Major Scanning and Digitization Projects at the University of Minnesota

or

Massive Digital Libraries via Radical Collaborations

John T. Butler, University of Minnesota
j-butl@umn.edu
NCSL Legislative Summit
August 2014

With major contributions from Jeremy York and Mike Furlough, both HathiTrust; OCLC Research; and Jason Roy, University of Minnesota
Digitizing a library, one semi at a time

By Jenna Ross, Star Tribune

Last update: April 27, 2010 - 5:29 PM

A semi pulled up to the University of Minnesota last week and left full -- of books.

The U Libraries sent off its first shipment of volumes for the Google Books project, a massive effort to digitize collections from around the world.

The U signed onto the project in 2007, along with other Midwestern universities.

Google won't get everything the U has. Instead, the company requests books and manuscripts that are distinctive and have yet to be scanned, said Peggy Johnson, associate university librarian.

Indiana University, for example, will pass along its "fabulous folklore collection."

The U's contributions will include books on bee-keeping, forestry and Scandinavian literature. Then there's "Minnesota election laws in theory and practice," and the 1916 document, "A preliminary survey of the more important archives of the territory and state of Minnesota."

In the end, the U will contribute more than 1 million volumes.

No money will change hands under this six-year contract. Essentially, Google is digitizing large parts of the U library for free.

The process is occasionally tricky.

Staffers gather what Google has requested, being careful not to raid an entire location, pick a book that's in poor shape or inconvenience students.

"We don't want to go into the law library right before finals and have trucks rolling back and forth while they're studying," Johnson said. "Our first priority is to our users."

The project will ultimately make the lives of those users easier. A student will be able to access a paragraph within a text actually housed in Italy. A professor might search thousands of volumes to find when a particular phrase was first used.

Johnson herself is excited about the possibilities.
The CIC-Google Agreement

• Up to 10 million volumes from CIC (in addition to the ~ 8-9M vols from Michigan and Wisconsin); up to 1 million from UMN

• Focus on unique titles in CIC

• Capture “collections of distinction” in their entirety

• Out-of-copyright digital copies returned to HathiTrust

• In-copyright works held in escrow with specified release conditions
  – working to renegotiate these terms
Library Opportunities

• Preservation and access
  – “Street value” ~ $60-$80/volume
  – 1,000 years

• Collection management
  – Shared print retention and storage
  – “Cloud Library” potential

• Shared/collective action for future services
THREE-DIMENSIONAL CALIBRATION USING ORIENTATION AND POSITION SENSITIVE CALIBRATION PATTERN

Inventor: Francols-Marie Lefevere, Mountain View, CA (US)

Assignee: Google Inc., Mountain View, CA (US)

OTHER PUBLICATIONS

Cited by examiner.
Welcome to the Shared Digital Future

HathiTrust Welcomes Columbia University as its Newest Partner

Read more >>
The Name

- The meaning behind the name
  - Hathi (hah-tee)--Hindi for elephant
  - Big, strong
  - Never forgets, wise
  - Secure
  - Trustworthy
The Mission, Goals, and Partnership
HathiTrust Mission

The mission of HathiTrust is to contribute to the common good by collecting, organizing, preserving, communicating, and sharing the record of human knowledge.
HathiTrust Goals

• Build a comprehensive digital archive of library materials
• Dramatically improve access to and use of these materials
• Preserve these important human records
• Coordinate shared storage strategies
• Sustain this as a “public good”
• Create a technical framework responsive to members through the centralized creation of functionality and to the creation of tools and services by the partnership.
Preservation with Access

• Cost effective preservation and access services
• Preservation
  – TRAC-certified
  – Robust infrastructure
  – Long-term commitments on digital content facilitate planning, decision-making
  – Facilitate activities such as discovery, copyright review, use of materials
Preservation with Access

• Discovery
  – Bibliographic and full-text search of all materials
  – Extended discovery (ProQuest, EBSCO, OCLC, Ex Libris)
  – Mechanisms for local loading of records

• Access and Use
  – Full text search
  – Public domain and open access works
    • Full download of materials where possible
    • Print on demand
  – Collections and APIs
  – Research Center
  – Lawful uses of in-copyright works

– Columbia University
– New York Public Library
– University of California system (consortium)
– CIC (Committee on Institutional Cooperation)

- University of Chicago
- University of Illinois
- Indiana University
- University of Iowa
- University of Michigan
- Michigan State University
- University of Minnesota
- Northwestern University
- Ohio State University
- Pennsylvania State University
- Purdue University
- University of Wisconsin-Madison

– Triangle Research Library Network (consortium)
– University of Virginia
– Yale University
The Partnership Today

Allegheny College
Arizona State University
Baylor University
Boston College
Boston University
Brandeis University
Brown University
California Digital Library
Carnegie Mellon University
Colby College
Columbia University
Cornell University
Dartmouth College
Duke University
Emory University
Florida State University
Getty Research Institute
Harvard University Library
Indiana University
Iowa State University
Johns Hopkins University
Kansas State University
Lafayette College
Library of Congress
Massachusetts Institute of Technology
McGill University
Michigan State University
Montana State University
Mount Holyoke College
New York Public Library
New York University
North Carolina Central University
North Carolina State University
Northwestern University
The Ohio State University
The Pennsylvania State University
Princeton University
Purdue University
Rutgers University
Stanford University
Syracuse University
Temple University
Texas A&M University
Tufts University
Universidad Complutense de Madrid
University of Alabama
University of Alberta
University of Arizona
University of British Columbia
University of Calgary
University of California Berkeley
University of California Davis
University of California Irvine
University of California Los Angeles
University of California Merced
University of California Riverside
University of California San Diego
University of California San Francisco
University of California Santa Barbara
University of California Santa Cruz
The University of Chicago
University of Connecticut
University of Delaware
University of Florida
University of Houston
University of Illinois
University of Illinois at Chicago
The University of Iowa
University of Kansas
University of Maine
University of Maryland
University of Massachusetts, Amherst
University of Miami
University of Michigan
University of Minnesota
University of Missouri
University of Nebraska-Lincoln
The University of North Carolina at Chapel Hill
University of Notre Dame
University of Oklahoma
University of Pennsylvania
University of Pittsburgh
University of Queensland
University of Tennessee, Knoxville
University of Texas
University of Utah
University of Vermont
University of Virginia
University of Washington
University of Wisconsin-Madison
Utah State University
Vanderbilt University
Virginia Tech
Wake Forest University
Washington University
Yale University Library
Requirements

- Non-profit libraries or non-profit institutions with libraries
- Partnership agreement/fees
- Print holdings information
- Shibboleth compliant (authentication protocol)

http://www.hathitrust.org/eligibility_agreements
http://www.hathitrust.org/partnership_checklist
Highlights and Accomplishments

• Launch (2008)
• TRAC certification (2011)
• Constitutional convention (2011)
• HathiTrust Research Center (2011)
• 10 million volumes (2012)
• New governance established (2012)
• Current bylaws and fee structure (2013)
• 11 million volumes (2014)
Currently Digitized

- **11,428,472** total volumes (UMN Libraries ~ 7.5M vols)
- **5,896,575** book titles
- **297,639** serial titles
- **3,999,965,200** pages
- **512** terabytes
- **135** shelf miles
- **9,286** tome tons
- **3,998,077** volumes in the public domain (~35% of total)
Search Results: 22,798 items found for "Minnesota Legislature" in Full-Text + All Fields

Select all on page: [ ]

Search Results:

- The Minnesota Legislature of ..., by C. J. Buell ... 1913
  - by Buell, Carl J., 1853-
  - Published 1910
  - [Catalog Record] [Full view]

- The Minnesota Legislature of ..., by C. J. Buell ... 1913
  - by Buell, Carl J., 1853-
  - Published 1910
  - [Catalog Record] [Full view]

- The Minnesota Legislature of 1915 / by C.J. Buell.
  - by Buell, C. J., 1853-1924.
  - Published 1915
  - [Catalog Record] [Full view]
CHAPTER I.

THE SPEAKERSHIP.

Very soon after the election of Nov. 5, 1912, it became apparent that the people had chosen to the lower house of the legislature of Minnesota a substantial majority of men who believed in the fundamental principles of democracy. Most of these men came to the legislature labeled as Republicans. Others called themselves Democrats. There was one called a Socialist and one a Prohibitionist. Whether these men were truly democratic or not must be determined by their legislative acts; and the first ten by which we can begin to form an opinion was the way they lined up on the speaker.

There were six candidates for speaker. One of them was the progressive element among the Republican members. He was Mr. McCaffrey, who was later to be the mayor of Minneapolis. There was Frank Minnet of St. Paul, N. J. Hancher of Leipzig, McPherson of St. Peter, J. T. Johnson of Otter Tail, and E. G. Olson of Pope. All these men had been in the legislature before, and their work had commanded the respect and confidence of the people of the state. With a degree of uneasiness seldom witnessed among those who seek political power, these six men consulted and entered into an agreement to unite in support of the one who should show the greatest strength in a meeting of progressive members.

In this meeting, Henry Rines, after several ballots, was elected speaker, and the next day he was sworn in with the support of the entire Republican party. It was a close election, and all the other members to do all they could to secure his election. Other pledges of support began to come in and by December 3rd, enough members had pledged themselves to Mr. Rines to make his election certain.

Garfield B. Brews of McLeod, P. H. McCaffrey of Cass and Ernest Samuel of St. Louis, who had been willing to receive the voices of those opposed to Mr. Rines, saw him withdraw from the contest, and acknowledged their defeat. In this contest the twenty members who were elected by the Republican party were the victory of the Republican party. They were elected in St. Paul Nov. 18, and elected to hold office and allow the Speakership to be determined by the Republican members. This action is worthy of commendation, as a long party was recognized at all in our legislature, parties should stand by themselves in the determination of all party matters. It is to be hoped that the time is near when men will be chosen for public positions in state and city, village and county, upon their honest and fitness and not of how they line up on national issues that have no necessary relation to state and local affairs. Of course, real democracy in fundamental, and he who is imbued with that spirit will always be allied to that side regardless of the issue of party.
# Google Books-HathiTrust Comparison

<table>
<thead>
<tr>
<th></th>
<th>Google Book Search</th>
<th>HathiTrust</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volumes</strong></td>
<td>~20M??</td>
<td>11.4M, includes Google, IA content, plus far more</td>
</tr>
<tr>
<td><strong>Search</strong></td>
<td>Full-text*</td>
<td>Bibliographic and FT</td>
</tr>
<tr>
<td><strong>Data Access</strong></td>
<td>Only through the web interface</td>
<td>Numerous APIs and growing; in WorldCat</td>
</tr>
<tr>
<td><strong>Metadata</strong></td>
<td>“it’s all data”</td>
<td>MARC, METS, PREMIS…</td>
</tr>
<tr>
<td><strong>Enumerations</strong></td>
<td>Each volume = edition</td>
<td>Clearly presented; clarity around “parts-to-whole”</td>
</tr>
<tr>
<td><strong>Rights Management</strong></td>
<td>Google’s Black Box</td>
<td>Detailed rights mgmt. system; verification work</td>
</tr>
<tr>
<td><strong>Preservation</strong></td>
<td>No long-term assurances</td>
<td>TRAC certified</td>
</tr>
<tr>
<td><strong>User Experience</strong></td>
<td>General audience; largely effective</td>
<td>Oriented towards academic users</td>
</tr>
</tbody>
</table>

* Full-text searches for “minnesota” in GBS and HT yield 118K and 926K results, respectively.
Collections
HathiTrust covers a wide range of formats

- Books
- Encyclopedias
- Archival materials
- Directories
- Periodicals
- Maps
- Musical scores
- Statistics
- Visual Materials
HathiTrust contains materials in all disciplines...

- **HathiTrust by call number**

and includes a wide range of primary source materials, such as:

- Diaries
- Correspondence
- Reports
- Newspapers
- Memoirs
Support Beyond Books and Journals
Content Sources

University of Michigan, 42.52%
University of California, 31.47%
University of Wisconsin, 5.06%
University of North Carolina at Chapel Hill, 0.46%
University of Virginia, 0.46%
University of North Carolina, 0.16%
Columbia University, 0.59%
Penn State, 0.63%
Purdue University, 0.41%
Texas A&M University, 0.01%
Utah State University, 0.00%
Boston College, 0.02%
North Carolina State University, 0.03%
University of Florida, 0.09%
Yale University, 0.22%
Duke University, 0.25%
University of Chicago, 0.36%
Northwestern University, 0.34%
Ohio State, 0.00%
*As of February 17, 2014*
The top 10 languages make up ~87% of all content

- English, 49%
- German, 9%
- Spanish, 5%
- French, 7%
- Chinese, 4%
- Russian, 4%
- Japanese, 3%
- Italian, 3%
- Arabic, 2%
- Latin, 1%
- Remaining Languages, 13%

* As of February 17, 2014
Language Distribution (2)

The next 40 languages make up ~12% of total

* As of February 17, 2014
Content Rights Distribution

- In Copyright: 67%
- "Public Domain": 33%
- Public Domain (worldwide): 17%
- Public Domain (US): 11%
- Open Access: .1%
- Creative Commons: .2%
- U.S. Federal Government Documents (worldwide): 4%

*As of February 17, 2014*
HathiTrust
Collection Development & Management
In 2011, over a third of titles held in UMTC Libraries were duplicated in the HathiTrust Digital Library.

~3.9 million University of Minnesota (MNU) holdings in WorldCat

~1.2M duplicated in HathiTrust Digital Library

OCLC Research. Analysis based on HathiTrust and WorldCat snapshots. Data current as of February 2011.
A global change in the library environment

Academic print book collection already substantially duplicated in mass digitized book corpus

Copyright
Legal and Policy Frameworks

• While true previously, but we have greater certainty and judicial clarity today regarding:
  – Digitization for the purposes of full-text search is a **fair use** of in copyright work.
  – Digitization for the purposes of serving users with print disabilities is a **fair use** of in copyright work.

• The US Copyright Office is working to update the Copyright Act.
  – Congressional hearings are underway.
Lawful uses of in copyright works

• Sensitive to multiple legal regimes
  – Full-text search (everywhere)
  – Access to users who have print disabilities (US, and where law permits)**
  – Access works that are damaged or missing and also out of print and unavailable (US only)

**Terms and conditions at
http://www.hathitrust.org/access_use#ic-access
<table>
<thead>
<tr>
<th>Type of work</th>
<th>Searchable (bibliographic and full-text)</th>
<th>Viewable*</th>
<th>Full-PDF download</th>
<th>Print on Demand</th>
<th>Print disabilities*</th>
<th>Preservation uses (Section 108)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public domain worldwide</td>
<td>Worldwide</td>
<td>Worldwide</td>
<td>Partners only if 3rd-party restrictions, if not, worldwide.</td>
<td>Worldwide</td>
<td>Worldwide</td>
<td>N/A</td>
</tr>
<tr>
<td>Public domain (US) – Non-US works published between 1873 and 1923.</td>
<td>Worldwide</td>
<td>When accessed from with the United States</td>
<td>Partners in the US if 3rd party restrictions, if not, anyone in the US</td>
<td>Available within the United States</td>
<td>Partners in the US; partners worldwide where laws permit</td>
<td>N/A</td>
</tr>
<tr>
<td>Works that rights holders have opened access to in HathiTrust</td>
<td>Worldwide</td>
<td>Worldwide</td>
<td>Worldwide (if digitized by Google, full-PDF only available if opened with CC license)</td>
<td>Worldwide with permission</td>
<td>Worldwide</td>
<td>N/A</td>
</tr>
<tr>
<td>Works that are in-copyright or of undetermined status</td>
<td>Worldwide</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Partners in the US; partners worldwide where laws permit</td>
<td>Partners in the US; partner worldwide where laws permit</td>
</tr>
</tbody>
</table>

* Note: Access to in-copyright works is subject to conditions listed in HathiTrust’s policies on [Access and Use](http://example.com).
Copyright Review / Permissions

• CRMS US (since 2008)
  – Published in US, 1923-1963
  – 312,667 determinations
  – 163,968 opened (~52%)
• CRMS-World (since 2012)
  – Published non-US (UK, Canada, Australia, Spain)
  – 102,366 determinations
  – 52,164 opened (~51%)
• Permissions
  – Open access – 6,982
  – Additional Creative Commons – 6,835
Organization & Governance
Governance

- Board of Governors
- HathiTrust Members
- Program Steering Committee
- Executive Director
- Standing Committees and Working Groups
How are costs shared?

• Public domain volumes: All partners share in infrastructure costs for each item.
• In copyright volumes: Partners share costs based on their holdings.
• Infrastructure cost per volume: ~$0.155 per volume per year.
• All partners pay an additional amount above costs to fund new programs and investigations.
Current Initiatives
Current Initiatives

1. Developing a shared print monographs archive
2. Expanding support for computational (non-consumptive) research
3. Expanding coverage and access to US government publications
Government Documents Initiative

• Ballot Initiative: provide “expanded coverage & enhanced access to U.S. Government Documents.”

• Activities:
  – Developing a registry of US Federal Government Documents
  – HathiTrust Board of Governors recently approved appointment of a PSC-designed Advisory Group to begin process
How to find out more

- About: http://www.hathitrust.org/about
- Resources: http://www.hathitrust.org/resources
- Twitter: http://twitter.com/hathitrust
- Facebook: http://www.facebook.com/hathitrust
- Monthly newsletter:
  - http://www.hathitrust.org/updates
  - RSS http://www.hathitrust.org/updates_rss
- Contact us: feedback@issues.hathitrust.org
- Blogs: http://www.hathitrust.org/blogs
  - Large-scale Search
  - Perspectives from HathiTrust
A Second Story of Large-scale Digital Collaboration:

Minnesota Digital Library and the Digital Public Library of America:

dp.la | reflections.mndigital.org | mndigital.org
The Minnesota Digital Library, based in Minitex, engages in and supports access to online resources, digitization, educational outreach, professional development and digital preservation. 

Minnesota Reflections is a free online database of digitized materials from many of the state’s leading cultural heritage organizations.
MDL Footprint (2014)

- ~160 cultural institutions – all types and sizes
  - County, Area, and Regional Historical Societies
  - Academic, Public, and Special Libraries
  - Museums
  - Governmental agencies, including national, state, and county offices
  - Non-profit foundations
  - Religious organizations
  - Church and monastery archives

- >200,000 files -- images, audio-recordings, newspapers, maps & documents

- Educational Programming
  - Lesson plans and exhibits

- Large-scale aggregation & discovery
  - via DPLA Service Hub role
MDL’s Five Program Areas

- **Digital Conversion**
  - Photographs, textual materials, maps, audio, video

- **Online Access**
  - Minnesota Reflections
  - Metadata brokering (DPLA, WorldCat, Google)
  - Experimentation with Google SA, Steve Project (tagging)

- **Digital Master Storage and Preservation**
  - Evolving towards a state-wide preservation service

- **K-12 and Lifelong Learning Support**
  - Teacher guides, tied to Minnesota Curriculum Standards
  - Teacher-designed Pachyderm modules (online learning objects)

- **Professional Development & Education**
  - Metadata and digital capture training/webinars
  - Annual conference
The Digital Public Library of America brings together the riches of America’s libraries, archives, and museums, and makes them freely available to the world.

- **Portal**
  - Providing innovative ways to search and scan through millions of items, including by timeline, map, virtual bookshelf, format, subject, and partner.

- **Platform**
  - Enabling new and transformative uses of our digitized cultural heritage. With an API and maximally open data, DPLA can be used by others to create novel environments for learning, tools for discovery, and engaging apps. (http://dp.la/info/developers/download)

- **Public Option**
  - DPLA works, along with like-minded organizations to foster an open intellectual landscape in the face of increasingly restrictive digital options.
DPLA Start-up Funders

- Alfred P. Sloan Foundation ($2.5M)
- Arcadia Fund ($2.5M)
- John S. and James L. Knight Foundation ($1M)
- National Endowment for the Humanities ($1M)
- Institute of Museum and Library Services ($250K)
- Bill and Melinda Gates Foundation ($1M)
April 18, 2013

Total DPLA records: 2.4 M
Service Hubs: 6 (including MDL)
Content Hubs: 10
Organizations represented: ~500

April 18, 2014

Total DPLA records: 7.1 M
Service Hubs: 11-12
Content Hubs: 16
Organizations represented: ~1,300
Sources for Metadata Aggregation

Metadata for cultural heritage digital objects and books aggregated from **Service Hubs** and **Content Hubs**

**SERVICE HUBS**
- Mountain West Digital Library
- Digital Commonwealth (Mass.)
- Digital Library of Georgia
- Kentucky Digital Library
- **Minnesota Digital Library**
- South Carolina Digital Library
- Empire State Digital Network (New York)
- North Carolina Digital Heritage Center
- The Portal to Texas History
- Connecticut Digital Archive
- Indiana Memory
- Montana Memory Project

**CONTENT HUBS (≥250K records)**
- ARTstor
- Biodiversity Heritage Library
- California Digital Library
- David Rumsey Map Collection
- The J. Paul Getty Trust
- The U.S. Government Printing Office
- The Harvard Library
- **HathiTrust Digital Library**
- Internet Archive
- National Archives and Records Administration
- New York Public Library
- The Smithsonian Institution
- more...
The DPLA hopes that the content and resources in the library will be put to creative uses that educate, inform, and empower current and future generations.

The DPLA aims to make the cultural and scientific record available, free of charge, to all through databases of metadata. The DPLA, for this purpose, has undertaken the task of ingesting, indexing, enriching, and making available descriptive metadata and wishes to make such metadata widely available for reuse.

The DPLA wishes to promote innovation in the development of applications and tools that use and rely on this metadata. In order to foster such innovation, the DPLA is committed to ensuring such metadata is unencumbered by legal restrictions.
The vast majority of metadata is not subject to copyright restrictions.

DPLA’s partners share the DPLA’s vision of and commitment to freely sharable metadata to promote innovation.

DPLA asserts no rights over its database of metadata and dedicates its contributions to the public.

DPLA’s users are free to harvest, collect, modify, and/or otherwise use any metadata contained in the DPLA.
Download, re-use, re-invent...
Fostering Innovation via Re-use

- The point of the API is for the community to build on it
  - Beta sprints
  - Appfests

- **Code** – [https://github.com/dpla](https://github.com/dpla)
- **App Library** – [http://dp.la/apps](http://dp.la/apps)
App Library

The DPLA is a platform that enables new and transformative uses of our digitized cultural heritage. The DPLA’s application programming interface (API) and open data can be used by software developers, researchers, and others to create novel environments for learning, tools for discovery, and engaging apps.

Become an App Developer

WikipeDPLA
Eric Phetteplace
See relevant results from the Digital Public Library of America on any Wikipedia article using this Google Chrome extension.
App Home Page »

Term vs. Term
Owen Mundy
Compare the number of search results for two phrases from the Digital Public Library of America.
App Home Page »

FindDPLA
Eric Phetteplace and Jake Orlowitz
Want to see DPLA’s related text and images for any Wikipedia article? FindDPLA is an easy-to-install tool that pulls up relevant content from the DPLA any time you view a Wikipedia article.
App Home Page »

Historical Cats
Adam Malantonio
A Twitter bot that grabs an item at random via the DPLA’s API platform and tweets it out.
App Home Page »

Metadata Games
Tiltfactor Labs
Metadata Games is a digital game platform for gathering data on photo, audio, and moving image artifacts. The platform entices players to visit archives and explore humanities content while contributing to vital records. Metadata Games is fueled in part by digital materials contained in DPLA via its partners.
App Home Page »

DPLA Search Widget
Dean Farrell and Josh Wilson
Search the DPLA right from your webpage in three easy steps! DPLA Search Widget allows you to easily install a DPLA search box on your website or WordPress pages.
App Home Page »
MDL+DPLA
Addressing the Full Spectrum of Digital Needs
MDL’s DPLA-funded Activities

- State-/Region-wide digital library metadata aggregation
- Major new digitization projects
- Digital storytelling
- New Audio/Visual Documentary initiatives
- Community-centered engagement and outreach
Why Aggregate?

MDL + DPLA = Amplification
MDL + DPLA = Aggregation

Beyond the MDL Digital Collections
Digital Storytelling

History of Survivance: U Narratives
Dressing a Buffalo Skin

Seth Eastman, an American soldier stationed at Fort Snelling near modern-day Minneapolis, 1849, was commissioned by Congress to compile images and images of the Native inhabitants. Eastman was charged with providing the government an idea of what tribes und to be heard up hearing, of the exhibit is Native must be an account of said nation, and of gatherings of their account of the lives of those recounted so as to an account of the lives of those recounting the account of the lives of those recounting the account of the lives of those recounting...
Questions?

Portrait of Dr. G. A. Dahl, Mankato, Minnesota, by George E. Keene. ca. 1900.
Blue Earth County Historical Society
http://reflections.mndigital.org/cdm/ref/collection/blue/id/1689