Digitization in Saskatchewan and Critical Issues in its Continuing Development

Report of the Digitization Inventory Project

Commissioned by the Multitype Library Board, Saskatchewan Provincial Library, Saskatchewan Learning.

Completed by Tanya Rogoschewsky, MLIS Intern

August 2005
# Table of Contents

Executive Summary .................................................................................................................. 2  
Project Goals and Background ............................................................................................. 5  
Position within Previous Digitization Efforts ....................................................................... 6  
Methodology .......................................................................................................................... 7  
Results Summary .................................................................................................................. 8  
  Expectations ......................................................................................................................... 8  
  Level of Digitization Activity in Saskatchewan ....................................................................... 9  
  Motivating Factors in Digitization ....................................................................................... 9  
  Types of Digitization Projects ............................................................................................... 10  
  Resource Discovery (searching capabilities and metadata) .................................................... 10  
  Collaboration ......................................................................................................................... 11  
  Obstacles in Digitization ...................................................................................................... 11  
  Critical Issues ....................................................................................................................... 12  
  Future Considerations .......................................................................................................... 14  
Recommendations to Further Digitization in Saskatchewan .................................................... 14  
Proposed Areas of Collaboration in the Development of a Future Pilot Project ................. 17  
Acknowledgements ............................................................................................................... 18  

Appendices

Appendix A: Digitization Inventory Project Plan: May – August, 2005................................. 19  
Appendix B: Research Questions for the Digitization Inventory Project ............................... 22  
Appendix C: Organizations Included in Digitization Inventory ........................................ 23  
Appendix D: Inventory of Digitization Projects: Completed and Ongoing Projects .......... 26  
Appendix E: Survey of Digitization Activities in Saskatchewan 2004 Results Summary ...... 43  
Appendix F: Fostering Digitization Initiatives In Saskatchewan: A Discussion Paper .... 51
Executive Summary

Saskatchewan libraries, archives and other information providers have been working over the last number of years articulating a growing need for collaboration and standardization in the area of digitization. In 2003, a report by the Saskatchewan libraries and archives Digitization Working Group identified that "standards-based digitization offers new opportunities to collaborate in the creation of interactive and dynamic information and educational tools.” The Saskatchewan Multitype Library Board is supporting the development of such collaboration as part of its broader vision of ensuring that multitype partners have the capacity to digitize information and have enhanced online collections utilized by the public.

In order to explore the potential for a province-wide digitization strategy, the Multitype Library Board hosted Digitization Forums in 2004. Key stakeholders in the area of digitization were invited, including libraries, archives, museums and other community organizations. Participants at the Forums expressed interest in digitization collaboration and they recommended that the Multitype Library Board conduct an inventory of current digitization projects and collections as a next step. In addition, they suggested that the board identify and engage all interested sectors, complete a needs assessment, and identify a potential trial project.

In 2005, the Digitization Inventory Project was commissioned by the Multitype Library Board to follow through on the recommendations from the Forums. This resulting report significantly expands information gathered previously on digitization in Saskatchewan. It provides an overview of the digitization environment in Saskatchewan and identifies existing and potential digitization projects, perceived benefits and obstacles of digitization, the institutions’ capacity to digitize collections, standards used in digitization projects (and how that will influence future interoperability) and potential partnerships. 98 Saskatchewan organizations participated in the inventory, including libraries, archives, museums, art galleries, local history societies, and other organizations.

Findings – Including Trends and Current Issues

- Digitization or planning of a future digitization project is occurring throughout the information sector indicating a high level of activity in Saskatchewan.
- The level of funding for a project, the capacity of the organization, the perceived benefits to user communities, and the mandate of the organization are all motivating factors when digitizing. Driving the need to digitize are the perceived benefits of this activity including access to the resources being digitized, preservation of fragile physical objects and promotion of the resources that are available.
- Types of projects include virtual exhibits, internal resources modified for external use, public domain materials, Saskatchewan-specific materials, and photograph collections.
While the standards have evolved in this area internationally, there are few projects using metadata standards or controlled vocabulary within Saskatchewan, and many projects lack a search interface.

The number of projects within an organization, the knowledge of other projects, and the availability of resources (staffing and finances) are all factors determining the level of collaboration among organizations.

The significant obstacles to digitization include a lack of resources, lack of time, and the overall process needed to obtain copyright.

The tight time frames of funding grants create a barrier for creating robust digitization projects that include collaboration across partners.

The proposed changes to the copyright laws will impact on any digital projects in the future and will need to be considered.

Respondents showed a high degree of interest in the concept of a digitization alliance.

Major obstacles relating to access need to be overcome. Obstacles identified in the survey included the need for a high speed internet connection in order to view digital objects, basic search functionality in order to find digital objects within a collection, and the ability to promote the digital collection to target audiences so that users are aware of the existence of the resources.

There is currently no common definition for digital projects.

Preservation issues have yet to be defined and there is still a need to create digital migration strategies.

Digital materials and collections seem to reside in “silos” and need to be pulled together into more useable groupings.

Participants articulated a need for a national digitization funding program for libraries.

Digital projects are being created to follow funding rather than based on public needs assessment.

There is a difficulty in finding a suitable scope of project to undertake in the library sector.

**Recommendations**

- Increase the amount of public consultation to ensure the user communities’ needs are being met. This will help ensure that future digital projects can be more closely aligned with the user communities’ interests and to increase usage.

- Create a framework document of best practices to assist with digitization project planning. By creating this framework, the Saskatchewan digitization community will create a road map for building capacity and a common ground for cross-project cooperation.

- Test the framework by developing a pilot project. A pilot project will identify areas for more development and identify potential capacity within participating organizations.
• Establish an interim Advisory Council on Digitization reporting to the Multitype Library Board to help develop a digital alliance. The role of this council would be to continue the momentum already developed, and to prepare a more formalized approach to digital service development.

• Develop a Digital Alliance in Saskatchewan to increase the capacity for digitization across the sectors. This would formalize the collaborative relationships that currently exist, as well as make new partnership development easier in the future.
Project Goals and Background

In 2005, the Digitization inventory project was commissioned by the Multitype Library Board to expand on information gathered previously on digitization in Saskatchewan. The project aimed to provide an overview of the digitization environment in Saskatchewan by identifying current and potential digitization projects and major trends, themes and obstacles in digitization. The inventory was identified at the 2004 Digitization Forums as a necessary first step in creating province-wide collaborative digitization activity among diverse institutions with the eventual goal of increasing public access and use of digital collections in Saskatchewan.

The inventory gathered information on existing and potential digitization projects, perceived benefits and obstacles of digitization, the institutions’ capacity to digitize collections, standards used in digitization projects (and how that will influence future interoperability) and on potential partnerships. The four month project allowed for greater depth of information gathering from a wider cross-section of Saskatchewan organizations/institutions then was previously possible.

Through the creation of an inventory of digitization projects, the Multitype Library Board has gathered information on the current digitization infrastructure in Saskatchewan necessary to begin the establishment of a digitization ‘alliance’ or ‘consortium.’ The information gathered shows the critical issues which are impeding current digitization activity or which may become significant barriers in the future. This information provides an outline of where a potential digitization alliance should concentrate its efforts and will enable informed decisions when developing a digitization strategy.

Through the survey process, the concept of a digitization alliance was promoted to potential stakeholders and the level of interest in the concept assessed.

This project supported Saskatchewan Learning’s Performance Plan, Goal 1 “Learners Succeed” Objective 4: Increase access to information and resources through improved use of technology.

It also supported Strategic Directions 2 and 3 of the Multitype Library Board’s Strategic Plan, which state:

- Partners have the capacity to digitize information and have enhanced online collections that are utilized by the public (performance indicator, strategic direction 2).
- The partners’ online services are interoperable, transparent to people, affordable, fast, current, and distance neutral (performance indicator, strategic direction 3)
- Review the digitization report and develop a provincial strategy for multitype partners (objective 1, strategic direction 2).
Position within Previous Digitization Efforts

The 2005 digitization inventory project continues efforts in the area of digitization in Saskatchewan, building on past information gathering and recommendations.

In 2001, Provincial Library prepared a discussion paper entitled Saskatchewan Electronic Text Initiative Discussion Paper (SETI) in response to a need for research into digitization issues and possible future directions for Saskatchewan. The discussion paper was reviewed by the six largest libraries in Saskatchewan and the Saskatchewan Archives Board (6 + 1 Directors). They established the Digitization Working Group to review the SETI discussion paper and assess issues and concerns regarding digitization in Saskatchewan.

The working group met over the next two years and in 2003 submitted its report to the Six Plus One Directors. The report summarized the perceived key issues and outlined a broad blueprint for the development of an alliance of Saskatchewan organizations interested in digitization. The working group also released a discussion paper proposing the alliance concept including a vision, values, and objectives (see Appendix F). The discussion paper was referred to the Multitype Library Board, which was asked to coordinate advancement of the initiative.

In order to explore the potential for a province-wide digitization strategy, the Multitype Library Board hosted Digitization Forums in 2004 and invited key stakeholders in the area of digitization including libraries, archives, museums and other community organizations. Organizations were also asked to complete a short survey on their digitization activities. The survey identified issues and obstacles related to digitization in the 22 organizations that responded, however there remained a need for more comprehensive information gathering (see Appendix E).

The forums identified four main next steps necessary to develop a collaborative digitization strategy in Saskatchewan:

- Identification and engagement of all interested sectors (arts community, Aboriginal community, museum community, libraries, archives and other community associations);
- Development of an inventory of current projects and collections;
- Completion of a needs analysis/market analysis (dedicated information gathering);
- Identification of a trial project.

The Digitization Inventory Project was developed to begin work in these areas.
Methodology

Provincial Library hired a Masters of Library and Information Studies (MLIS) intern through the Centennial Summer Student Program to undertake the digitization inventory project (May 2 – August 26, 2005) under the guidance of the Multitype Library Development Unit. The project plan, including project objectives, structure and timeline, is in Appendix A.

A list of 170 potential contacts including libraries, resource centres, archives, historical societies, museums, art galleries, and arts/culture organizations was developed. This list was not meant to include all organizations from each sector, but rather ensure that the inventory project would involve a range of organizations with varying sizes, mandates, budgets and locations so that information gathered could provide representative data on the state of digitization in the province. While the scope of the project was broadly inclusive, the priority was to include as many institutions as possible from the library sector.

Working with existing digitization information resources from groups such as the Colorado Digitization Project (now Collaborative Digitization Program), PADI (Preserving Access to Digital Information, National Library of Australia), and the Nova Scotia Digital Collections Initiative, a working document of digitization questions was developed. To facilitate information gathering, this document was condensed to 23 questions which would provide the desired research information (see Appendix B). The survey included questions on the organization’s capacity for digitization, format and subject of the digital collection, partnerships, copyright considerations, personnel requirements, standards, access and project outcomes.

In order to create a manageable body of information, a definition of digitization was drafted for this project. For the purposes of this inventory, digitization referred to, either the creation born digital materials or the conversion of non-digital material to digital form, to create an array of digital information resources that could be used for a variety of purposes (i.e. not course specific). The definition was purposely broad so that the inventory could include a full range of projects.

An introductory email was created outlining the project and its goals. This email was sent to the contact list and included the questionnaire form as an attachment. Organizations were given the option of responding via email or telephone. Involvement in this project was voluntary, but participation in the survey was actively sought as the project coordinator gathered the majority of the information through telephone interviews. A total of 98 organizations were successfully contacted and included in the project (see Appendix C). An inventory of the completed or ongoing digitization projects is also included in this report (see Appendix D).
Results Summary

Expectations

Based on information gathered through the previous survey and issues raised at the Digitization Forums, we had anticipated certain trends in the information gathered through this inventory. While much of the information supported our expectations, there were a few noteworthy deviations.

In the previous survey, participants had prioritized the obstacles to digitization as:
1 - Funding
2 - Equipment
3 - Training
4 - Standards
5 - Realignment of resources to achieve digitization
6 - Governance
7 - Digital Copyright
8 - Preservation

Participants in the Digitization Inventory Project also identified lack of funding, lack of equipment, and lack of digitization training as the three most significant obstacles to undertaking digitization projects, but two important differences were noted. Digital copyright (previously ranked second lowest) was identified by this research as the largest obstacle after insufficient resources. The influence of this obstacle was evident in the project choices being made (a higher incident of historical projects with work in the public domain). Standards were previously listed as the fourth highest obstacle, but only 12% respondents in this inventory mentioned metadata, subject or imaging standards as an obstacle.

In consideration of recent attention paid to the importance of metadata standards and the development of cross-walks between the different standards, we had anticipated that the majority of organizations would be using some type of metadata standard and that there would be a high level of sector-specificity in choosing which standard to follow. This was only partially borne out by the research. While there remains some level of metadata sector specificity such as the dominance of RAD (Rules for Archival Description) in the archives sector, a significant number of organizations were using no metadata of any kind.

We had also not anticipated the number of digitization projects being completed in the form of virtual exhibits. The influence of the Canadian Heritage Information Network's (CHIN) Communities Memories Program on Saskatchewan digitization projects in the museum sector was another unexpected finding of this research.
Level of Digitization Activity in Saskatchewan

- All Sectors are Involved in Digitization to Some Extent: Digital projects are being carried out in varying degrees by all of the sectors surveyed: libraries, museums, archives, and arts and culture organizations.
  
  o 51% of the organizations surveyed were currently involved in or had completed a digitization project.
  
  o Archives (72%) and museums (83%) are the most active sectors. (However, it should be noted that due to time constraints, fewer small museums and archives were included in this inventory and therefore it can be assumed these numbers are somewhat higher than had all archives and museums participated).
  
  o 15% of the organizations surveyed reported having no interest in digitization.

- Potential Digitization Projects: For those organizations not currently involved in digitization, 47% had potential projects, meaning the amount of digitization activity in Saskatchewan could increase substantially if factors were favourable (e.g. sufficient funding).

- Public Library Involvement in Digitization: 30% of the public library systems in Saskatchewan had been involved in a digitization project. All of the public libraries had potential future digitization projects, but none had any projects in development. Public libraries reported that their staff and budgets were already stretched maintaining traditional services and therefore, digitization was often not seen as a priority.

- Definition of a Digitization Project: The definition of a digitization project differs between organizations and appears heavily influenced by the organization’s traditional role. (e.g. digital projects done by museums focus on the creation of virtual exhibits).

Motivating Factors in Digitization

- Available Funding Source: 80% of the organizations surveyed listed funding as the largest obstacle preventing digitization activity. 47% of organizations not involved in digitization have identified potential projects to be undertaken dependant on available funding in the future.

- Size of the Organization: Most digitization projects involve significant staff time, funding, equipment, and technical expertise. As a result, larger organizations with more sizeable budgets, more staff and more established funding are more likely to be involved than smaller organizations.
  
  o The exception to this is the museum sector where a national funding initiative was started (the Community Memories Program under the Virtual Museum of Canada) which targeted smaller organizations and districts.
This has resulted in a significant level of digitization involving small museums.

- **Benefits: Access, Promotion and Preservation:** Increased access, preservation of the material and promotion of the collection/organization are seen as the three major benefits of digitization.
  - Other benefits may be tied to specific types of digitization projects. For example, collection databases (with attached digital images of the items) are common digitization projects in the museum sector. Improved collection management and enhanced accessibility for internal research are seen as the major benefits for this type of project.

- **Organization’s Mandate and Collection:** The type of collection and the organization’s mandate are major factors in determining an organization’s level of involvement in digitization. Of the organizations which identified themselves as having little to no interest in digitization, 60% felt that their collection was not appropriate for digitization.

**Types of Digitization Projects**

- **Virtual Exhibits:** Virtual exhibits are the most common, followed by internal collection databases and online indexes.

- **Internal Access vs. Public Access:** The majority of organizations with an ‘internal access only’ digitization project plan to release a modified version of the project online for public access within the next 5 years.

- **Influence of Copyright in Collection Selection:** Due to copyright restrictions and the time needed to secure permission, most digitization projects involve historical materials which are in the public domain.

- **Saskatchewan sectors concentrating on Saskatchewan Material:** 89% of current digitization projects in the province focus on Saskatchewan materials or have a Saskatchewan theme.

- **Types of Materials Selected:** Photographs are the most common material to be digitized, followed by art work and archival ephemera (posters, postcards, etc.)

**Resource Discovery (searching capabilities and metadata)**

- **Lack of Metadata Standards Implemented in Current Projects:** While a variety of international standards exist, metadata standards are only being used by 42% of the organizations surveyed. This appears to be a result of the types of digitization projects being developed and from a lack of knowledge on metadata.
Many virtual exhibits have been designed to mimic museum exhibits and provide a total experience of the subject matter for the user. Items are organized by subject/theme or by date, but no search function is included, therefore, metadata is perceived as irrelevant.

Outside of the library and archive sectors there is limited knowledge of metadata and its purpose in a digital collection.

Although metadata’s value is beginning to be recognized, standards are continuing to evolve rapidly.

It is less a problem of sector specificity (with specific metadata standards being used by each sector), than a problem of the number of organizations using no metadata or self-developed metadata.

- **Subject Heading Standards**: These are used only by a small percentage of organizations. Most searches rely on full-text keyword searching.

- **Lack of a Search Function**: The prominence of virtual exhibits and the level of metadata knowledge and technical expertise needed to develop searchable digitization projects have resulted in fewer digitization projects with search functions. Currently 45% of online, public access digitization projects have a search function. However, if the projects developed under the CHIN program (whose software is designed to create searchable projects) are excluded, the number of public-access, online digitization projects with search functions drops to 30%.

**Collaboration**

- Collaboration on digitization projects is influenced by:
  - **Organization’s Level of Involvement in Digitization**: Organizations with one digitization project are less likely to be involved in collaboration than organizations with multiple projects.
  - **Knowledge of other Digitization Projects**: Organizations’ limited knowledge of other digitization projects, especially those in other sectors limits the amount of collaboration. Collaboration tends to occur among organizations with collection similarity.
  - **Available Digitization Resources**: Collaboration is influenced by financial constraints, technical capacity and specific collection similarity.

**Obstacles in Digitization**

- **Lack of Resources**: This is the number one reason why organizations were not involved in digitization or involved only in a limited capacity.
• **Copyright:** The amount of time and finances needed to secure permission to reproduce copyrighted materials was seen as the second largest obstacle.
  
  o A significant number of organization expressed confusion over what comprised “reasonable efforts” to locate copyright holder and secure permission.

• **Limited Time Frames of Funding Grants:** The time requirement in conducting initial project planning, recruiting staff with the necessary skill sets, and carrying out the digitization project can be difficult for organizations given the limited time frame specified by funding programs.

---

### Critical Issues

• **Interest in the Concept of a Digitization Alliance:** As part of the digitization inventory project, the concept of a province-wide digitization alliance was discussed and the level of interest assessed. With the exception of those organizations who expressed no interest in digitization, there was a very high level of enthusiasm for the concept. It was felt that this was an essential step to create more accessible and useful digitization projects and to facilitate partnerships among organizations. Additionally, it was deemed that such an alliance would promote digitization in the province and allow it to move forward in a collaborative, organized fashion rather than as a piece-meal process.

• **Obstacles to Access:** Access is perceived as the primary benefit of digitization projects. However, the effectiveness of digital collections in providing access is impacted by:
  
  o **Access to high-speed Internet:** Digital projects involve large numbers of digital images and documents, thereby increasing page download time. High-speed internet access is therefore essential to facilitate use of digital collections. CommunityNet is crucial in providing high-speed internet access in rural Saskatchewan thereby allowing individuals in those communities to benefit from the digital material available.

  o **The lack of a search function:** Many of the self-developed projects (as opposed to those developed in partnership with CHIN) do not have a search feature. Although items may be organized chronologically or by theme, the lack of a search function poses a significant barrier to access.

  o **The lack of promotion:** Most organizations made some attempt to promote their digital collection, however the cost and time expenditure involved in creating a digital collection often results in limited budget or staff time remaining to promote the finished product. Additionally, as digitization projects become more commonplace, traditional media is less interested in documenting them. Without promotion, many projects may not reach their potential audience, compromising their value.
• **Varying Definitions of a Digital Project:** The lack of a clear definition or understanding of what comprises a digitization project results in a very diverse digitization landscape. The definition of digitization is impacted by the type of organization and by its level of involvement in digitization. Small organizations are more likely to consider anything which involves the use of technology resources (such as creation of a website or a text-only database from an existing paper copy) as a digitization project.

• **Digital Migration and the Obsolescence of Digital Formats:** Preservation is seen as the second highest benefit because use of a digital copy prevents unnecessary handling of a fragile item or document. Unfortunately, few organizations (less than 10%) indicated that they are considering digital migration and the obsolescence of digital formats. Without a strategic plan or long-term funding, it will be difficult to ensure the future accessibility of the digital collections.

• **Limited Number of Merged Digital Collections:** Many of the digitization projects included in this inventory were developed and promoted in isolation. Those that were developed through a collaborative structure are still separated into unconnected websites. This increases the searching time demanded of users in finding the desired materials. Access to the materials would be improved by creating more complex digitization projects involving multiple, merged collections. The current absence of metadata in use in the existing projects and the resulting lack of interoperability will impede this process.

• **Need for a National Digitization Funding Program for Libraries:** Although CIDL (Canadian Initiative on Digital Libraries) exists, it does not currently have a funding program. CIDL provides the essential infrastructure necessary for collaborative digitization in libraries as well as offers important resource material on digitization, but its value would be increased by the addition of a funding program. Currently there is no library equivalent funding program, similar in structure, to the Canadian Heritage Information Network (CHIN) Community Memories program. The Communities Memories Program facilitates digitization projects in smaller organizations through funding, by providing digitization-specific software to organize the project and by hosting the finished product on their server.

• **Insufficient Public Consultation:** Although statistics of usability testing were not formally tracked by this inventory, the importance of public consultations prior to beginning a digitization project and usability testing following its completion was something raised by very few of the organizations surveyed. This introduces the concern that digital projects are being created to follow funding rather than based on public needs assessment.

• **Difficulty in Selecting Manageable Digitization Projects in the Library Sector:** The libraries’ digitization efforts have been concentrated in creating online
versions of their finding aids (indexes, catalogues). Agencies funding digitization projects have tended to focus on projects that provide online full-text/full-image access to information.

Future Considerations

- **Increasing Difficulties in Copyright Law:** Proposed changes to copyright law may present further difficulties for organizations wishing to engage in digitization projects, by ignoring fair dealing criteria and the concept of user rights to access copyrighted material. There is also the concern that the purpose of digitized information is not considered in current copyright law and therefore material intended for educational purposes is subjected to the same restrictive laws as information intended for commercial purposes. As digitization copyright law continues to evolve and become increasingly complex, there will be fewer organizations with the legal expertise needed to successfully create digitization projects.

Recommendations to Further Digitization in Saskatchewan

**Increased Need for Public Consultation (Citizen Service Transformation)**

- As digitization projects grow and evolve, it will be necessary to ensure that these projects are meeting the expectations and demands of the public. Future projects should incorporate public consultation in the form of surveys or focus groups. This will allow those designing digitization projects to make evidence-based decisions and ensure that proposed projects are responsive to the needs of Saskatchewan residents. Additionally, usability testing should be conducted following the completion of future projects to ensure that projects are meeting their intended goals.

**Creation of a Best Practices Framework**

- This framework would be developed to assist organizations in the planning of digitization projects. The initial time needed to plan a digitization project and research equipment, standards, etc. can be a significant barrier especially given the limited time frame allowed by many digitization grants. Currently, each organization considering digitization must undertake this planning alone which results in a redundant use of resources. This redundancy could be avoided through the creation of a central planning framework. Much of the information included in such a framework is already available, but not in one succinct document with a Canadian focus. The framework document could be modeled on resource guides available from the Colorado Digitization Project (now Collaborative Digitization Program) and should include:
Project Planning Guide: step-by-step instructions on how to develop a digitization project plan, including information on realistic budgets and timelines for the project.

Information on potential funding sources.

Equipment information: what equipment is necessary, what software is available and how to choose what is most suitable for the project (thereby eliminating what can be a time consuming research process).

Copyright legislation information: what is in the public domain, what are "reasonable efforts" to locate a copyright holder and secure permission, samples of copyright permission forms, benchmarks for reproduction compensation, etc.

Metadata and language standards information.

A promotion guide: samples of media releases, suggestions of promotion activities etc.

This project should be developed in consultation with the different sectors and will require ongoing yearly maintenance to assure its accuracy, currency and relevancy.

Formation of a Saskatchewan Digital Alliance

A Saskatchewan digital alliance would bring together representatives from the various sectors and act as a leader in the creation and organization of digitization activities in the province. Its functions would include:

- Creating education opportunities related to digitization (e.g. workshops on developing metadata and using standards).
- Ensuring interoperability for the future by developing a province-wide strategy for digitization projects, which would include the development of provincial digitization standards that adhere to national and international proposed standards.
- Promoting careful usage of resources by eliminating duplication of efforts and facilitating information and equipment sharing.
- Researching and recommending digitization software, potential contract businesses, metadata standards, etc.
- Facilitating mentorship-style partnerships among organizations with established digitization projects and those recently embarking on digitization.
- Helping to create the infrastructure necessary to merge existing digital collections into a digital library which would allow users to remotely search multiple collections.
- Increasing public knowledge of the available digital resources about Saskatchewan to guarantee that those existing digitization projects are used to their full potential.
- Being a strong voice for securing project funding.
In order to achieve its objectives, a Saskatchewan digital alliance will require administrative support and technological and legal expertise. Therefore it is recommended that funding be sought for the hiring of two staff persons with knowledge of digital rights management, digitization software/hardware, metadata standards and copyright law. These staff persons could be based with Provincial Library, but shared among the alliance’s partners.

This alliance should involve representatives from the libraries, archives, museums, art galleries, and arts/culture organizations in Saskatchewan to ensure that the alliance is responsive to the needs of all Saskatchewan sectors involved in digitization. This will also enable each sector to contribute from their area of expertise.

Establishment of an Advisory Council

To facilitate the creation of a Saskatchewan digital alliance, an interim committee should be created under the direction of the Multitype Library Board. This committee would include representatives from a broad cross-section of interested organizations. The committee would be responsible for the establishment of the digitization alliance, the contacting of appropriate organizations/institutions and the development of the alliance’s mandate and structure.
Proposed Areas of Collaboration in the Development of a Future Pilot Project

Following the establishment of a Saskatchewan digital alliance and the development of a digitization “best practices” framework, a pilot project may be considered if supported by public consultation. To assist in the development of a pilot project, areas of similarity and linkages among existing digitization projects have been identified.

1. Museum Collection Database

Many Saskatchewan museums are creating electronic databases of their collections and attaching digital images of the artefacts to the existing text records. Currently these collection databases are not accessible online and access is restricted to internal staff only. However, many museums surveyed expressed the desire to make portions of their databases available to the public in the future via the internet. Therefore the possibility exists to create a central museum database consisting of the merged collections from multiple Saskatchewan museums. A central database would facilitate research and education by allowing public online access to both the text records and digitized images of artefacts currently held in Saskatchewan museums.

2. Saskatchewan Newspaper Index

Currently the Saskatchewan News Index (project of the University of Saskatchewan Archives) indexes the commercial newspapers of the province. However, three other digitization projects surveyed involved indexes to smaller Saskatchewan-developed newspapers or newsmagazines. (First Nations Periodical Index, Saskatchewan Indian: Selected Articles From the 1970 – 2003 and Index to Perceptions Newspaper). Additionally two organizations (Société Historique de la Saskatchewan and St. Peter's Abbey and College Library) also identified potential projects involving the digitization of Saskatchewan newspapers/newsmagazines. The potential exists for a unified index of Saskatchewan newspapers building on the project already begun by the University of Saskatchewan Archives. This project could begin as an online text-only index with full-text access to the documents being added in the future.

3. “Made in Saskatchewan” database

Several organizations in the arts and cultural sector have existing or developing databases on their collection of Saskatchewan-produced artistic materials including literary works, films, and visual arts. There is the potential for a collaborative digitization project which would focus on merging the existing databases. This would provide online public access to the artistic/cultural achievements in Saskatchewan. Recommended organizations for such a pilot project would include the Saskatchewan Filmpool, the Saskatchewan Playwrights Center, the Saskatchewan Publishers Group, the Saskatchewan Arts Board, the MacKenzie Art Gallery and the Saskatchewan Indian Cultural Centre.
Acknowledgements

The author gratefully acknowledges the continuing support and guidance of Melissa Bennett, Manager, Multitype Library Development and Amy Rankin, Coordinator, Multitype Library Services in the completion of the Digitization Inventory Project and this report. Their invaluable encouragement and information has been most appreciated.

The author would also like to thank Calvin Sadowski for creating the database for this project.

A final thank you to the staff of Saskatchewan Provincial Library, the members of the Multitype Library Board and the organizations and institutions who generously shared their information with me.
Appendix A
Digitization Inventory Project Plan: May – August, 2005

Project Description
Provincial Library is undertaking a Digitization Inventory Project upon recommendation of the Multitype Library Board. This project will focus on developing an inventory of digitization activities in libraries, archives, museums, and other organizations in Saskatchewan. The inventory will provide an overview of the digitization environment in Saskatchewan by identifying current digitization projects (both completed and ongoing) and potential or future digitization projects (existing collections). The inventory will include the description and scope of the project, the project’s purpose, the expected audience, the digitization and organization standards used, the technical, financial and human resources, the method of access, outcomes of the projects and any partnerships.

Through the creation of this inventory, the Multitype Library Board will develop a broad picture of the current digitization infrastructure in Saskatchewan. It will be used to identify existing digital collections which could be included in a prototype or pilot project. In addition, the concept of a Saskatchewan digital alliance will be promoted and a contact list of potential partners developed.

The Digitization Inventory Project will be conducted from May through August by Tanya Rogoschewsky, summer student at Provincial Library.

Project Objectives
1. To develop an inventory of digitization projects in Saskatchewan.
2. To identify the types of standards being used with digitization projects.
3. To identify existing capacity for digitization, as well as the challenges and barriers.
4. To explain and promote the concept of a Saskatchewan digital alliance.
5. To ascertain the current level of interest in a Saskatchewan digital alliance.
6. To identify potential partners for a Saskatchewan digital alliance.

Position within Saskatchewan Learning’s Performance Plan and the Multitype Library Board Strategic Plan
The inventory project has been identified as a first step in creating collaborative digitization activity among diverse institutions with the eventual goal of increased public access and use of digital collections in Saskatchewan. As such, this project supports Saskatchewan Learning’s Performance Plan, Goal 1 “Learners Succeed” Objective 4: Increase access to information and resources through improved use of technology. The information compiled through this project will be critical when developing a provincial strategy for digitization. By gathering information on the institutions’ capacity to digitize collections, on the standards used in digitization projects (and how that will
influence future interoperability) and on potential partnerships, this inventory supports Strategic Directions 2 and 3 of the Multitype Library Board’s Strategic Plan, which state:

- Partners have the capacity to digitize information and have enhanced online collections that are utilized by the public (performance indicator, strategic direction 2).
- The partners’ online services are interoperable, transparent to people, affordable, fast, current, and distance neutral (performance indicator, strategic direction 3)
- Review the digitization report and develop a provincial strategy for multitype partners (objective 1, strategic direction 2).

**Scope**

The project will concentrate on three sectors:

1. Libraries
   a. Public libraries
   b. Academic libraries
   c. Special Libraries
   d. School Libraries
2. Archives
3. Museums, cultural organizations, historical societies, arts organizations, etc.

**Project Steps:**

1. Develop a contact list of organizations.
2. Determine what information is to be collected.
   a. Review other digitization projects (Colorado Digitization Project, CIDL, etc.).
   b. Identify core and supplementary questions.
3. Develop an interview guide.
4. Work with Provincial Library, Department of Learning on the design of a database to house the information.
5. Begin initial contact with organizations.
6. Identify primary contact.
7. Send introduction notice/email.
8. Set up interview time.
9. Conduct interviews.
10. Enter data.
11. Completed database (linked to website).
12. Create a final report.
13. Create a project plan of recommendations for future steps.
14. Identify potential digital collections/organizations to participate in a pilot project.
<table>
<thead>
<tr>
<th>Tasks</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review existing digitization projects</td>
<td>05/02 to 05/09</td>
</tr>
<tr>
<td>Develop Project Plan</td>
<td>05/09 to 05/16</td>
</tr>
<tr>
<td>Develop Inventory of Questions</td>
<td>05/16 to 05/23</td>
</tr>
<tr>
<td>Develop Interview Guide</td>
<td>05/23 to 05/30</td>
</tr>
<tr>
<td>Create list of key organizations to contact</td>
<td>05/30 to 06/06</td>
</tr>
<tr>
<td>Send initial introduction emails</td>
<td>06/06 to 06/13</td>
</tr>
<tr>
<td>Complete design description for database</td>
<td>06/13 to 06/20</td>
</tr>
<tr>
<td>Schedule interviews</td>
<td>06/20 to 06/27</td>
</tr>
<tr>
<td>Conduct Interviews</td>
<td>06/27 to 07/04</td>
</tr>
<tr>
<td>Input data into database</td>
<td>07/04 to 07/11</td>
</tr>
<tr>
<td>Create a final report of findings</td>
<td>07/11 to 07/18</td>
</tr>
<tr>
<td>Create a project plan for future steps</td>
<td>07/18 to 07/25</td>
</tr>
<tr>
<td>Identify potential projects/organization to participate in a pilot project</td>
<td>07/25 to 08/01</td>
</tr>
<tr>
<td></td>
<td>08/01 to 08/08</td>
</tr>
</tbody>
</table>
Appendix B
Research Questions for the Digitization Inventory Project

For the Organization
1. What does the organization see as the value of digitization?
2. What additional resources would/are needed for a digitization project?
3. What are the obstacles to digitization?

For Each Digital Collection
1. What is the name of the collection/digital project?
2. What is the subject of the collection? (brief description of project)
3. Is there a Saskatchewan-focus to the material?
4. What is its size? (total number of items digitized)
5. What is the original format of the materials being digitized? (e.g. photograph, map, document)
6. What is/will be the digital format of the materials? (e.g. PDF, JPG)
7. What equipment/software was used to create this collection?
8. Who is the intended audience of the collection?
9. When was the project started? Completed?
10. Was the project undertaken with a partner organization?
11. How was (is) the project funded?
12. How many staff people are involved?
13. Who owns the materials? (what are the copyright considerations?)
14. What steps were taken to ensure the digitized collection complied with copyright law?
15. Was metadata created for the digital collection?
   a. If yes, what standard was used?
16. How is access provided? (e.g. CD-ROM, database, webpage)
17. What type of search mechanism is available? (e.g.: full text, subject search, etc.)
18. What are goals of the project?
19. What obstacles were encountered in creating this project?
20. How was (or will be) the finished project promoted?
Appendix C
Organizations Included in Digitization Inventory

Libraries, Educational Institutions and Related
1. Cameco Corporation Library
2. Campion College Library
3. Canadian Wildlife Service, Prairie & Northern Region Library
4. Central Pentecostal College Library
5. Centre for Second Language Instruction Library
6. Chinook Regional Library
7. Credit Union Central Library
8. East Central Health District Staff Library
9. Forest Ecosystems Library
10. Full Gospel Bible Institute, A.D. Marshall Library
11. Gabriel Dumont Institute
12. Health Sciences Library, Regina Qu'Appelle Health Region
13. National Hydrology Research Centre Library
14. International Bible College
15. John Dolan Resource Centre – Saskatchewan Association for Community Living
16. Lakeland Library Region
17. Law Society of Saskatchewan Libraries
18. Legislative Library
19. Luther College, George Thorne Library
20. NORTEP
22. Palliser Regional Library
23. Parkland Regional Library
24. Public Health Services Resource Center
25. RCMP Training Academy Learning Resource Centre, Depot Division
26. Regina Public Library
27. Resource Centre for Sport, Culture and Recreation
28. Resource Centre, Saskatchewan Highways and Transportation
29. Saskatchewan Indian Cultural Centre Library
30. Saskatchewan Indian Institute of Technology
31. Saskatchewan Labour Library
32. Saskatchewan Learning, Resource Centre
33. Saskatchewan Library Association
34. Saskatchewan Provincial Auditor’s Office Library
35. Saskatchewan Provincial Library
36. Saskatoon Public Library
37. Saskatoon Theological Union Libraries
   a. (St. Andrew’s College Library, Otto Olson Memorial Library, Lutheran Theological Seminary, College of Emmanuel & St. Chad Library)
38. SaskTel Corporate Library
39. SIAST
40. Southeast Regional Library
41. St. Peter’s Abbey and College Library
42. University of Regina, Dr. John Archer Library
43. University of Saskatchewan Libraries
44. University of Saskatchewan Libraries, Special Collections
45. Wapiti Regional Library
46. Wheatland Regional Library

Archives
1. Anglican Church of Canada Diocese of Saskatchewan Archives
2. City of Regina Archives
3. City of Saskatoon Archives
4. North Battleford City Archives
5. Regina Qu’Appelle Health Region Archives
6. Roman Catholic Archdiocese of Regina
7. Roman Catholic Diocese of Prince Albert Archives
8. Saskatchewan Archives Board
9. Saskatchewan Council for Archives and Archivists
10. University of Regina Archives and Special Collections
11. University of Saskatchewan Archives

Non-Profit Organizations (Arts & Culture Organizations, Historical Societies, etc.)
1. CARFAC: Saskatchewan Visual Artists
2. Museums Association of Saskatchewan
3. Organization of Saskatchewan Arts Council
4. Persephone Theatre
5. Saskatchewan Architectural Heritage Society
6. Saskatchewan Arts Board
7. Saskatchewan Craft Council
8. Saskatchewan Cultural Exchange Society
9. Saskatchewan Elocution and Debate Association
10. Saskatchewan Filmpool
11. Saskatchewan Genealogical Society
12. Saskatchewan History & Folklore Society
13. Saskatchewan Indian Cultural Centre
14. Saskatchewan Organization for Heritage Languages
15. Saskatchewan Playwrights Center
16. Saskatchewan Publishers Group
17. Saskatchewan Recording Industry Association
18. Saskatchewan Writers Guild
19. SaskCulture
20. Société Historique de la Saskatchewan

Museums and Galleries
1. Allan Sapp Gallery
2. Art Gallery of Prince Albert
3. Avonlea & District Museum
4. Claybank Brick Plant Historical Society
5. Diefenbaker Canada Centre
6. Duck Lake Regional Interpretive Centre
7. Dunlop Art Gallery
8. Estevan Art Gallery and Museum
9. Grand Coteau Heritage and Cultural Centre
10. Humboldt & District Museum & Gallery
11. Mackenzie Art Gallery
12. The Mendel Art Gallery
13. Moose Jaw Museum and Art Gallery
14. Neutral Ground Artist Run Center
15. Regina Plains Museum
16. The Royal Canadian Mounted Police Centennial Museum
17. Royal Saskatchewan Museum
18. Saskatchewan Sports Hall of Fame and Museum
19. Saskatchewan Western Development Museum
20. South Saskatchewan Photo Museum (formerly Arcola Heritage Society)
21. Swift Current Museum
Appendix D
Inventory of Digitization Projects: Completed and Ongoing Projects

This is not meant to be an exclusive listing of all digitization projects in Saskatchewan, but instead a representative sample of projects as identified by the organizations included in the Digitization Inventory Project. Many of these projects were developed in partnership, but are listed here only under the organization which assumed leadership of the project.

* denotes an ongoing project

Allan Sapp Gallery
Virtual Museum: Through the Eyes of the Cree
This online exhibit connects the artwork of Allen Sapp with the recorded oral narratives of Cree Elders to create a history of the Cree People. Includes images and videos.

http://www.virtualmuseum.ca/Exhibitions/allensapp/

Anglican Church of Canada, Diocese of Saskatchewan Archives
Catalogue of the Anglican Church, Diocese of Saskatchewan Archives *
Creation of database catalogue listing the complete records of the archives. Archive includes textual records, maps, architectural drawings, and artefacts on the history of the area, immigration and the role of the church.

Not online

Art Gallery of Prince Albert
Influences of the Emma Lake Art School *
A virtual exhibit on the Emma Lake Art School and its influence on art in Saskatchewan, specifically highlighting work in the Art Gallery of Prince Albert collection.

Not online yet

Avonlea & District Museum
Avonlea’s Prairie Pioneers
An online exhibit highlighting the lives of pioneers and immigrants in the area surrounding the town of Avonlea from 1890-1950. It includes photographs and audio and visual clips. The exhibit is keyword searchable.

http://www.virtualmuseum.ca/CommunityMemories/AAWT/000a/Exhibits/English/

City of Regina Archives
Regina: the Early Years
Regina’s early years from the 1880s - end of World War II. It features about 500 images, text, photos and video clips.

http://scaa.usask.ca/gallery/regina/north/north.html
City of Saskatoon Archives  
*Saskatoon: The Early Years (joint project with Saskatoon Public Library)*  
Complete details - see Saskatoon Public Library

Claybank Brick Plant Historical Society  
*A Little Brick Plant in the Middle of Nowhere*  
An online exhibit of the Claybank Brick Plant in Saskatchewan. The exhibit includes photographs, a virtual tour and former employees' stories. It is searchable by keyword and pre-selected subject terms.  
http://www.virtualmuseum.ca/English/CommunityMemories/flashDisplayer.php?exNum=0000163

Diefenbaker Canada Centre  
*Diefenbaker Archives Collection: OCLC Online*  
Online searchable database of the Diefenbaker archive collection (papers, photographs and audio-visual material accumulated by Mr. Diefenbaker during his life, including his Prime Ministerial papers). Currently text records only, no full-text.  
http://library.usask.ca/dbs/dief.html

Duck Lake Regional Interpretive Centre  
*Duck Lake Regional Interpretive Centre Collection*  
Onsite database of the museum’s collection with digitized images of all items. It includes pioneer, First Nations and Métis artefacts, documents, and photographs from 1870-1905. Primarily for staff use, but available to researchers onsite upon request.  
Not online

*First Shot Rang Out: Battle of Duck Lake*  
An online exhibit of the Battle of Duck Lake, the first armed encounter of the 1885 Northwest Uprising between the Métis and the Northwest Mounted Police. Includes photographs, maps, documents and storylines from the different perspectives.  
http://www.virtualmuseum.ca/CommunityMemories/AAXS/000a/Exhibits/English/

Estevan Art Gallery and Museum  
*Andrew King Show Print*  
A virtual exhibit of the posters created by Andrew King, a Saskatchewan printer who made advertising posters for carnivals and circuses using woodblock printing. The exhibit includes 200 images made from 1911-1958 and is searchable by keyword.  
http://www.virtualmuseum.ca/pm.php?id=record_detail&fl=0&lg=English&ex=00000172
Northwest Mounted Police Wooden Detachment *
A virtual exhibit on the history of Northwest Mounted Police in the Estevan region. It will include a database of the museum collection, teacher’s guide, student artwork, photographs, documents, photographs of artefacts. Currently in development.
Not online

Gabriel Dumont Institute
Virtual Museum of Métis History and Culture *
A virtual museum containing the following collections: Métis Community Photograph collection, Métis Oral History collection, Métis Artefacts, Saskatchewan Archives Board Métis Image Collection, New Breed Magazine, James Brady Papers. Browse collection or search by subject, title, author, etc
http://www.metismuseum.ca/main.php

Grand Coteau Heritage and Cultural Centre
Collection Database *
Database of the museum’s collection on the natural and social history of Shaunavon and surrounding area. The database has approximately 6,300 records with attached images for 90% of them. Currently for staff use only.
Not online

Through the Eyes of Everett Baker
Online exhibit on the work of Everett Baker, an amateur Saskatchewan photographer who photographed the social and natural history of the province from the late 1930s to the early 1970s. Browse or search by keyword or subject category.
http://www.virtualmuseum.ca/pm.php?id=exhibit_home&fl=0&lg=English&ex=00000185

Humboldt and District Museum & Gallery
Internal Database of Museum Collection*
An internal collection database with 12,084 textual records. The are currently attaching digital images to the records (44% complete). The collection includes Humboldt & area history from 1878-present (pioneer, natural history, town archives).
Not online

A Line Through the Wilderness: the Humboldt Telegraph Station
A virtual exhibit on the history of the telegraph station in Humboldt, the lives of its operators, George and Catherine Weldon and its role in the 1885 uprising at Batoche. The exhibit includes images, photographs, documents and other materials.
http://www.virtualmuseum.ca/pm.php?id=exhibit_home&fl=0&lg=English&ex=00000085
John Dolan Resource Centre – Saskatchewan Association for Community Living

*Dialect (organization newsletter) *
Website links to PDF versions of the bi-annual newsletter of the organization: articles of interest to teachers and parents of individuals with intellectual disabilities.
http://www.sacl.org/information/dialect.htm

*School to Life Transition Handbook*
A PDF version of their handbook for life planning for students with intellectual disabilities.
http://www.mcleod-educational.com/misc/to_work.pdf

Law Society of Saskatchewan Libraries

*Newsletters of Law Society of Saskatchewan* *
PDF versions of the organization’s newsletters – Bencher’s Digest Practitioner Journal, Saskatchewan Bar Association and Law Society’s Gazette.
www.lawsociety.sk.ca

*The Builder’s Lien Act Manual*
A PDF version of their manual on the Builder’s Lien Act.
www.lawsociety.sk.ca

*Judgements from Saskatchewan Courts* *
A database of the judgements from the Saskatchewan Court of Appeal, Court of Queen's Bench, and Provincial Court from 1994 to date. Database has 15,500 records, full-text 9900
http://www.lawsociety.sk.ca/NewLook/Library/fulltextnew.htm

Legislative Library

*Conversion of Older Card Catalogue* *
The library is converting older catalogue items (prior 1980) to electronic format. The project follows patrons’ requests for older material.

Online as part of their catalogue

Mackenzie Art Gallery

*Internal Database: Permanent Collection of MacKenzie Art Gallery* *
A database with text records and images for the 3,500 items in the permanent collection (includes contemporary and historical SK, Canadian and International work as well as other special areas). It is accessible only to staff and authorized researchers.

Not online
**Online Database of the Permanent Collection**

Online database of the permanent collection: textual records for all of the items including digitized images of 50% of the items. The collection includes 3,500 items: contemporary and historical Saskatchewan, Canadian and International work.

http://www.mackenzieartgallery.sk.ca/collection/view.cgi

Mendel Art Gallery

*Qu’appelle: Past, Present and Future*

A virtual exhibit on the Qu'Appelle region. It is still in development, but will include photographs and artwork.

Not online

Moose Jaw Museum and Art Gallery

*Like a Falling Leaf - The 1954 Plane Collision Over Moose Jaw*

A virtual exhibit on the 1954 airplane collision over Moose Jaw, Saskatchewan. The exhibit includes archival images and documents and is searchable using pre-selected subject terms or by a keyword search.

http://www.virtualmuseum.ca/CommunityMemories/ABAH/000a/Exhibits/English/

*Museum Collection Database*

A database of the museum and gallery's collection, which includes text records with attached images for the majority of the items. The collection focuses on visual arts and social (human) history of the region.

Not online

North Battleford City Archives

*Database of Archive’s Catalogue*

The creation of an electronic database of the archive’s catalogue. Upon completion, it will be accessible via the city's website.

Not online

Pahkisimon Nuye?áh Library System

**Northern Heritage Collection**

The project consisted of 8000 slides digitized onto CD-ROM: images of past events, places and activities in Northern Saskatchewan. CD-ROMS were distributed to schools in the region, but images are also included in the virtual exhibit ‘The Saskatchewan Landscape’ at http://scaa.usask.ca/gallery/saskatchewan/index.html

Complete project not online
Persephone Theatre

*Photo Gallery*
Photograph archive for past the 32 years of Persephone Theatre. The online gallery includes one photograph from each play produced and lists the actors. Photographs are arranged chronologically by performance year.

http://www.persephonetheatre.org/gallery/index.shtml

Regina Plains Museum

*A Window into the Regina Tornado of 1912 *
Upcoming online exhibit that will include interviews, maps, and over 120 photographs on the Regina Tornado of 1912. The collection will be searchable. Projected date of completion: April 2006.

Not online

*Internal Database of Collection *
A collection database: currently 13,500 textual records (10% with attached images). It will eventually include the total collection (approximately 20,000 items). Collection includes pioneer items, domestic artefacts and historical records. Staff access only.

Not online

Royal Canadian Mounted Police (RCMP) Training Academy Learning Resource Center

*Community Policing Manual*
A PDF version of their reference book on how to create a community profile. Hope to eventually have access over the internet, but access will be limited to RCMP.

Not online

Royal Canadian Mounted Police (RCMP) Centennial Museum

*RCMP Museum Photograph Collection*  
A collection of the photographs documenting the history of the RCMP from 1880-present. Searchable through an internal database, accessible for staff and authorized researchers. Project is in very early stages.

Not online

Royal Saskatchewan Museum

*Collection Database *
Database of the museum’s collection: media library (slides, videos, records of exhibits, field records), reference library, equipment library, and main collection records (collection includes Saskatchewan’s natural and human history).

Not online
Interactive Learning Centres

http://ilc.royalsaskmuseum.ca/home/

Saskatchewan Architectural Heritage Society
Facade: Newsletter of the Saskatchewan Architectural Heritage Society
Website links to PDF versions of the organization newsletter - currently 8 copies from 2002-present (not complete set). Newsletter listed by date, not searchable, no indexing of articles.

http://www.sahsonline.ca/facade.htm

Saskatchewan Archives Board
Saskatchewan Archives Board digitized photo file. *
An internal database of the digitized photographs from the collection. Photographs are digitized as requested by researchers for personal use and private study, broadcast, or publication in print or on the internet.

Not online

The Settlement Experience in Saskatchewan, 1870-1930 *
An online exhibit documenting the Saskatchewan settlement experience. Using the homestead files, digitized images and sounds, the website highlights immigration policy, settlement of the Canadian West, pioneer communities, education, spiritual life, etc. Anticipated date of completion: March 2006.

Not yet online

Regina Riot Enquiry Commission (The Populist Project: A Window on a Nation Building Experience) *
As part of the Prairie Populism Project, the Saskatchewan Archives Board has digitized 10,000 pages of materials relating to the Regina Riot Enquiry Commission. The final project will have 30,000 pages of archival materials from Alberta, Saskatchewan and Manitoba.

Not yet online

Saskatchewan 1905: The Birth of a Province *
A virtual exhibit on the province's evolution from being a part of the Northwest Territories to attaining provincial status in 1905. The website will give visitors a chance to go back in time and embark on a virtual journey through the SK of 1905.

Not yet online
Saskatchewan Arts Board

Showcase: Samples of Saskatchewan's Literary and Performing Arts
15 streaming video clips of writers reading from their works, theatre and dance performances
http://www.artsboard.sk.ca/showcase/showcase.shtml

The Permanent Collection of Saskatchewan Arts Board
An online database of 2,500 art objects. Public access is to primarily text-only records with password-protected access to a full image database (available free for curatorial research). Also has six online exhibitions with images under a specific themes.
http://www.artsboard.sk.ca/showcase/showcase_collection.shtml

Saskatchewan Council for Archives and Archivists

Combined Virtues: Saskatchewan’s Ukrainian Legacy
An online exhibit on the history of Ukrainian settlers in Saskatchewan. The exhibit is divided into 5 subjects: education, arts & crafts, literature, politics and music & celebration. It includes text, photographs, and other archival documents.
http://scaa.usask.ca/gallery/ukrainian/

A Doukhobor Song of Days
A virtual exhibit on the Doukhobors in Saskatchewan. It includes text, photographs, archival documents and music. It has a number of classroom activities for teachers related to Doukhobor history.
http://scaa.usask.ca/gallery/Doukhobor/

The Saskatchewan Archival Information Network (SAIN)
An online database of descriptions of archival material held in Saskatchewan archives. Fully searchable (title, names, keywords).
http://scaa.usask.ca/sain/

All Frocked Up: Glimpses of Cross-Dressing in Saskatchewan
A virtual exhibit on the history of female and male impersonation performed as entertainment in Saskatchewan. The exhibit includes archival photographs and is organized by themes.
http://scaa.usask.ca/gallery/allfrockedup/

Canada Quiz
An interactive quiz on Canadian history, which showcases archival photos and other materials.
http://scaa.usask.ca/gallery/quizcan/
**Saskatchewan Quiz**
An interactive quiz on Saskatchewan history with 30 questions. It includes archival photographs, documents, maps and text information on the questions asked.

http://scaa.usask.ca/gallery/quizsask/

**Main Street, Saskatchewan**
An exhibit showcasing archival photographs of the main streets of Saskatchewan towns. It includes more than 90 communities with images spanning the past century. Searchable by community name or geographic region.

http://scaa.usask.ca/gallery/mainstreet/

**Saskatchewan and the Visual Arts**
A virtual exhibit on the development of the visual arts in Saskatchewan and the lives/work of individual artists. It includes information on Saskatchewan art galleries, biographical information on selected artists and a brief history of visual arts in the province.

http://lib74123.usask.ca/scaa/gallery/art/

**Medicare: A People’s Issue**
A virtual exhibit on the growth of medicare in Canada from 1905-1962. It includes 617 photographs, newspaper articles, posters, brochures, etc. Also includes a message from Roy Romanow on the future of health care.

http://scaa.usask.ca/gallery/medicare/index.php

**The Avro Arrow**
A virtual exhibit on the development and history of the Avro Arrow, a Canadian-developed aircraft. The exhibit is organized by subject and includes photographs, archival documents and a full-text thesis written on the subject.

http://scaa.usask.ca/gallery/arrow/index.htm

**Saskatchewan in Two World Wars**
A virtual exhibit chronicling Saskatchewan’s participation in the two world wars. It is divided into subject categories: enlistment, training, the home front, etc. and includes photographs, posters, newspaper articles and other archival documents.

http://scaa.usask.ca/gallery/war/

**Saskatchewan Presents: An Exhibition of Theatre and Drama**
A virtual exhibit exploring the history of theatre and drama in Saskatchewan. It includes performance posters and photographs of players, theatres, costumes, etc. and is organized by subject categories.

http://scaa.usask.ca/gallery/drama/
Saskatchewan Elocution and Debate Association

*Guides and Resource Material for Saskatchewan Elocution and Debate Association*

Website contains PDF versions of 20 Resource Guides for debate: includes resources for starting a debate club, hosting a debate tournament, and introducing debate in the classroom. Also includes coach's and judge's handbooks.

[http://www.saskdebate.com/resources/resources.shtml](http://www.saskdebate.com/resources/resources.shtml)

**SEDA 30th Anniversary Photograph Collection**

A PowerPoint presentation on CD-ROM. The presentation highlights a photograph collection documenting the past thirty years of debate in Saskatchewan.

Not online

Saskatchewan Genealogical Society

*The Saskatchewan Homestead Index Project (SHIP)*

An online index of the homestead records in Saskatchewan from 1870 to 1930 (approximately 330,000 records). The records document the history of the earliest agricultural settlement of Saskatchewan. Full-text of record available only in paper and by request.

Not yet available online

Saskatchewan Indian Cultural Centre

*Aboriginal Arts Gallery Saskatchewan*

A database of Aboriginal arts/crafts produced by Saskatchewan's Aboriginal people. It includes selected works, and biographical and contact information for the artists. Keyword searchable, or browse by artist name, medium or location.

[http://www.sicc.sk.ca/native_arts/](http://www.sicc.sk.ca/native_arts/)

*Aboriginal Faces of Saskatchewan: A Photo Gallery*

A collection of prominent Saskatchewan First Nation and Métis persons. The site includes photographs of the individuals and a short biography. The individual biographies are divided by gender and alphabetized.

[http://www.sicc.sk.ca/faces/index.htm](http://www.sicc.sk.ca/faces/index.htm)

*First Nations Bands of Saskatchewan*

Information on the First Nations of Saskatchewan: includes (when available) contact information, history, government, economic development, programs, schools, events, tourist sites. Browse by band name (listed alphabetically), treaty area or tribal council.

[http://www.sicc.sk.ca/bands/](http://www.sicc.sk.ca/bands/)
First Nations Periodical Index
Index to twenty Aboriginal content journals, newspapers and magazines, including some links to full-text articles. Searchable by keyword under article title, author, journal title, abstract and subject.
http://www.lights.com/sifc/

Our Elders: Interviews with Saskatchewan Elders
A collection of Saskatchewan Elders’ thoughts and histories. Browse by name or search by keyword, name, and subject.
http://www.sicc.sk.ca/elders/

Remembering Our Heroes: Saskatchewan First Nations Veterans
A searchable database of Saskatchewan First Nations veterans with approximately 1000 records. It lists the name, sex, First Nation band and theatre of service for each. Also included are 14 veteran profiles (recollections of the veterans) and a photo gallery.
http://collections.ic.gc.ca/heroes/

Saskatchewan Indian: Selected Articles From the 1970 - 2003
A selection of full-text articles from the publication, Saskatchewan Indian. (approximately 1000 articles and 1600 photographs). Topics include politics and government, education, sports, etc. related to the First Nations of Saskatchewan.
http://www.sicc.sk.ca/saskindian/

The Virtual Keeping House: A First Nations Gallery
An online gallery of the Saskatchewan Indian Cultural Centre’s permanent collection (70 items) includes artwork and artefacts. Browse by artist name or artefact category or keyword search. Includes images of the items.
http://www.sicc.sk.ca/keepinghouse/index.html

Saskatchewan Learning, Resource Centre
Alternate Format Collection
Resources for the use of students with print handicaps
Not online

Saskatchewan Library Association
FORUM - Newsletter of the Saskatchewan Library Association
Website contains links to PDF versions of the organization’s newsletter which is published quarterly. Archives from 2002-present
http://www.lib.sk.ca/sla/forumpdfs/archivedforum.html
Handbooks and Forms of the Association
PDF versions of conference handbooks, board manuals, program manuals, personnel policies, and trust handbooks
http://www.lib.sk.ca/sla/index.html
Ongoing Project

Saskatchewan Playwrights Centre
Members Catalogue
A database of Saskatchewan playwrights and their plays. Searchable by play title, play type (drama, comedy) or playwright. Includes biographical and contact information about playwrights. Play records include a description, the style, the length, etc.
http://www.saskplaywrights.ca/members_pages/search_for_a_play.htm

Saskatchewan Publishers Group
Saskatchewan Book Archives Database
A database of Saskatchewan written, published or produced books (fiction, non-fiction, poetry, government documents, etc.) from 1905-present. Part of Saskatchewan Designations Project.
http://www.saskpublishers.sk.ca/sampler/index.shtml

Saskatchewan Recording Industry Association
The Session (newsletter of the organization)
The Session newsletter from 1997-present. Full HTML version is available. No search function, but articles are indexed and you can browse articles under various topics including: recording and production, artist interviews, features, etc.
http://www.saskrecording.ca (under session)

Saskatchewan Sports Hall of Fame and Museum
Collections Database *
A database of the museum's collection. The collection covers sport history in Saskatchewan from 1800-present, includes 6,500 artefacts and 3,000 photographs. Staff only access.
Not online.

Saskatchewan Western Development Museum
Collection Database
A database with 80,500 records of artefacts in the museum's collection, 1,100 records with attached images. The collection covers Saskatchewan's human history from 1870-present.
Not online
**Scotia Bank: Centennial Celebration**
A CD-ROM on the history of Scotia Bank in Saskatchewan from 1905-2005 with two separate sections: ‘Bankers from Saskatchewan Reminisce’ and ‘A Photo Journey of Saskatchewan History.’ The museum contributed the photographs and text for the photo section.

Not online

**Saskatoon Public Library**
**Saskatoon: The Early Years**
Virtual exhibit: A photographic history of Saskatoon from pre-settlement to 1948, organized chronologically. A joint project with the Saskatoon City Archives.


**Société Historique de la Saskatchewan**
**Musée Virtuel Francophone de la Saskatchewan**
A virtual exhibit of francophone culture and history in Saskatchewan. It includes anecdotal texts about Saskatchewan French heritage, biographies of pioneers, collections of photographs, legends, and songs. Site is currently in French only.

[http://www.societehisto.com/Musee/welcome.html](http://www.societehisto.com/Musee/welcome.html)

**South Saskatchewan Photo Museum**
**A Century of Education**
Online exhibit traces the history of southeast Saskatchewan’s education through pictures and the real life accounts of teachers and students. Includes photographs and video clips. Database of images is searchable by theme and keyword.

[http://www.virtualmuseum.ca/pm.php?id=exhibit_home&fl=0&lg=English&ex=0000182](http://www.virtualmuseum.ca/pm.php?id=exhibit_home&fl=0&lg=English&ex=0000182)

**Pioneering Photography**
Online exhibit of 500 images from the South Saskatchewan Photo Museum. It documents the early history and settlers of the area and focuses on the work of 3 studio photographers who operated in Arcola from late 1800’s-1960. Searchable by theme and keyword.


**Southeast Regional Library**
**Estevan Community Access Project (CAP)**
Project includes content of 32 full-text local history books, cemetery records, church records and other documents. A Google search allows users to access all materials hosted on the CAP server.

[http://cap.estevan.sk.ca/](http://cap.estevan.sk.ca/)
Southeast Saskatchewan Heritage Information Project
Searchable database of Southeast Saskatchewan cemetery records, newspaper articles, maps, photographs.
http://www.southeast.sk.ca/index.php

University of Regina Archives and Special Collections
Finding Aids for the University of Regina Archives *
Digitized finding aids for the University archives collection. The finding Aids will eventually be attached to collection description on University catalogue.

University of Regina, Dr. John Archer Library
Electronic Dissertations and Thesis
Library receives paper copies from grad studies which are digitized and made available through ProQuest.
Online through ProQuest

University of Saskatchewan Archives
Balfour Currie & the 2nd International Polar Year
A virtual exhibit with photographs & manuscripts from 2nd International Polar Year (1932-1933) at Chesterfield Inlet, NWT. (Inuit archival images)

Building the University of Saskatchewan
An online exhibit about the construction of the University of Saskatchewan. It includes photographs, the history of buildings and a chronology of construction.
http://scaa.usask.ca/gallery/uofs_buildings/

Deo et Patriae: Events in the History of the University of Saskatchewan
A virtual exhibit on the history of U of S. Includes photographs, manuscript images and explanatory text, all arranged by date.
http://scaa.usask.ca/gallery/uofs_events/

Frederic Harrison Edmunds. The Canadian Landscape
A virtual exhibit on Dr. F.H. Edmunds’s (professor of geology) collection of photographs. Images from 1904-1923, illustrating geological formations.
http://scaa.usask.ca/gallery/edmunds/

From the Athabasca to the MacKenzie Delta: a journey on Canada’s inland waterways
A virtual exhibit which documents the journey that Emrys Jones made from Waterways, Alberta to Aklavik, Northwest Territories in the summer of 1928.
http://scaa.usask.ca/gallery/northern/jones/index.html
Hans Dommasch: Canada North of 60
Virtual Exhibit: 144 images from Hans Commasch's collection of photographs of the Canadian Arctic and its animals, landscape and climate.

Hans Gruen Postcard Collection
A virtual exhibit of antique Japanese postcards from 1900-1939 collected by Hans Gruen. Images are organized by subject and geographic region.
http://scaa.usask.ca/gallery/gruen/

I've Been to England
A virtual exhibit of Ruth Hood's 1937 trip to England with the Overseas Education League to see the Coronation of King George IV. Photographs, letters, and other archival materials organized by subject. Includes a teacher section.
http://scaa.usask.ca/gallery/OEL/

John Reeves: Portrait of the Woman
A virtual exhibit: selections from John Reeves' photographs of Canadian women taken between 1974-1977 (to document Canadian women of achievement for the International Year of the Woman, 1975). They are organized by subject name and subject profession.
http://scaa.usask.ca/gallery/reeves/

ParticipACTION
An online archive of Canada's ParticipACTION program (it promoted a healthy, active lifestyle) from 1973-1998. It includes examples of Television, radio and print campaigns, educational resource materials, and reports on the impact of ParticipACTION
http://www.usask.ca/archives/participaction/english/home.html

Saskatchewan Wheat Pool: A History in Pictures
Virtual Exhibit: documents the history and impact of the Saskatchewan Wheat Pool through images accompanied by explanatory text. It includes photographs, posters, and archival documents. Items are arranged chronologically and by subject.
http://scaa.usask.ca/gallery/wheatpool/index.html

Saskatoon Light Infantry
The website contains information on World War II diaries, including a searchable database (by name and battalion order) and sample images of orders and other records. Also includes a PDF listing of casualties from Saskatoon Light Infantry records.
http://www.usask.ca/archives/sli/
The Changing Face of the Saskatchewan Prairie
A virtual exhibit showcasing images of Saskatchewan grain elevators specifically those taken by Hans Dommasch and Joanne Abrahamson (Saskatchewan photographers). Images are organized by town name.
http://scaa.usask.ca/gallery/elevators/index.html

The Murray Adaskin Collection
A promotional exhibit on Murray Adaskin, a composer and head of the music department at the University of Saskatchewan from 1952-1966. He donated complete copies of his work to the university. Archival photographs and sample pages of his music are displayed.
http://scaa.usask.ca/gallery/adaskin/

The Student Experience
An online exhibit of the history of student life at the University of Saskatchewan organized by themes: sports, social activities, life on campus, etc. It includes photographs and other archival documents.
http://scaa.usask.ca/gallery/uofs_students/

University of Saskatchewan Photographic Database *
The online database is a sub-set of the Saskatchewan Archival Photograph Database. It indexes the University of Saskatchewan Archive’s photographs, negatives, transparencies, slides, etc. It contains approximately 8,100 items, with 1,400 images available online.
http://library.usask.ca/dbs/archivesp.html

Saskatchewan News Index
An index of Saskatchewan newspapers - Regina Leader Post, Moose Jaw Times Herald, Prince Albert Daily Herald, and Saskatoon StarPhoenix (100 full-text articles also).
http://library.usask.ca/sni/

The Northern Research Portal *
Archival, library, and Internet resources for the study of northern Canada and the circumpolar world. It combines several collections and contains a searchable online database of photos and archival documents, several virtual exhibits, teacher resources, etc.
http://scaa.usask.ca/gallery/northern/content?pg=entrylevel

Herstory: An Exhibition
An online retrospective exhibition on the Herstory Project - it provides samples of the pages of Herstory: The Canadian Women’s Calendar from 1974 to 1995 which gives biographical information on important women in Canada’s history.
http://library.usask.ca/herstory/
Images of a Country: the Canadian Flag Debate
A virtual exhibit of the Canadian flag debate divided into theme sections. It includes archival images, photographs, editorial cartoons, etc. Also has a section on educational resources.

http://scaa.usask.ca/gallery/flagdisplay/country.htm

University of Saskatchewan Libraries, Special Collections
Index to Perceptions Newspaper
1983-1997 Index to Perceptions (longest continuously published gay & lesbian newsmagazine in Canada). This index is part of the Saskatchewan Resources for Sexual Diversity project.

http://library.usask.ca/spcoll/srsd/journals/perceptions/index

Saskatchewan Resources for Sexual Diversity
Reference site to books, journals, manuscripts, etc. on sexual diversity in Saskatchewan. Contains chronology of gay movement.

http://library.usask.ca/spcoll/srsd/index.html
Appendix E
Survey of Digitization Activities in Saskatchewan 2004 Results
Summary

Twenty-three surveys were received from museums, archives, libraries, associations and other organizations. For a complete list of organizations that completed the survey, see appendix A.

What digitization projects are you currently working on within your organization?

- Local history digitization (in Southeast).
- Digitizing photograph collection.
- Digitizing photo collection.
- We have no specific projects. We digitize mostly photographic material as it is requested by patrons.
- We are collaborating on 12 virtual exhibits with other member institutions of the Saskatchewan Council for Archives and Archivists; we expect to have most of our finding aids coded and accessible on-line over the course of this summer; and will be collaborating with the University of Saskatchewan Library on a portal to northern resources (library and archival) during this fiscal year.
- Saskatchewan court judgments from the 1990's; One of our publications called, The Builders' Liens Act Manual.
- Cultural project – Ukrainian Heritage Pioneers; Science Project – Carbon Dioxide Emissions.
- Create e-texts for print disabled K-12 students; convert print to electronic format and then convert again into Braille files and makes these files available to print disabled K-12 students.
- Kindergarten to Grade 12 Arts Education Curriculum guides and supporting online resources for dance, drama, music, visual art, film and other media.
- Saskatchewan Homestead Index Project.
- Virtual exhibit relating to 2005 Saskatchewan Centennial made possible through grant from Canadian Memory Fund. While not perhaps in the same magnitude, we are currently partnering with the Saskatchewan Genealogical Society to launch and on-line index to the pre-1930 Saskatchewan Homestead records. Completion date is projected for early 2005. This is more a database than actually digitization of original documents, but we hope to be able to "build" an interpretive module for online researchers as part of a later phase.
- Electronic reserves – sporadic activity to digitize materials for reserves. Digital records management needs are present in our institution.
- We have completed several digitization projects in the Library, some by ourselves, others in cooperation with University Archives, including: Northwest Rebellion; Resources for Aboriginal Studies; The Doukhobors in Canada; Saskatchewan Resources for Sexual Diversity; HerStory; Documenting Saskatchewan; and 3 postcard collections. We are currently working on a major Aboriginal Digital Library Portal initiative and Understanding Canada's Northland internally. We are also
contributors to the Our Roots/Notre Racines project (Laval and U of Calgary) and Peel's Prairie Provinces (U of Alberta Library).

- Eight respondents indicated that they were not currently working on digitization projects.

What collections do you have that you would like to see digitized? What are the priorities?

- Primarily photos; also 2-D and 3-D objects/images.
- 200+ posters; 400-800 of our best photographs.
- Photographic collection is our only priority for digitization. We have no plans to digitize textual or over sized material.
- Significant images from photograph fonds and collections.
- Aerial photos.
- Museum articles – photographs taken and digitized with article accession and register.
- Photographs, homestead records, finding aids and guides. No priorities as of now.
- Theses and dissertations and photographs in Archives.
- Our first priority is getting our finding aids up in a searchable format. Having digitized images + descriptions of all our photographs would also be useful for us. In terms of textual collections, we have such a wide variety that I think would be useful it is difficult to prioritize. However, I would probably begin with those relating specifically to Saskatchewan - politics, agricultural developments, First Nations and Métis.
- In-house publications.
- Local history.
- Jackson Collection and Yorkton this Week (newspaper).
- Books, videos, CD-ROMs / DVDs in the library (all priorities).
- The collection of the Diefenbaker Centre Archives (DCA) contains a significant Audio-Visual Series. A key component of this series is a 1000 unit collection of audio reels and cassette tapes. The audio reels are in a state of deterioration. We hope to convert these reels to MP3 files, keep a set of MP3 files on the computer and create a set of the files on CDs. Once this is completed, we would also wish to digitize the audio cassettes. We also wish to digitize the registration data on our artefacts in the museum collection.
- Art collection in schools; Saskatchewan Artists; Saskatchewan Authors; History Books; Rare books; Projects related to the curriculum: fashion over the last 100 years; pictorial landscape of Saskatchewan; Boreal regions of Saskatchewan; Prairie History Room at Public Library.
- We have numerous small special collections that would benefit from digitization for purposes of access and outreach. There are larger scale digitization projects such as Canada’s North and the Aboriginal Digital Library Portal that are a very high priority for us.
- Historical annual reports for Saskatchewan Learning; historical programmes of study and textbook curriculars; historical educational reports.
We have no collections. The priority is to provide teachers and students with examples of music, dance, drama, visual art, and multimedia to support them in meeting provincial Arts Education curriculum objectives.

Campion Archives - low priority.

An older collection of Lutheran-related works. A couple of the works date back to the 1500s. I'm not sure what my priorities should be considering our extremely tight resources and the age (fragility) of the documents.

None.

How could digitization help you meet the needs of your community?

In general, most of the comments identify access to the information as helping organizations meet the needs of their communities. Increasing awareness of the resources and preservation are also mentioned often.

- Provide better access to local history information.
- Easier access for students and teachers.
- Making resources more accessible online for distance research.
- Better access and ease of use for community and beyond.
- By allowing us to provide more timely (and less expensive) access to our photographic collection both through distribution to customers and through the creation of on-line exhibits.
- By providing access to at least a sample of our photographic holdings.
- Our students and faculty could access some of these primary texts without actually working with the items and degrading them even further.
- Provide easier access to information.
- Digitization would provide access to clients in Saskatchewan as well as out of province allowing them to search our collections and request material or copies.
- Besides promoting awareness of Saskatchewan Archives and its holdings, the priority projects mentioned above would make the most popular resources in our holdings much more accessible.
- More access points and able to print.
- Digitization would allow us to extend access to fragile resources and to resources that are difficult to access (e.g. materials in our special collections – users are bound by the hours of operation and using the materials within the facility).
- Find and send information to interested requests.
- We would provide the electronic versions directly on the desktops of our members.
- Teach students the value of preservation of the cultural and historical heritage of our province.
- Positive promotion and awareness of community theatre.
- The Resource Centre receives historical questions regarding education in Saskatchewan, so the public would like this information made available in formats other than print.
- Teachers and students will learn more about Saskatchewan and Canadian arts and artists, develop ideas for their own creative expressions, and will be encouraged to become informed arts advocates and consumers.
Most of our archival material is of a sensitive nature, including many personal documents and it is unlikely that much of this material would be made accessible to the general public through digitization. However, it is important to preserve the historical nature of this material, not only concerning the college but also dealing with Catholic school and university topics, and digitization would be one way to do this.

Digitization current serves needs of access and outreach in areas of importance to the University. It also presents primary and secondary resources for scholarship from a wide variety of sources in an organized fashion to our community. Digital preservation will benefit our community in terms of curatorship and stewardship. The latter, especially, is a niche that we are uniquely qualified to fill.

The DCA Audio-Visual Series is an integral component of its collection. Mr. Diefenbaker is known for being one of the finest political orators in Canadian political history; consequently researchers and the general public find his recorded speeches, interviews and public appearances to be of great value in their investigation into the man and his era. Digitizing the series would allow researchers to use the content now on reels. An important benefit of this digitization project would be the ease with which the DCA could reproduce, in-house, copies for researchers at a much reduced cost to the researcher.

Digitizing our registration of artefacts would be a vast improvement over the original paper documentation we now have. Digital photographs of the artefacts from a variety of angles would provide a better and more accurate record.

Unsure

What are the benefits of digitization to your organization?

The most often mentioned benefit submitted by respondents is access. Closely following access, are preservation and promotion. Outreach was mentioned by six of the respondents as being a benefit of digitization to their organization. One respondent saw an additional benefit of the preservation of “born digital” materials. Another respondent replied that there was no benefit of digitization for their organization at this time.

What are the obstacles to digitization? Please list in order of importance (1-8) and provide a brief explanation.

Overall the order of prioritization is*:

1 – Funding
2 – Equipment
3 – Training
4 – Standards
5 – Realignment of resources to achieve digitization
6 – Governance
7 – Digital Copyright
8 – Preservation
* Equipment, training and standards and realignment of resources to achieve digitization were all very close in order of priority.

Following is a list of the obstacles including additional comments made by respondents, although not every response indicated a priority for each obstacle.

1. Funding: 14 out of 21 identified funding as the number one obstacle to digitization.

Additional comments:

- Takes a lot of time.
- Having staff, time and money.
- Schools and division would give some support.
- For equipment and staff.
- No budget for special projects – 100% volunteer run.
- We are a small library with a small budget. This would not be a priority for us.
- This is our only issue. We do not have staff resources to undertake any large projects.
- I’m not even sure digitization is in the books for us considering our funds.
- No direct funding available.
- No possibility of doing major projects within current operating budget.
- Mostly in terms of staffing hours.
- Relates to some degree to realignment of resources. We are allocating some operating budget resources so that we can achieve what we want and need to internally without external funding but could advance this or that project better with incremental project funding.

2. Equipment: Ten out of 20 identified funding as their 2nd or 3rd obstacle to digitization.

Additional comments:

- High-speed scanning equipment.
- Some already purchased as part of curricula already taught.
- Staff and cost to use.
- No computers on-site.
- Would like to learn more about digital imaging equipment/software.
- Don’t have any [equipment].
- I’m not even sure digitization is in the books for us considering our funds.
- Available, but not accessible to library staff.
- Institution has most of the needed equipment.
- Data storage capacity is a big issue for major projects.
- Low priority as we may not need equipment for larger projects (outsource).
- This is at the present time not much of a problem for us. Staff all have high end networked workstations and things like scanners and digital cameras are easy to afford and attach. What is hard is getting someone with the expertise to use the equipment at the highest necessary standard - for example, digital photography. It is very hard to create a good digital image of some materials (for example, a page of an illuminated mss.).

3. Training: 13 out of 17 identified training as their 3rd or 4th obstacle to digitization.

Additional comments:
- Necessary for consistency with a good overall product.
- Staff resources.
- I’ve not worked with digitizing before in any capacity.
- None available.
- Staff not knowledgeable in digitization techniques.
- Expertise to plan and to implement projects well is required.
- Staff at the many levels that will be involved – updating on standards.
- Fundamental. Real need for expertise and canned courses and training materials and trainers.

4. Standards: Eight out of 16 identified standards as their 4th or 5th obstacle to digitization.

Additional comments:
- Don’t want to waste time having to redo.
- Standards are an issue insofar as we want to ensure interoperability with other organizations/collections in the future.
- Need to show people why a standard is necessary.
- I know nothing about this area.
- No institutional standards in place.
- Important to ensure longevity for any project that requires major resources.
- Differing standards for archives and libraries.
- Standards are important for training and also ensuring that the work of digitization is done once and done well.

5. Realignment of resources to achieve digitization: Eight out of 17 identified realignment of resources to achieve digitization as their 3rd, 5th or 6th obstacle to digitization.

Additional comments:
- Will require some work.
Would need more staff.
So few resources, I’m not sure we’d be able to realign.
Difficulty in persuading management of the value of the resource, therefore those with the training and the equipment are not assigned to digitize this valuable resource.
Not a high priority within organization.
Very limited scope to reassign duties to existing staff.
Set it as a priority and assign staff to the tasks.
The issue here is fundamentally one of sustainability and appropriate priority. For us, digitization projects of various kinds.

6. Governance: Eight out of 14 identified governance as their 4th, 5th or 6th obstacle to digitization.

Additional comments:
- Willing to work with the Multitype Board and Provincial Library.
- Most often large projects require that more than one institution be involved.
- Policy issues.
- Not a problem so far.

7. Digital copyright: Six out of 14 identified digital copyright as their 6th or 7th obstacle to digitization.

Additional comments:
- Stress the importance of copyright and who owns the rights after digitization.
- I assume the College holds copyright to this material but this would have to be investigated.
- I suspect that most of what we’d like to digitize is no longer copyrighted.
- Some copyright restrictions.
- Not a problem for us generally speaking.
- For most materials, we have traced copyright.
- Also rights management. A big issue for anything published after 1922.

8. Preservation: Nine out of 15 identified preservation as their 7th or 8th obstacle to digitization.

Additional comments:
- After training, it shouldn’t be too difficult.
- This is becoming more important.
- I’m not sure we can digitize such old items without damaging them.
- Maintenance and preservation of the digitized medium is an issue.
Longevity of original documents will be enhanced by taking them out of service.
Of objects “born digital” – Archives will not digitize for preservation.
Digital preservation is a very serious undertaking. Much digitization can be done with aim of access, promotion, outreach and so on without having to address preservation concerns except to the extent that digitization helps reduce the wear and tear on some artefacts. So far, that is what we are doing. And we have barely begun to come to grips with preservation of born digital objects such as government publications and other book and record type material let alone the far greater problem of the preservation of non-book type and non-record management type of information of relevance to our mission as a university library.

**Responding Organizations**

Please note that more than one survey was received from some of the organizations.

- Athol Murray College of Notre Dame Archives/Museum
- Campion College Library
- City of Saskatoon Archives
- Law Society of Saskatchewan Libraries
- Luther College High school library
- Lutheran Church Canada, Central District
- Moosomin School Division No. 9
- Parkland Regional Library
- The Right Honourable John G. Diefenbaker Centre
- Saskatchewan Archives Board
- Saskatchewan Environment
- Saskatchewan Highways Resource Centre
- Saskatchewan Learning
- Saskatchewan Learning, Humanities Unit
- Saskatchewan Learning Resource Centre
- Saskatchewan Library Trustees Association
- Saskatoon Gateway Players
- Saskatoon Theological Union
- Swift Current Museum
- University of Regina Library
- University of Saskatchewan Archives
- University of Saskatchewan Library
Appendix F
Fostering Digitization Initiatives in Saskatchewan: A Discussion Paper

Fostering Digitization Initiatives In Saskatchewan A Discussion Paper

Prepared by The Digitization Working Group With representation from

University of Saskatchewan Libraries and Archives
University of Regina Libraries and Archives
Saskatchewan Archives Board
Saskatchewan Legislative Library
Regina Public Library
Saskatoon Public Library
Provincial Library, Saskatchewan Learning

April 2003
EXECUTIVE SUMMARY

This paper proposes a methodology for Saskatchewan institutions to develop strategic alliances with one another to enhance their digital content creation capacity.

Many Saskatchewan organizations are developing digital content. Archives are creating digital objects from fragile historical documents and making them accessible on the Internet. Libraries of all types are digitizing popular information resources. Schools, colleges and universities are creating digital course materials for Internet-based education programs. Museums are creating digital objects to showcase their collections. Many cultural organizations and other information providers are also creating digital content.

This paper proposes that interested institutions form a strategic alliance to:

- share information about their individual digitization initiatives;
- discuss issues related to digitization projects -- digital rights management issues, metadata standards, hardware, software, and product design;
- develop a body of expertise, best practices, and standards;
- share two resource people who can become advisors on digitization;
- investigate joint licensing of digitization software/hardware;
- establish a funding pool for digitization projects; and
- represent the digitization interests of participants to vendors, potential funding sources, and government.

The following pages outline a draft model for developing a strategic alliance on digitization. We invite Saskatchewan institutions to review the model and give us feedback. We need to know if this type of initiative would meet your needs and have your support. As a draft, this model is expected to evolve. Your feedback will shape the outcome.

DIGITIZATION ADVISORY ALLIANCE DRAFT MODEL

VISION -- Working Draft

To develop a locus of knowledge and support that enables the public to find, locate, and utilize Saskatchewan knowledge and information created through co-operative Saskatchewan digitization initiatives.

VALUES -- Working Draft

Co-operation would be founded upon shared principles:

- Partnership
- Access
- Preservation
- Institutional learning
- Education
- Cultural development
- Promotion
- Standards
**Partnership** -- The value of strength in collaboration.

**Access to and discovery of information** -- Commitment to access to information.

**Institutional learning** -- Commitment to growing as institutions by learning new skills, and sharing our learning experiences with our partners.

**Education** -- Digital content is an important component of education: K-12, post-secondary education, and life long learning.

**Cultural development** -- Commitment to preserving cultural heritage and developing our cultural future via digital content creation.

**Promotion** -- Digital content is an effective way to promote our organizations and the province.

**Standards** -- Commitment to excellence in digitization by fostering adherence to international digitization standards.

**Preservation** -- Capturing Saskatchewan information.

**OBJECTIVES -- Working Draft**

1. **Build expertise**

   Digitizing materials and building digital content is complex. Agencies must make decisions regarding copyright, digital rights management, metadata standards, technical issues (hardware, software), and product design. Information demonstrating the complexity of technical issues and standards is included in the appendices to this paper.

   We propose finding a way to fund two individuals: an expert on copyright, digital rights management, and legal components of digitization; and, an expert on international metadata and digitization standards, as well as digitization hardware and software. These individuals could be shared among the alliance's partners, providing direction, support, and on-site assistance.

   We also propose engaging alliance partners in regular meetings to facilitate sharing of expertise and experiences.

2. **Provide co-ordination and leadership**

   We believe it would be useful to have a locus of provincial co-ordination and leadership to:
   - Co-ordinate joint licensing of digitization products, if desired.
   - Inventory digital content developed.
   - Create a registry of Saskatchewan digitization projects with detail about the standards and policies they have used (i.e. best practices).
   - Compile priority lists and wish lists for future digital content creation and for navigational tools.
   - Co-ordinate collective decision making on matters such as standards.
   - Co-ordinate regular meetings of the alliance partners.
3. Develop financial capacity

Most institutions apply for external grant funds to finance digital content creation. Many granting agencies require applicants to contribute a certain dollar amount to the project. This process could be aided through the establishment of a provincial funding pool to be used for leveraging grant funds for digital content creation. The alliance could establish a pool and solicit contributions. The alliance could set up an impartial adjudication group to review applications.

4. Future proof digital collections

Many institutions are currently building digital content. With this content scattered in separate repositories across the web, it can be difficult to find. Some digital objects are stored in software repositories that may be proprietary and inaccessible.

"Future proofing" means utilizing international digitization standards so that digital objects created in isolation can, at any time in the future, be "virtually" integrated into broader digital collections, libraries, learning resources, teaching tools, and other future environments and formats.

Future proofing increases the value of digital objects because they can be dynamically integrated into broader collections and information products. Future proofing also increases the value of digital objects because it facilitates the building of a single search interface for accessing various digital collections and making them easily available to all users. International digitization standards are based on open-source computer programming, which means that they do not rely on proprietary fee-based software to access them, thus making them more affordable to operate and access into the future.

We propose sharing information on future proofing and international standards, so that institutions in Saskatchewan have a better understanding of their options when developing digital content. Information sharing will also enable institutions to make some collective decisions about technological standards, thus enabling future interoperability of their digital repositories.

5. Preserve Saskatchewan Information

Digital standards have not yet evolved to the point where they offer a permanent alternative to traditional methods of reformatting original documents. Digitization does, however, offer the ability to provide researchers with a virtual image that can be used instead of the fragile original, thus saving the original from further damage through frequent physical handling (although it may be noted that demand for physical handling of the original can often increase as a result of virtual publication).

Preservation is also a concern (for information managers) where solutions must be found for issues of technical obsolescence and migration for 'born-digital' documents, i.e. information originally created and stored in digital formats, and print documents that have been transferred to electronic form. A digitization advisory alliance could help institutions address these
concerns by providing guidance on digital standards that offer the best long term accessibility options.

From these perspectives, digitization can be seen as a useful adjunct to paper preservation programs. A priority of a Saskatchewan digitization alliance should be to build understanding of the opportunities and limitations that digitization offers with regard to preservation, so that partner institutions can make wise preservation decisions.

STRUCTURE -- Working Draft

Structures for this initiative will be investigated if there is sufficient interest from potential partners. Structures would then be evolved with the input of the partners.

We suggest the following principles and priorities to guide structural development.

✓ Locus of knowledge concept -- The focus should be to build and co-ordinate a collaborative support network (instead of building administrative structures).

✓ Expert staff -- Expert staff, committed to the digitization alliance is necessary given the complexity of digitization. Funding would need to be sought for two staff persons, who could possibly be based in a partner organization.

✓ Governance -- An advisory committee, with representation from all partners, could be established for the alliance. The “home” for this advisory committee and staff would need to be determined in consultation with the communities of interest. The Multitype Library Board is a possible option because it has a role to co-ordinate co-operative province-wide initiatives for all types of information providers in Saskatchewan.

✓ Funding pool -- Financial contributions must be sought to develop a funding pool. Light administrative structures, managed through partner representatives, the parent/host organization, and staff members, are a possibility.

✓ Provincial government support -- Sustainable funding should be sought from the Government of Saskatchewan, including funding to hire staff support and for the funding pool. Government support is appropriate given the broad positive impact this initiative could have on the learning, library, heritage, archives, and cultural sectors (particularly in regard to technology-enhanced learning and online service development).

✓ Additional financial support -- Funding should be sought from other groups, such as the Canadian Council of Archives and other bodies identified by the communities of interest. Corporate donations should be sought to support a funding pool.

REQUEST FOR FEEDBACK

We believe that embracing digital technology will enable us to meet the future needs and expectations of our respective clients, and, that an alliance will enable us to undertake digitization projects more effectively. We would like your feedback on this strategy. Is digitization important to you? Would this type of initiative meet your needs? Would this initiative have your support? Would you like to be involved? Would you like to attend a follow up meeting with other interested organizations?
APPENDIX

Issues Concerning Digitization Methods, Standards, Support Requirements, Copyright, and Digital Rights Management

This appendix was first written by Brett Waytuck, formerly of Provincial Library, following his attendance at the University of New Brunswick Electronic Text Centre’s Summer Institute. The Summer Institute was held in Fredericton between August 20-24, 2001 and was taught by David Seaman, director of the internationally recognized Electronic Text Centre at the University of Virginia. Revisions to the Appendix have been made by the Digitization Working Group. The Working Group would like to thank Mr. Waytuck for his digitization research, out of which this provincial strategy has evolved. The issues identified herein articulate the complexity of digitization and represent the type of expertise that could be collectively built and shared through a cooperative alliance.

A. Methods of Digitization

Standards

Markup Languages

The past several years have seen the development of internationally recognized standards for the preparation of text and images for delivery in various electronic formats.

The most important of these is Extensible Markup Language (XML). XML was derived from Standard Generalized Markup Language (SGML), an ISO standard in its own right. It is a set of rules for describing data and designing text formats that let people structure their own data. It uses a Document Type Definition (DTD) or an XML Schema to describe the data.

With XML, the data with different formats can be converted to a single format that can be read by many different types of applications. Industries can use XML to define platform-independent protocols for the exchange of data, allowing people to structure, store, retrieve, and display information the way they want it.

What makes XML so important is that it provides a means of marking up a text once and then, through the creation of front end style sheets, distributing the text through a variety of electronic media (XHTML/Web based, PDF, e-books, palm devices). Also, as XML is based on recognized standards there is the expectation that any new format or device will be compatible with a properly marked text -- eliminating the need for backwards conversion except through the creation of new style sheets.

Encoding Standards

The most pervasive and important encoding standards for the digitization of texts are the Text Encoding Initiative (TEI), Encoded Archival Description (EAD) and Dublin Core.
TEI was developed to aid in the conversion of humanities and social sciences texts and manuscripts to electronic formats, but other forms of information such as images and sound are also addressed. The TEI Guidelines describe an encoding scheme that can be expressed using a number of different formal languages. The first editions of the Guidelines used SGML; but the most recent edition can also be expressed in XML.

EAD was developed as a way to create electronic finding aids for archival collections. It is a set of rules for preserving the hierarchy and designating the intellectual and physical parts of archival finding aids to help search, display and exchange archives and manuscript collections. The EAD rules are written in the form of a SGML Document Type Definition (DTD), because archival description emphasizes intellectual structure and content more than bibliographic description, making SGML, and later XML, a more suitable transport syntax than MARC (MARC is the standard for bibliographic information in machine-readable format, used by libraries).

Dublin Core Metadata Element Set (DCMES) was designed as the descriptive metadata to support digital resource discovery. It has the similar functions as MARC to organize digitized data. Dublin Core provides a simple core set of description elements that can be used by normal users who are not familiar with cataloging rules for simple digital resource description. The core set of elements could be modified and extended by adding new elements according to the specific requirement of the project within the framework. This provides DCMES flexibility, interoperability and extensibility.

These encoding schemes provide a significant amount of internal flexibility. Individual projects and document classes can be evaluated for the level of internal markup required to effectively access the text, while at the same time insuring that the base electronic document conforms to a standard and will interact with other documents similarly encoded.

Adhering to the XML standards also allows for the creation (usually in conjunction with digital imaging of the source document) of an electronic archival copy of the document.

TEI and other XML encoding languages do not require, but do not preclude accompanying digital images (scanned or photographed) of the source material. Where these aid the viewer, or are required due to expectations of the end user, they can be linked to the encoded document for clarity. Where they are not required the encoding agency can provide a faithful reconstruction of the original text without the added expenses of imaging and electronically storing the original.

The process of using standards for digitizing and its advantages and disadvantages can be summed up as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Digitizing texts via scanning or keyboarding and marking the electronic text with a standardized tags to aid in searching, retrieval and display.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Allows for “reading” of the document in a manner similar to the physical item. Allows for searching of the document(s) at a level controlled by the viewer and the encoding agency. Opportunity to clarify information at any level. Ability to easily convert source material into forms readable by any electronic text delivery device.</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Time and costs involved in marking up entire text.</td>
</tr>
</tbody>
</table>
Other Methods of Digitization

While the XML family of markup languages and style sheets are increasingly recognized as library and industry standards for the encoding of texts, there are other methods for digitizing materials.

While it may be argued that adhering to the recognized standard is the preferred course of action this is not always practical based on a variety of considerations. These considerations may include the cost of the digitization versus available funds, intended use of the encoded document, grant or funding requirements, compatibility with related materials, copyright restrictions and historical precedence.

A selection of common alternatives to TEI encoding is described below.

1. Raw HTML / XHTML Encoding

<table>
<thead>
<tr>
<th>Description</th>
<th>The framing of a text with HTML / XHTML codes for display on the Internet.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>None given the power of the XML standard markup languages and the ease of their post-production conversion to HTML / XHTML.</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>The amount of work involved in creating these electronic documents is almost equivalent to that involved in creating an XML encoded document without the resulting benefits of standardization.</td>
</tr>
</tbody>
</table>

2. Digital Imaging With No Text Encoding

<table>
<thead>
<tr>
<th>Description</th>
<th>Creating “photographic” images of the document (via scanning or digital photography) for retrieval.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Provides the viewer with a faithful reproduction of the original document. Allows for “reading” of the document in a manner similar to the physical item.</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Inability to search the documents in any manner. Readability dependant solely on the quality of the original document and the resulting scan/photograph. No opportunity to clarify unclear information. Images require large virtual storage space. Print quality dependent on image quality.</td>
</tr>
</tbody>
</table>

3. Digital Imaging With Metatagging

<table>
<thead>
<tr>
<th>Description</th>
<th>Creating “photographic” images of the document (via scanning or digital photography) and adding meta tags at a variety of levels to aid in retrieval.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Provides the viewer with a faithful reproduction of the original document. Can allow for “reading” of the document in a manner similar to the physical item. Allows for searching of the document(s) at a level controlled by the encoding agency.</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Readability dependant solely on the quality of the original document and the resulting scan/photograph. Opportunity to clarify unclear information only at the macro level. Does not allow for natural language or keyword searching. Images require large storage space with limited text retrieval. Print quality dependent on image quality.</td>
</tr>
</tbody>
</table>
4. Digital Imaging With PDF

<table>
<thead>
<tr>
<th>Description</th>
<th>Scanning a source document into Adobe Acrobat’s software for Web reading and display.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Provides the viewer with a faithful reproduction of the original document. Can allow for “reading” of the document in a manner similar to the physical item. Allows for keyword searching within the document. Very good print results.</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Proprietary software, not an open source standard. Readability dependant solely on the quality of the original document and the resulting scan/photograph. Cross document searching not perfected.</td>
</tr>
</tbody>
</table>

5. Text Entry into a Searchable Relational Database with Accompanying Digital Imaging

<table>
<thead>
<tr>
<th>Description</th>
<th>Creating “photographic” images of the document (via scanning or digital photography) and entering the full or partial text into a relational database for searching.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Provides the viewer with a faithful reproduction of the original document. Can allow for “reading” of the document in a manner similar to the physical item. Allows for searching of the document(s) at a level controlled by the viewer. Opportunity to clarify information at any level. Allows for natural language or keyword searching.</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Readability dependant solely on the quality of the original document and the resulting scan/photograph. Images and database require large storage space. Relational database will not meet international standards. Difficulty in sharing source documents with other collections. Print quality dependent on image quality.</td>
</tr>
</tbody>
</table>

B. Digitization Support Requirements

Besides issues related to digitization standards, all projects have certain technical and personnel requirements. These requirements may vary depending on the type and size of the project at hand, but a general rule is that the larger the project the more equipment and personnel it will require.

Outlined below are some of the technical and support personnel requirements that may be utilized in a digitization project. This listing is not intended to be exhaustive and there has been no attempt to provide “industry standards” information. In relation to the descriptions of required personnel, it should be kept in mind that people often perform more than one role while working on a project.

Equipment

**Computers and Software:** The technical requirements can vary greatly dependent on the project at hand. Digital imaging requires access to software and computers capable of capturing, editing and displaying images separate from the text creation computers. If
keyboarding is done locally, computers are required for the work. Software can also be purchased to aid in this but is not required.

**Digital Cameras:** Used for archival electronic imaging of materials. Also utilized for materials too fragile for flatbed or OCR scanning. Mounting systems, lighting and lenses are also required for more advanced treatment of materials.

**Imaging Structures:** Purchased or built equipment utilized in the digitization process. Requirements vary with the fragility and rareness of the material to be digitized. Can include such things as scanner extensions, camera mounts, lighting systems, book rests.

**Scanners:** Depending on the project, standard flatbed or OCR (optical character recognition) scanners may be required.

**Servers:** There must be someplace to both store the information that has been digitized and to make it available to the user community. Locally owned servers have the advantage of being under the direct control of the content creators. The public is not in as much danger of losing access to the digital information. The servers need to support the digitization processes used.

**Personnel**

**Administrators:** Responsible for establishing goals of the project. Coordinate funding, initiate grant proposals, secure copyright clearances, negotiate scope of projects, work with text authors and publishers, establish quality control objectives, market and promote collection.

**Designers:** Responsible for designing web pages, web display, e-book or other electronic media display.

**Imagers:** Production people responsible for scanning or taking digital photographs of materials. Must be able to work with equipment and software. Must be able to maintain established quality control guidelines. May need to have training in archival handling of materials.

**Intellectual control personnel:** Identify type of digitization to be done, identify technical requirements, establish and apply metadata requirements, design associated database requirements, establish and monitor quality control levels.

**Keyboarders:** Production people responsible for translating printed/written text to an electronic environment. Can be onsite or offshore. Accuracy rate of scanning with OCR technology at its best only meets minimum rate guaranteed by double keyboarding / computer comparison of texts. Keyboarders better at dealing with manuscript or unique type face materials. Keyboarding required for anything but “dirty” OCR scanning. Require training in whatever markup or tagging language is being used.

**Systems people:** Insure goals of project can be met with available technology. Coordinate equipment/software needs and compatibility, design associated databases and interfaces, work with intellectual control personnel to insure technical specifications are executable and met, insure storage capacity and file linking needs are met, and insure accessibility.
C. Copyright and Digital Rights

As with all forms of publishing, copyright is a concern. The perception that copyright is more complex in a digital environment is only partially correct. Fundamental copyright rights and restrictions currently still operate in the digital environment. Within the context of this discussion paper it is not possible to itemize all of the copyright concerns related to the digitization of text and images. There are some general issues, however, which are appropriately discussed within this context.

What is often not understood is that digitizing a text or image and then posting it to the Internet, storing it in a computer, or transferring it to a CD-ROM is the equivalent of re-publishing the item.

Institutions that undertake digitization projects must recognize early in the process that they are undertaking a publishing initiative. Full discovery and securing of necessary rights is a basic requirement. Without this discovery and securing of rights, institutions can face the prospect of having the time, money and equipment they have invested in digitizing a document wasted.

Institutions must also be aware of the copyright and digital right responsibilities that digitization carries. While there is a public perception that what is available on the Internet is "copyright free" this is obviously not the case. Whatever digitization work a library completes has digital rights associated with it. Even if the copyright of the original source has expired, the newly created digital resource is copyrighted. Institutions must insure that it is clearly understood who holds the copyright for the newly created work, who will have responsibility for safeguarding the copyright, and what digital rights the users have when they use or purchase the digital resources.

If the material is placed freely on the web, the concerns regarding copyright may be minimal (although it is unlikely that the originating institution would want someone else to copy the digital files and distribute them as their own). If the material is created with revenue generation in mind, then copyright issues will be of greater concern – insuring that rights are protected, royalties paid and material is not copied illegally.

Pursuing this discovery and securing of rights can, however, have unintended positive benefits for both the institution and its community. By working within their community, institutions are more likely to be able to explain to their patrons the advantages of digitizing important materials; insure that materials created by and for the community remain freely accessible to that community; ensure that text and image electronic rights remain within the community or the province; ensure that knowledge management principles are consistently applied to digitization projects; and further demonstrate to stakeholders that the institution is an integral and living part of its community.