DeJohn, Director  
MINITEX Library Information Network

**FFY2007 Final Report due to the State Library Agency by 4:00 p.m. Friday, August 1, 2008, or postmarked Friday, August 1, 2008.**