



Council of Nova Scotia Archives

Archives Management Software Review and
Recommendations Report

Prepared By
Amanda Stevens, MLIS

For the ArchWay Committee,
Council of Nova Scotia Archives

September 2008

Table of Contents

I. Executive Summary.....	1
II. Detailed Software Information: Features and Reviews.....	4
1. Archives Online 3.....	4
2. Archivists' Toolkit 1.1.....	14
3. Archon 2.2.....	22
4. Eloquent Archives 4.0.....	31
5. PastPerfect 4.0.....	41
6. Re:discovery Proficio 8.6.....	51
7. STAR/Archives 4.0.....	59
8. Microsoft Access and Filemaker Pro.....	69
III. Factors to Consider in Selecting an Archives Management Software Program.....	71
IV. Research Methodology.....	76
V. Acknowledgements.....	77
Bibliography.....	78
Appendix 1: Archives Management Software Programs Excluded from Review.....	81
Appendix 2: Interview Questions for Archivists.....	86

I. Executive Summary

The Council of Nova Scotia Archives (CNSA) is an association of archives and archivists in Nova Scotia that advocates the importance of archives, preservation of Nova Scotia's documentary heritage, and public access to these records through its member institutions. The CNSA initiated this study to provide its members who are planning to automate the archival management functions of accessioning and description with information that will help them make informed choices about future software purchases.

The CNSA's membership is primarily composed of small and medium-sized archives with limited staff resources, budgets, and technological expertise. A survey of the CNSA's members undertaken in 2006 revealed that the average annual budget of archives in Nova Scotia, excluding the provincial archives, is \$41,098, but museum and historical society archives have an average annual budget of \$16,108 and genealogical centre archives only \$7,994. Just over half of member archives have a paid staff person, while 44% are staffed by volunteers only. 70% use Rules for Archival Description (RAD) standards to describe their holdings, and the CNSA promotes further adherence to RAD. In terms of CNSA member archives utilizing technology for archives management, the survey uncovered the following:

- Two-thirds have finding aids in word processing programs
- Over half have fonds-level descriptions available through an in-house database
- 8% have searchable databases accessible online
- 18% have static finding aids on their websites
- 34% have public access computers on site

While it is recognized that increased use of technology could improve efficiency and provide the public with better access to archival records, constraints to adopting new technology must also be recognized. The needs and limitations of CNSA members have guided the research and evaluation process used in this review and determined the criteria used to evaluate the software. Basic criteria used to select the programs included in the review are as follows:

- Software or a specific module of the software designed specifically for archives management
- Software and support available in Nova Scotia
- Includes functions for accession and description of archival records
- Accommodates hierarchical arrangement of records
- Initial purchase cost does not exceed \$8,000
- Widely used enough that sufficient information was available for fair evaluation
- Targeted to the English language market

Seven programs were selected for the review, including two open source programs and five

proprietary programs. Appendix 1 provides a list of other software programs used for archives management that were not selected because they did not meet one of the above basic criteria. In addition, the report briefly considers Filemaker Pro and Microsoft Access database software, as these programs were not designed specifically for archives management but are used widely by archives across Canada. The selected programs reviewed in detail in this report include the following:

1. Archives Online (add-on to Inmagic DB/TextWorks)
2. Archivists' Toolkit
3. Archon
4. Eloquent Archives
5. PastPerfect
6. Re:discovery Proficio
7. STAR/Archives

After determining that these programs met the basic criteria, they were further examined and evaluated for specific features, general usability, and quality of support available through examination and basic testing of demonstration copies of the programs, interviews with archivists who have used the software, and a review of current literature. All of the programs reviewed can be used to effectively manage archival collections, and each has its own unique strengths. The CNSA recommends that users undertake a detailed review of their needs before choosing a software program. Section III: Factors to Consider in Selecting an Archives Management Software Program provides a list of factors to consider in determining an organization's software needs and provides further explanation of the evaluative criteria. However, the evaluation process led to the selection of three archives management programs that stand out from the rest and come specially recommended by the CNSA. These programs are STAR/Archives, the Archivists' Toolkit, and Archives Online.

These three programs have detailed modules for managing archival accessioning and description. They all received positive reviews from users. All are currently set up or can be made to conform to RAD standards.

STAR/Archives is the most expensive of the three programs, but it offers an extensive number of features and a great deal of flexibility, and the vendor is reported to provide excellent support. Although the software is intuitive and user-friendly, it is a complex program and may be too complicated for small organizations staffed by volunteers to use. The CNSA, therefore, recommends this program for medium-sized archives or small archives with a professional archivist on staff that require a full suite of features, robust descriptive cataloguing and search features, and the ability to publish finding aids on the web with an attractive user interface.

The Archivists' Toolkit is the least expensive of the three programs, as it can be downloaded for

free under an open source licence. While it does not have as many features as STAR/Archives, its features are also quite robust, particularly accessions. The program is very flexible and allows users customize the program to conform to specific archival standards and internal workflows. The user interface is straightforward and intuitive and many functions can be accomplished by simply clicking buttons. With no public search interface or the ability to publish collections online, the Archivists' Toolkit is a strong tool for behind-the-scenes archives management. .

If a simple but fully featured and highly customizable program is needed, Archives Online is a good choice. The description module is RAD compliant but simple, and there is also an option of using a brief data entry form with a limited number of required fields. The program is highly customizable, providing users with the ability to add, modify, or delete fields, alter database structures, create new databases from scratch, design reports, and more. One significant drawback of Archives Online is it is not relational and so does not link accession and description records, and related records within a hierarchy are not displayed or linked as well as in the other two programs. However, at an affordable price, it is a good choice for small archives looking for a simple system.

Please refer to the next section for detailed reviews of Archives Online, STAR/Archives, the Archivists' Toolkit, and the other four programs.

II. Detailed Software Information: Features and Reviews

1. Archives Online 3

Archives Online is an add-on to the database program Inmagic DB/TextWorks that provides users with tables, reports, and other functions customized for archives.

Developers	Andornot Consulting, Vancouver, BC
Website	http://www.andornot.com/
Type of licence	Commercial
Hosted service provided as alternative to purchasing licence	Yes
Technical Requirements	
Operating system required	Windows 95 or higher
Additional hardware or software required	Archives Online requires Inmagic DBTextWorks version 5.01 or later
Accessioning	
Record or generate deed of gift	Yes, program generates deed of gift when user creates an accession record.
Track donors	Yes, but field is not linked to a separate donor table so information must be entered each time.
Record condition	Yes
Record conservation treatment	Yes
Manage physical locations	Yes
Manage copyright	Yes
Control access to restricted materials	Yes, restrictions field in description form.
Accession records keyword searchable	Yes
Track method of accession (transfer, donation, loan, or purchase)	Yes
Set processing priorities	No.
Manage processing status	Yes, as a field in accession form.
Manage monetary appraisals	No
Deaccessioning	No
Description	

Create description record from accession record and automatically populate fields	No
Link accession and description records	No
Link accession record to multiple description records	No
Link description record to multiple accession records	No
Hierarchical - create records for fonds, collection, sous-fonds, series, sub-series, files, items and link fonds with its parts in a hierarchy.	Yes, when you create a description record you can note the level and whether it's part of another collection. There are not data entry forms specifically designed for cataloguing records at different levels but there is a detailed data entry form that can be used for fonds-level description and a basic data entry form that can be used for lower levels.
Ability to reorganize hierarchies	No
Allow text fields of unlimited length	Yes
Standards supported	RAD, ISAD
Batch modify records	Yes
Searching	
Basic search	Yes
Advanced search (by field)	Yes
Date-range search	Yes
Browse	Yes
Search results clearly indicate hierarchical relationships of records	Limited – results indicate description level of the record and what fonds it's part of, but no other levels of hierarchy. Search results show all items and files, then all series and fonds, even if some may be part of the others.
Records linked to other parts of hierarchy	Limited - in the list of search results the user can link to the fonds, but not in the detailed record. Fonds records do not include a list of records contained within it that can be linked to.
Print search results	Yes
Reports	
Generate reports	Yes, many common reports already set up for accessioning and description.
Customize reports	Yes, reports can be modified and created in Report Designer.
Authority Records	Yes, can create or import authority files.
Link authority record to	Yes

unlimited description records	
Link description record to unlimited authority records	Yes
User Access and Data Security	
Public search interface	Yes, but system is not set up to provide separate public access without the purchase of WebPublisher Pro. If you wanted to provide access on a public computer you could create a run-time version of the software for free and install on the public computer. You would need to copy files over regularly.
Publish finding aids online	Only through purchase of WebPublisher Pro.
Control when record becomes publicly accessible	Yes
Control who can delete records	Yes
User permissions management	Yes
Manage loans	No, but if this was a desired feature you could purchase the library kit and add it to Archives Online.
Backup/Restore utility	Yes
Keyboard shortcut options	Yes
Allows offline data entry	Yes
Multimedia	
Accommodates multimedia files	Yes, image, audio, video, word processing, and presentation.
Link description record to word processed documents or image files	Yes, image files can be linked but they must be stored externally.
Include metadata about linked image files	No
Importing and Exporting Data	
Import single EAD record	No, but can import XML.
Import single MARC record	Yes, with purchase of MARC Transformer module.
Import multiple EAD records (batch import)	No, but can import XML.
Import multiple MARC records (batch import)	Yes, with purchase of MARC Transformer module.
Export single EAD record	No, but can export XML.
Export single MARC record	Yes, with purchase of MARC Transformer module.

Export single METS record	No
Export single HTML	Yes
Export PDF	Yes
Export multiple EAD records (batch export)	No, but can export XML.
Export multiple MARC records (batch export)	Yes, with purchase of MARC Transformer module.
Export multiple tab-delimited files (batch export)	Yes
Software Support and Training	
Help Manual	PDF help manual comes with installation; also help menu in system.
Context-specific help	Yes
Installation instructions	Yes, installation instructions come with the software.
Technical support provided by developers	Telephone support provided for a fee.
Online user forum or listserv	Inmagic DB/TextWorks has a user forum but not Archives Online.
Training available	Yes, online training provided for a fee.
Customization	
User customization permitted	Yes, users can customize tables, fields, search fields, reports, data entry forms, menu screens, and toolbars.
Developer customization available	Yes, for a fee.
Localization options	None
Price Information	
Single-user licence for basic software	\$1,750.00 for Inmagic DB/TextWorks \$950.00 for Archives Online
Additional user licences	\$4,750.00 for 5 user licences
Additional modules	
Web publishing	\$11,000.00 or \$7,000.00 if purchased as an upgrade after a minimum of 1 year of using Inmagic DB/TextWorks and Archives Online
Multimedia	Included
MARC Transformer	\$600.00
Training	\$450.00 for first 4 hours, \$140.00/hr for additional hours
Customization	\$450.00 for first 4 hours, \$140.00/hr for additional hours
Data conversion/migration	\$450.00 for first 4 hours, \$140.00/hr for additional hours
Annual maintenance and	Approximately 20% of total software cost

support fees	
Annual fees for hosted service (includes maintenance and support)	\$1,800.00 plus \$1,500.00 for initial set-up

Review

InMagic was founded in 1983 in Woburn, MA and developed the database program DB/TextWorks in 1995. Andornot Consulting is a software consulting firm in Vancouver, BC that has been selling Inmagic products in the Canadian market since 1995. In 1995 Andornot developed an add-on to the Inmagic database for archival accessions and descriptions for the City of Richmond Archives. This add-on has since been enhanced and expanded by Andornot and is now sold as Archives Online. DB/TextWorks can be purchased on its own, but it requires the user to create all of the tables and structure the database to suit an archives environment, whereas if Archives Online is purchased in addition to DB/TextWorks this work is already done. For the purpose of this review, Inmagic DB/TextWorks was examined with the Archives Online add-on rather than on its own.

General Usability

Archives Online has a simple and straightforward user interface. The main menu has a limited set of options under the simple headings of accessions, descriptions, and thesaurus. Other menu items are accessed through the toolbar on the top of the screen. The data entry forms for accessions and descriptions are also simple and straightforward, with all fields displayed on 1 form and no additional tabs with other sets of fields. The required fields are labelled in red. Users commented that the Archives Online interface is easy for users of all technical abilities to use and navigate through. I also found it easy to use.

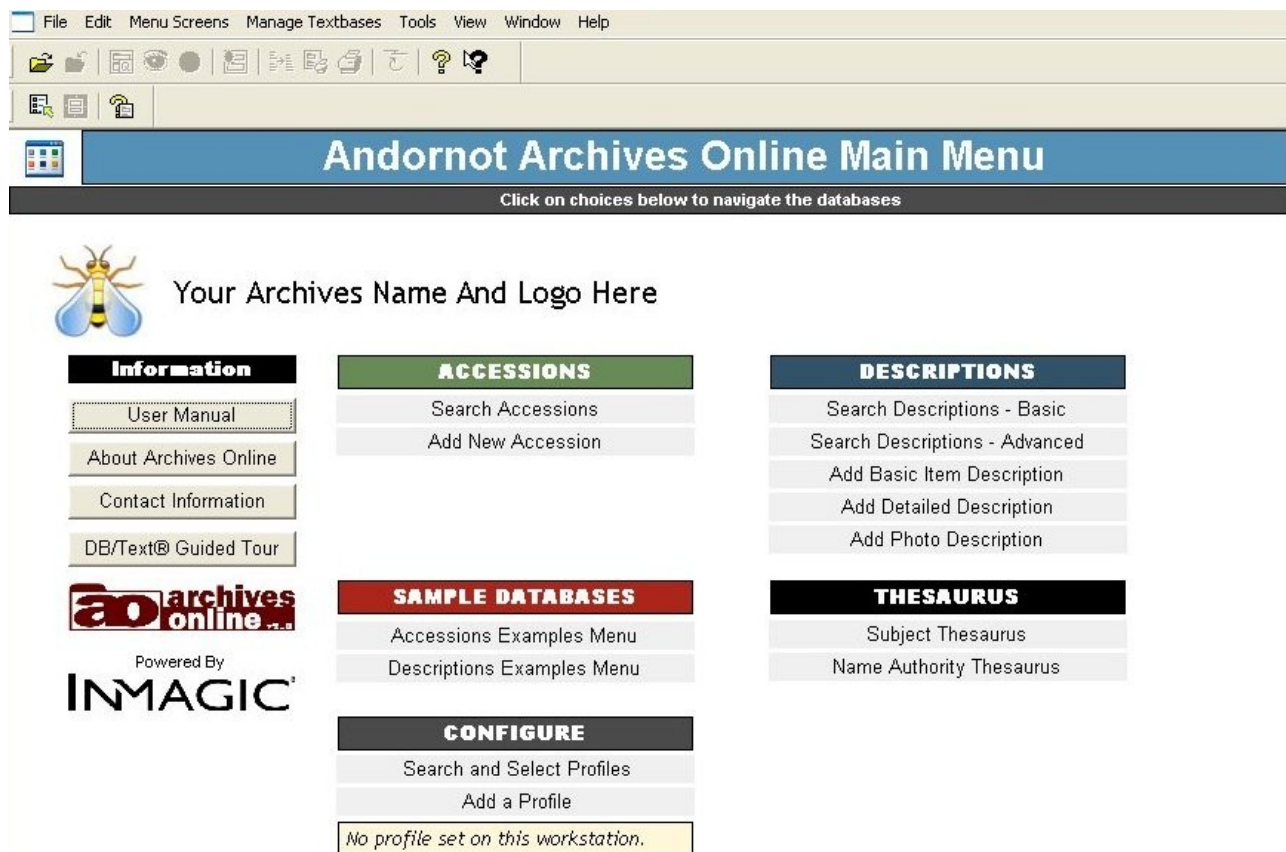


Illustration 1: Main menu screen in Archives Online

Data Entry, Accessioning, and Descriptions

The accession and description forms in Archives Online are both fairly brief compared to those in other programs, but they contain the standard accession and description fields. The donor field on the accession form does not link to a donor table and instead all donor contact information needs to be added to the accession form. The vendor sees this as a strength because it allows an organization to keep historical donor information when contact information changes over time. However, this also increases the amount of data entry that needs to be done for accessioning. This can also mean that data is less standardized. The creator field is set up in the same way.

The absence of linked tables results from the fact that Archives Online is not a relational database. This simplifies its structure but can be frustrating for some users because information often needs to be entered in four or five different places. Accession and description records are not linked, so information that is entered in the accession record that is also relevant to description needs to be added again when the description record is created. As well, there are some limitations on linking different records in a hierarchy, which is discussed further in the Searching and Public Access section below.

There are 2 data entry forms for descriptions: a detailed form with all description fields and a basic form with a limited number of fields that are seen to be most essential. The overall idea is that the detailed form can be used by an archivist while the basic form can be used by a volunteer or

student, or the detailed form can be used for fonds-level description and the basic form for item-level description. One user complained that the description form needs additional notes fields to be fully RAD-compliant. However, Archives Online is very flexible and can be heavily customized by users, so it would not be difficult to add more fields to the description form.

The screenshot shows a web form titled "Add/Edit a basic ITEM level description". At the top, there is a dark blue header with a pencil icon and the text "Add/Edit a basic ITEM level description". Below the header, a dark grey bar contains the instruction "Press <F5> to save the record" and the text "Entry-ItemBasic". A navigation bar below this contains buttons for "Menu", "New Search", "Save/New Record", and "Detailed Entry". The main content area is titled "Core Element Fields" and contains a grid of input fields. The fields are organized into several sections: "Title" (a long text field), "Part Of" (a text field), "Descr. Level" (a text field), "Series No." (a text field), "Item No." (a text field), "Storage Loc." (a text field), "Creator" (a text field), "Start Date" (a date field), "Date Range" (a text field), "Responsibility" (a text field), "Edition" (a text field), "Physical Descr." (a text field), "Custodial Hist." (a text field), "Scope/Content" (a text field), "Standard No." (a text field), "Source Type" (a text field), and "Notes" (a text field). To the right of the "Descr. Level" field, there are fields for "Fonds No.", "File No.", "Item Range", "Storage Range", and "GMD". Below these are fields for "End Date" and "Date Range". To the right of the "Date Range" field, there is a help box with the text "Help is OFF. To turn help on, click the Help On/Off button below. Further help can be found in the User Manual." Below the help box are buttons for "Help On/Off" and "Save / Start New Record". Below the "Save / Start New Record" button are fields for "Subject Access", "Name Access", and "Geo. Access". At the bottom of the form, there is a dark grey bar titled "System Generated Fields (read only)" which contains fields for "Descriptions ID" (with the value "1"), "Record Modified" (with the date "August 31 2008"), and "Record Created" (with the date "August 31 2008").

Illustration 2: Data entry form for basic item level description record in Archives Online

Searching and Public Access

Archives Online comes with both an archivists' search form and a public search form. The archivists' search form allows both basic and advanced searching. The public search form does not have a keyword search box that searches all fields and is set up to do advanced searching but with less fields than on the archivists' search form. Two users mentioned that their public users found the public search form too complicated because of the separate fields and instead they created a "Google-like" basic search form with one field. Archives Online provides a user-friendly interface in which to edit the search form, so this could easily be customized.

Users commented that the search features work well and they usually find what they are looking for. However, one user complained that the results do not display hierarchically. Indeed, search results display all fonds first, then all series, and so forth, and it is difficult to navigate to different levels of the hierarchy within search results. If you search for and retrieve a fonds-level

description, you can change the report format so that the fonds and all of the records it is linked to are displayed. But if you search for and retrieve an item-level record, you can see the name of the fonds it is part of but no information from the fonds record. To see the fonds record you need to perform a new search.

Archives Online does not include the capability to publish collections online, despite its name, but this can be done through purchasing the WebPublisher Pro module. 1 user who was interviewed had been using WebPublisher Pro and found it easy to use.

Installation, Maintenance, Importing, and Exporting

Users did not report any problems installing or maintaining the software or with importing legacy data into the software. Archives Online allows exporting in a number of formats and has extensive reporting options. The program comes with common reports already set up and a user-friendly interface for creating and modifying reports.

Customization

Indeed, the options for customization are one of the greatest advantages of using Archives Online. Almost everything in the system can be customized by the user. One user who was interviewed purchased DB/TextWorks only and designed a database for archives management completely on her own. She had technical skills and she found the customization was easy to do. Another user who was interviewed had Andornot do all of the customization for them because they lacked any technical skills. They were happy with all of the customization and felt it was worth what they paid. I believe a user with average technical skills could do quite a bit of customization within Archives Online.

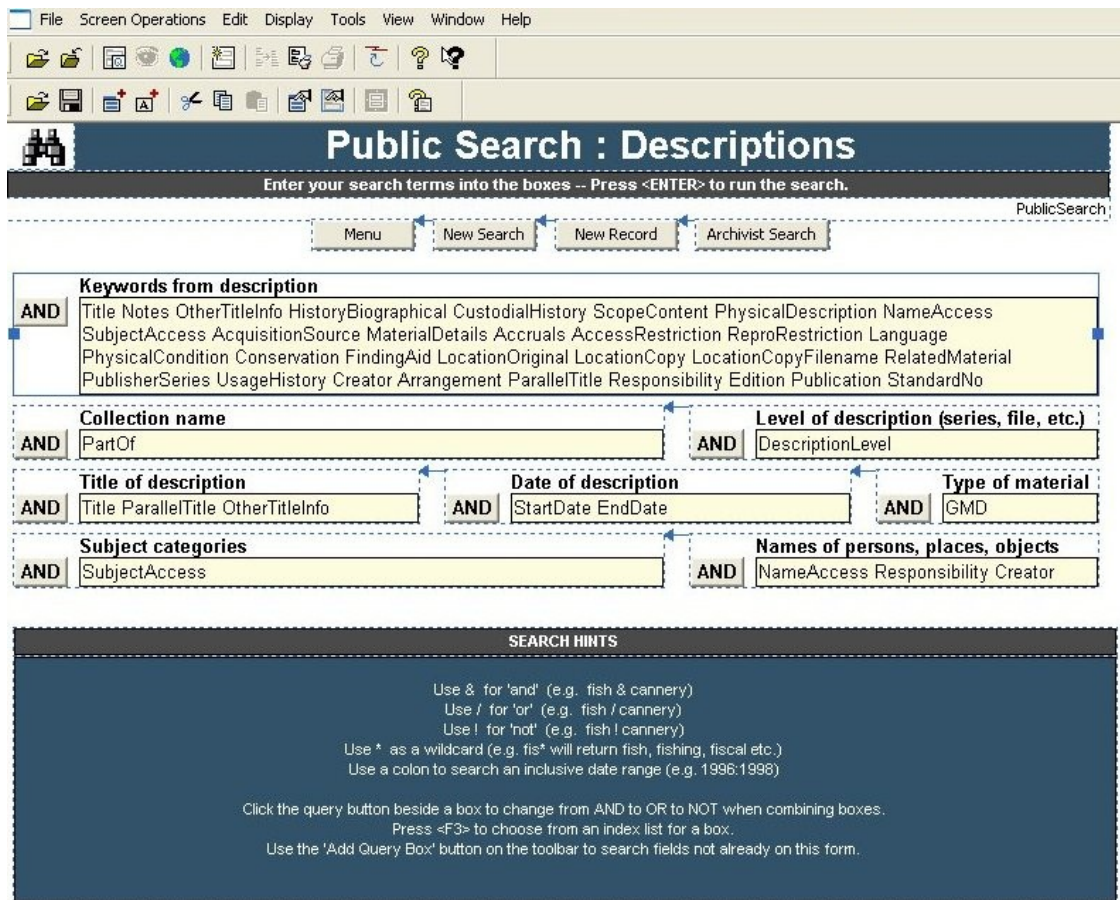


Illustration 3: Interface for customizing public search form in Archives Online

Software Support and Sustainability

Users commented that Andornot is very helpful and quick to respond to their requests for support. Of all of the vendors that I contacted during my research, I found Andornot to be the most responsive and helpful. They were the first company to reply to my initial request for information, provide me with a demonstration copy of their software, and do an online demonstration of the software for me. The software is also widely used by archives in Canada so there could be support available through the archives community. The help manual that comes with the software is fairly detailed and easy to understand.

Summary of Strengths

- Extensive user customization permitted
- RAD compliant
- Simple data entry
- Strong reporting features
- Good support

Summary of Weaknesses

- Database not relational and records not linked
- Limited collections management features

Hierarchical relationships poorly displayed

Recommendation

Archives Online is a good option for small archives working with limited budgets and volunteer staff. The users who were interviewed said the affordable price was one reason they purchased Archives Online and they were both satisfied with the program. The simplicity of the program comes at the expense of a robust structure of relationships between tables in the database, and this can mean increased workload, less standardized data, and less efficient searching. The program also offers a user with average technical skills extensive opportunities to customize reports, menus, search forms, data entry forms, and even fields and tables.

Demonstration Copy

A 30-day trial version of the software is available by contacting Andornot Consulting. A representative of Andornot will send the user an executable file to install the software on the user's own computer and the vendor will introduce the user to the software with an online demonstration. To get an idea of what the public side of the software looks like and how different organizations have customized their public search interfaces, you can link to client websites from the Andornot website.

2. Archivists' Toolkit 1.1

Developers	Developed collaboratively by the University of California San Diego Libraries, the New York University Libraries, and the Five Colleges, Inc. Libraries, and funded by The Andrew W. Mellon Foundation
Website	http://www.archiviststoolkit.org/
Type of licence	Educational Community License (open source)
Hosted service provided as alternative to purchasing licence	No
Technical Requirements	
Operating system required	Mac OS X 10.4 or later, Windows XP or higher, Linux
Additional hardware or software required	MySQL 5.0, Microsoft SQL Server 2005, or Oracle 10g. MySQL is an open source database and server program that can be installed for free at http://www.mysql.com/
Accessioning	
Record or generate deed of gift	There is a field where you can link to external documents, including a deed of gift. There is another field where you can record the date a deed of gift or other agreement was sent.
Track donors	Yes
Record condition	Yes
Record conservation treatment	No, but could record this in Processing Plan field.
Manage physical locations	Yes
Manage copyright	Yes, section to indicate if rights have been transferred and the date and notes about this.
Control access to restricted materials	Yes, fields to indicate access restrictions and use restrictions.
Accession records keyword searchable	No, only in limited set of fields.
Track method of accession (transfer, donation, loan, or purchase)	Yes
Set processing priorities	Yes
Manage processing status	Yes, fields for names of processors, a processing plan, processing started date, processing status, processed date, catalogued date, and catalogued note.
Manage monetary appraisals	No, but can add appraisal note in description record.
Deaccessioning	Yes. In accession record there is a section to record deaccession date, extent, and extent measurement, but to deaccession material you would instead create a deaccession record by clicking a button in the accession or description record and opening a form where you

	record deaccession date, description, reason, extent, disposition, and notification.
Description	
Create description record from accession record and automatically populate fields	Yes
Link accession and description records	Yes
Link accession record to multiple description records	Yes
Link description record to multiple accession records	Yes
Hierarchical - create records for fonds, collection, sous-fonds, series, sub-series, files, items and link fonds with its parts in a hierarchy.	Yes, hierarchy is clearly displayed for every record and it is easy to navigate between different levels of the hierarchy, identify the type of record you're looking at, and add new records within a hierarchy. There is only one description form to use for all levels of records, but there is flexibility to enter less detail at lower levels.
Ability to reorganize hierarchies	Yes
Allow text fields of unlimited length	Yes
Standards supported	RAD, ISAAR(CPF), EAC, AACR2, DACS
Batch modify records	No, but will be included in next release.
Searching	
Basic search	No
Advanced search (by field)	Yes
Date-range search	No, but could be customized.
Browse	Yes
Search results clearly indicate hierarchical relationships of records	The list of search results does not display hierarchical relationships but when you open an individual record the hierarchy is clearly displayed next to it.
Records linked to other parts of hierarchy	Yes, when you open an individual record the hierarchy is clearly displayed and you can navigate easily between different levels and records.
Print search results	Yes
Reports	
Generate reports	Yes, can generate reports from browse screens of filtered results, search results, or individual records with the click of a button, including accessions, names, subjects, resources, locations, and repository profile. Can create reports in PDF, HTML, RTF, Excel, or CSV format.

Customize reports	No, but can customize reports in the open source application JasperReports or import customized reports.
Authority Records	Yes, can create or import authority files for names and subjects.
Link authority record to unlimited description records	Yes
Link description record to unlimited authority records	Yes
User Access and Data Security	
Public search interface	No
Publish finding aids online	No, although can easily generate EAD files.
Control when record becomes publicly accessible	No
Control who can delete records	No
User permissions management	Yes
Manage loans	No
Backup/Restore utility	No
Keyboard shortcut options	No
Allows offline data entry	Yes
Multimedia	
Accommodates multimedia files	No, multimedia files cannot be imported.
Link description record to word processed documents or image files	A description record can be linked to a multimedia file that is stored externally.
Include metadata about linked image files	No
Importing and Exporting Data	
Import single EAD record	Yes
Import single MARC record	Yes
Import multiple EAD records (batch import)	Yes
Import multiple MARC records (batch import)	No
Export single EAD record	Yes
Export single MARC record	Yes

Export single METS record	Yes
Export single HTML	Yes
Export PDF	No, but will be included in next release.
Export multiple EAD records (batch export)	Yes
Export multiple MARC records (batch export)	Yes
Export multiple tab-delimited files (batch export)	No
Software Support and Training	
Help manual	PDF help manual can be downloaded from website.
Context-specific help	Yes, for explaining fields.
Installation instructions	Included in help manual.
Technical support provided by developers	Free e-mail support provided.
Online user forum or listserv	Yes, online user forum and listserv.
Training available	Yes, training workshops are offered approximately eight times per year in different American cities. A list of upcoming workshops is available here: http://www.archiviststoolkit.org/overview/workshops.shtml Members of the Archivists' Toolkit team may also be able to conduct on-site training for fees which would cover instructor costs and travel expenses.
Customization	
User customization permitted	Yes, user can establish default values for fields, modify search settings, customize field labels, identify fields to appear in browse lists, edit lookup lists, customize reports, and configure user-defined fields.
Developer customization available	No
Localization options	None
Price Information	
Single-user licence for basic software	Free
Additional user licences	Free
Additional modules	
Web publishing	NA
Multimedia	NA
Training	Varied

Customization	NA
Data conversion/migration	Available on a consulting basis for negotiated price.
Annual maintenance and support fees	Free
Annual fees for hosted service (include maintenance and support)	NA

Review

The Archivists' Toolkit was the first open source program developed to manage archival collections. It was designed to increase efficiency in archival processing and promote standardization of archival information (Westbrook, 2006). Development of the software began in 2004 by a team of programmers and archivists at the University of California San Diego Libraries, New York University Libraries, and the Five Colleges Libraries with extensive input from archivists at a variety of institutions. It was released for beta testing in 2006; the production version was released in January 2008; and the next version is scheduled for release in October 2008.

General Usability

I found the user interface for the Archivists' Toolkit to be straightforward and intuitive. The menus are simple and contain commands and terms that are easy to recognize and understand. Many functions can be carried out simply by clicking buttons. The main menu items are Names, Subjects, Accessions, and Resources (descriptions). When you select Accessions or Resources, the associated records are displayed in table format for easy browsing and you can search within each module by using a filter function.

Data Entry, Accessioning, and Description

The data entry forms are set up with tabs separating different types of information. It is possible to create a description record from an accession record, automatically populating common fields, which can make data entry easier and faster. It also has a feature called Rapid Data Entry to speed up data entry.

The accession form contains all of the standard fields except for custodial history. It does not have separate fields for creator, administrative history/biographical sketch, or donor. Instead this information is managed and recorded through the Names section, where you can link the accession record to creator or donor files that are stored in separate tables. Administrative history/biographical sketch data is stored in the creator files. The accession form has 10 user-defined fields. Users commented that the accessions module is very good - "better than anything out there" (Spiro, 2008).

The description form is unique in that there are not a large number of predefined fields besides title, dates of creation, and physical description, but there is section for notes where you can add up to 29 notes, such as Arrangement note, Biographical/Historical note, Conditions Governing Access

note, and Custodial History note. Many of these notes conform to RAD fields. You can wrap any of these notes in a tag so that it is exported correctly in an EAD file or define them for internal display only. This flexible structure provides a lot of different options for fields yet allows an archives to only use necessary fields and easily conform to a specific standard.

There is only 1 data entry form to use whether you are describing a fonds or an item. However, the flexible structure allows you to easily add less information to lower-level records. You can add a child or sibling record by clicking button on the bottom of the screen.

Many users commented that the software is easy to learn for archivists but might be more challenging for non-archivists (Spiro, 2008). In terms of data entry, one commented, “The big challenge with AT is that it leaves a lot of options open to [the] user. You have to make choices, and there are lots of different notes available to you” (Spiro, 2008). I found the data entry screens for accessioning and description to be quite detailed and able to accommodate a lot of information, yet easy to navigate through. However, the structure provides flexibility and choices, which could be overwhelming or confusing to some individuals. Volunteers would need to be given clear instructions.

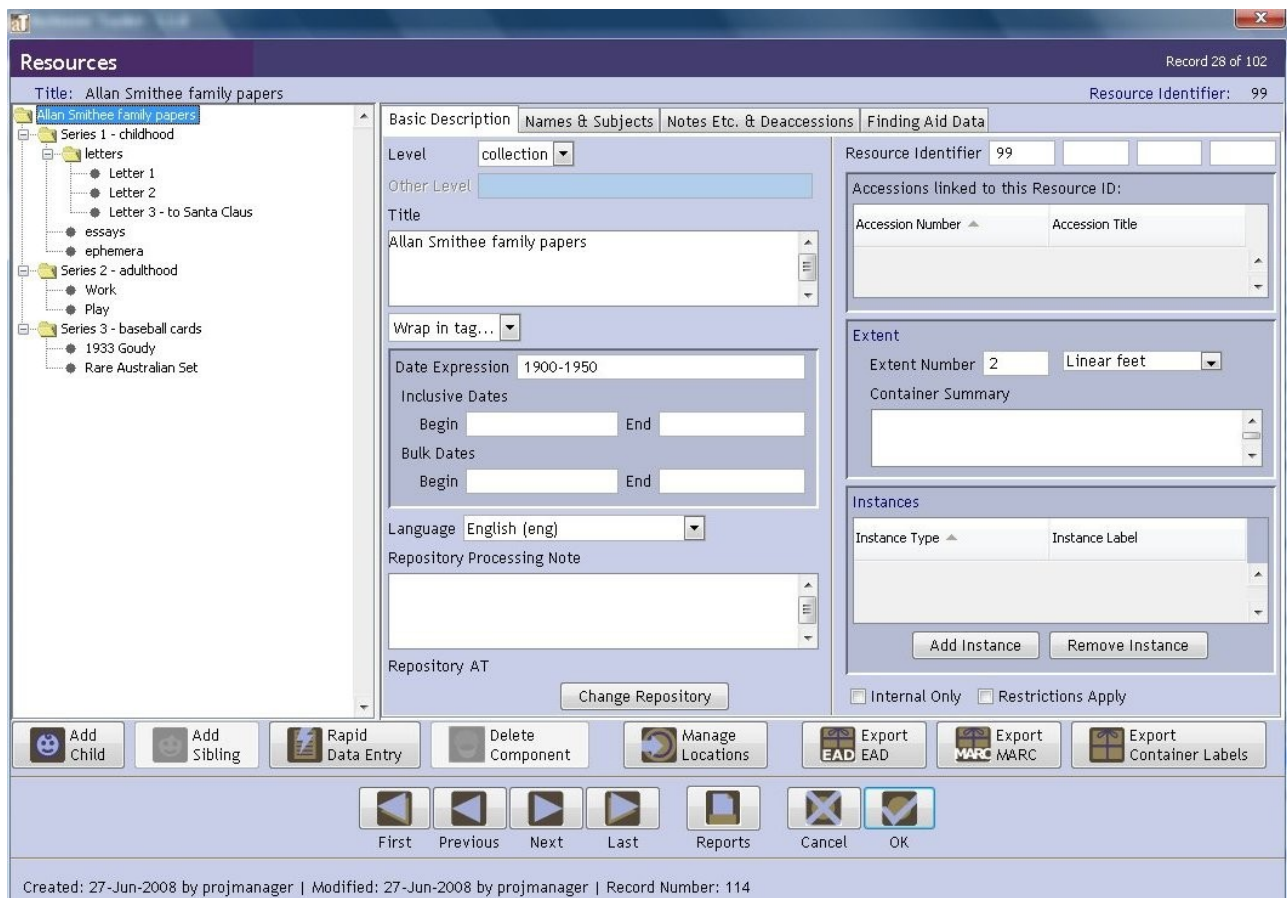


Illustration 4: Description record in the Archivist's Toolkit with hierarchy displayed on left

Searching and Public Access

The Archivists' Toolkit does not contain a public search interface. Archivists can search by keyword within the fields displayed for browsing in accessions or descriptions or search by field in an advanced search form. A basic search function is planned for future releases of the software. The fields offered for searching in the advanced search form are limited, but these could be customized. Hierarchical relationships between records are not displayed in search results but if you select a record to view it in detail you will clearly see the hierarchy displayed on the left of the screen and the detailed record on the right. You can link to other records in the hierarchy by selecting them. The Archivists' Toolkit also does not allow you to create webpages or publish your finding aids online, except through exporting records in EAD format and publishing them on your own website.



Illustration 5: Browse descriptions and main menu in the Archivists' Toolkit

Installation, Maintenance, Importing, and Exporting

EAD and MARC records can be generated from any description record with the click of a button. The program provides a number of options for importing and exporting records in different formats. Some users reported issues with importing legacy data into the Archivists' Toolkit if that data was not standardized or didn't map easily to the fields in the Archivists' Toolkit (Spiro, 2008). Users did not report any problems installing or maintaining the software, although all users who were interviewed had IT departments to support them.

Customization

Customization options are more limited than other programs because developers do not offer customization services. However, the program allows users to do some customization, such as

modifying search settings and customizing field names, through a user-friendly interface that requires no knowledge of programming.

Software Support and Sustainability

Users of the Archivists' Toolkit receive solid support from developers. The help manual is long, detailed, well-written, and easy-to-understand. It explains how to complete processes step-by-step and contains screenshots. The user listserv is active and developers respond quickly to questions. In communicating with the developers through the research process, I found they responded quickly to my questions and were very helpful. If ever I inquired about a feature that the software did not have, they always offered to look into including it in the next release. Indeed, users who were interviewed mentioned that most problems or missing features they have mentioned to developers in the past have been resolved or included in the next release of the software.

The Archivists' Toolkit was selected by some users because of its perceived sustainability compared to commercial software and compared to Archon, another open source archives management tool. Both Archon and commercial software are being developed primarily by a single organization whereas the Archivists' Toolkit has funding guaranteed until 2011 and is being developed by a number of different institutions.

Summary of Strengths

- Good management of hierarchical relationships
- Detailed and complete accession form
- Detailed and flexible description form
- Good support and user manual
- Simple and intuitive user interface
- Strong reporting features
- Free to install and use
- Easily generate EAD and MARC records

Summary of Weaknesses

- Limited support for multimedia.
- No public search interface or ability to publish to the web
- No customization available from developers

Recommendation

Unless an organization requires public access to their collections or has unique collections that require a heavily customized system, I would recommend trying out the Archivists' Toolkit. It is free to install, and I think most archivists would find that it is easy to use and a strong tool for managing accessions and descriptions and conforming to archival standards.

Demonstration Copy

A demonstration copy of the software can be downloaded and installed from the project's website. The demonstration system contains a fair amount of data and can be used for an unlimited time. It

is currently installed on the CNSA Software Review Project laptop. The laptop must be connected to the internet in order to use the demonstration system. The help manual and login information are also available on the laptop.

3. Archon 2.2

Developers	University of Illinois at Urbana-Champaign, UIUC Library, Urbana, IL
Website	http://www.archon.org/
Type of licence	Illinois Open Source License
Hosted service provided as alternative to purchasing licence	No
Technical Requirements	
Operating system required	Windows, Mac, or Linux
Additional hardware or software required	Blank MySQL or Microsoft SQL Server database and a webserver (of any type) running PHP 5.0 or higher. MySQL is an open source database and server program that can be installed for free at http://www.mysql.com/
Accessioning	
Record of generate deed of gift	No
Track donors	Donor name, contact information, and notes are recorded in the accession record, but there is not a separate donor table so donor information must be entered each time and is not standardized.
Record condition	No field for condition but notes on condition can be made in Accession description – Comments field.
Record conservation treatment	No
Manage physical locations	Yes
Manage copyright	No, not in accessioning, but 1 field for Use/Rights in description form.
Control access to restricted materials	Yes, in descriptions.
Accession records keyword searchable	No
Track method of accession (transfer, donation, loan, or purchase)	Not in accessions but in descriptions.
Set processing priorities	Yes, field to set processing priority.
Manage processing status	Description form has field for Processing Info.
Manage monetary appraisals	Not in accessions but field for Appraisal Info in description form.
Deaccessioning	No

Description	
Create description record from accession record and automatically populate fields	Yes
Link accession and description records	Yes, but link only appears in the accession record and not in the description record.
Link accession record to multiple description records	Yes
Link description record to multiple accession records	Yes
Hierarchical - create records for fonds, collection, sous-fonds, series, sub-series, files, items and link fonds with its parts in a hierarchy.	Yes, create a collection and then use Content Manager to create lower levels of records. Data entry form for fonds-level records is very detailed. Form for lower level records only has 5 fields but you can add as many user-defined fields as you would like for each record.
Ability to reorganize hierarchies	Yes
Allow text fields of unlimited length	Yes, most text fields are unlimited.
Standards supported	DACS, ISAD, RAD, AACR2
Batch modify records	No
Searching	
Basic search	Yes, available in public search interface, not administrative interface.
Advanced search (by field)	No
Date-range search	No
Browse	Yes
Search results clearly indicate hierarchical relationships of records	Yes, list of search results shows hierarchical relationships between records. But relationships are less apparent when you select a record to view it in detail. Fonds-level records show the next level down but nothing below that. Series and lower level records do not show relationships.
Records linked to other parts of hierarchy	Yes
Print search results	Yes
Reports	
Generate reports	No, but planned for next version.
Customize reports	No, but planned for next version.
Authority Records	
Types of authority files	Can create subject and creator authority files.

Link authority record to unlimited description records	Yes
Link description record to unlimited authority records	Yes
User Access and Data Security	
Public search interface	Yes
Publish finding aids online	Yes, system automatically publishes finding aids into a web-ready document.
Control when record becomes publicly accessible	Yes
Control who can delete records	Yes
User permissions management	Yes
Manage loans	No
Backup/Restore utility	No, but can be done through backend database program.
Keyboard shortcut options	No
Allows offline data entry	Yes
Multimedia	
Accommodates multimedia files	Yes, users can define types of files allowed using the File Types Manager. These include photos, sound clips, electronic records, or word processing documents.
Link description record to word processed documents or image files	Yes
Include metadata about linked image files	Yes, user can add metadata about file after it has been uploaded.
Importing and Exporting Data	
Import single EAD record	Yes
Import single MARC record	Yes
Import multiple EAD records (batch import)	Yes
Import multiple MARC records (batch import)	Yes
Export single EAD record	Yes
Export single MARC record	Yes
Export single METS record	Yes

Export single HTML	No
Export PDF	No
Export multiple EAD records (batch export)	No
Export multiple MARC records (batch export)	No, but planned for next version.
Export multiple tab-delimited files (batch export)	No
Software Support and Training	
Help manual	PDF help manual can be downloaded from website.
Context-specific help	Yes
Installation instructions	Yes, instructions included in help manual.
Technical support provided by developers	Free e-mail support provided to a limited extent.
Online user forum or listserv	Yes, online user forum and listserv.
Training available	Training is offered by the Society of American Archivists in the United States. No training available in Canada.
Customization	
User customization permitted	Yes, users can customize some user-defined fields, help text, and public interface and themes using HTML coding. More is possible with programming knowledge.
Developer customization available	No
Localization options	Interface available in Spanish.
Price Information	
Single-user licence for basic software	Free
Additional user licences	Free
Additional modules	
Web publishing	Free
Multimedia	Free
Training	NA
Customization	NA
Data conversion/migration	NA
Annual maintenance and support fees	Free
Annual fees for hosted service (include	NA

Review

Archon was developed by the University of Illinois Archives at the University of Illinois at Urbana-Champaign UIUC Library to help small, one-person archives efficiently and easily create standards-compliant finding aids and publish them on the web (Prom, 2007). It has been developed quickly: version 1.0 was released in August 2006; version 2.1 was released in April 2008; version 2.2 was released July 2008; and the next version is expected to be released in spring 2009. The software consists of an administrative and public user interface backed by a MySQL database.

General Usability

Users of Archon can log into the program as an administrator and access a variety of menu options through an administrative interface or they can edit and search records through the public interface. The administrative interface has 2 menus: Archon Administration and Archon Packages. Under the packages menu there are sub-menus for Accessions, Collections, Creators, Digital Library, Research, and Subjects. On the whole, I found the interface to be counter-intuitive and hard to figure out. Commands and features are not named as I expected them to be and the steps involved in carrying out tasks are quite different than in other archives management software programs. I relied on the developers to learn how to do quite a few things in Archon. Most users, however, said that they find the interface and program to be easy to use, and perhaps it is once you get used to it. Some users compared Archon to the Archivists' Toolkit and felt that the Archivists' Toolkit is designed more for archivists with a solid understanding of archival practices and standards while Archon is easier for non-archivists, volunteers, and students to use (Spiro, 2008). The developers are drastically redesigning the user interface for the next release of the software.

Data Entry, Accessioning, and Description

The data entry forms for accessions and descriptions are long forms that you scroll down through, but they are divided into sections that you can collapse and expand. In the next version of the software the data entry forms will instead have tabs with different sections of data. Accession and description forms are linked but the link only shows in the accession record. This will be fixed in the next version of the software.

The accessions function was only added to Archon in the most recent release and it is still fairly limited. It will be more robust in future releases. It is missing some important fields, including date received, date range, custodial history, acquisition type, and restrictions on access. Many of these fields are in the description form instead. Creator information, including biographical sketch or administrative history, is stored in a separate table and linked to accession records.

It is possible to create a description record from an accession record and automatically populate the description record with relevant accession data. You can also create description and accession records separately and then link them through the accession record. However, the link only appears in the accession record.

With Archon you can create a fonds-level description record using a data entry form that is fairly extensive. Then to add other records or groups of records in the hierarchy you select Content Manager and create the lower level records using a much shorter form. The fonds-level record is fairly detailed and has most of the fields necessary to be RAD-compliant, although different field names are often used. The lower level records only have fields for title, date(s), and description, but then you can add as many user-defined fields as you would like each time you create a record. You can also map each field to a particular EAD field. This flexibility is nice, but volunteers would need to be given clear instructions on which fields were needed. It is not possible to set up different collections in Archon with different fields and presentations.

The screenshot shows the Archon Collection Manager interface for the 'Edward Scribner Ames Papers (ID: 99)'. The 'Content Manager' button is highlighted. Below it, the 'Collection Information' section is expanded, showing the following fields and values:

- Title: Edward Scribner Ames Papers
- Enable Web Output: Yes No
- Main Repository: Brandeis University Archives
- Collection Classification: 10 Chancellor, 11 Public Relations
- Collection Identifier: 35
- Sort Title: Edward Scribner Ames Pa
- First/Last Year: -
- Inclusive Dates: 1870-1958
- Predominant Dates:
- Type of Materials: Personal Papers
- Extent: 3 (Select One)
- Finding Aid Author: schwartz, scott
- Template: System Default (default)

At the bottom of the form, there are several expandable sections: Location Information, Creator Information, Collection Description, Subjects, Genres, Languages, and Restrictions. A link 'Add or Edit Digital Content' is also visible.

Illustration 6: Description record in Archon. There are more sections of data below that could not be included in the image

Searching and Public Access

Search options in Archon are limited. From the administrative interface you can only do a basic search within a specific collection. In the public search interface you can search across the whole system but again can only do a basic search or browse by collection. There is no advanced searching at all in Archon.

The public search interface is simple, with one basic search box and the option to browse Collections, Digital Content, Subjects, Creators, and Record Groups. The terminology used here could be obscure to many users. Search results are grouped under similar names – Records and Manuscripts, Unprocessed Materials, Creator Descriptions - which may also be confusing to users. You select one of these to see all records retrieved within it. The list of records retrieved in search results show results in hierarchical order and display hierarchical relationships fairly clearly. However, when you select a collection or fonds level record to view it in detail you only see the next level of records down in the hierarchy and when you view a file or item level record in detail you do not see any other related records.

Archon comes with an attractive public user interface and web publishing capabilities, which allows you to easily put your collections online without doing any additional work, unless you want to change the theme or interface of the web pages, which requires basic knowledge of HTML. Users often cite this as the main reason they chose to adopt Archon: "It gave us a quick and easy way to put collections up on online, let patrons search them, and see everything we had, instead of having to search finding aids individually" (Spiro, 2008).



Illustration 7: Record viewed in detail from public search results in Archon

Installation, Maintenance, Importing, and Exporting

Users have found Archon to be easy to install and maintain (Spiro, 2008). Several users reported having problems importing their existing data into Archon and advised that it is better to begin using the program with no legacy electronic data (Spiro, 2008). These issues could have been with previous releases of the software and may be resolved now. Archon cannot currently generate any reports, but in the next version users will likely be able to create and generate their own reports. With Archon you can automatically generate EAD and MARC records, which is seen as a major strength of Archon by users.

Customization

Archon can be heavily customized with knowledge of PHP programming language. Users with basic knowledge of HTML and cascading style sheets can customize the user interface, such as fonts and colours. Archon documentation includes detailed instructions on how to do this. With no knowledge of HTML or PHP, users can change field names, and these changes will be retained when the software is updated. Customization is not available from the developers of the software.

Software Support and Sustainability

Support for Archon is primarily available by e-mailing questions to the developers and participating in the user forum and listserv. Users reported that the developers are very responsive requests for assistance and the user community is helpful. I found the developers to be fairly responsive to my requests for information. The help manual that is currently available for Archon is brief and lacks detail. It explains how features work but does not provide step-by-step instructions on how to carry out processes in Archon. I did not find it helpful.

One user felt that compared to the Archivists' Toolkit, Archon is a less sustainable option because it does not have ongoing grant support and is instead dependent on a single institution for development (Spiro, 2008). However, another user stated, "I have more confidence in the sustainability of Archon. The University of Illinois developed Archon, they're using it, they'll keep supporting it for the long term, even if they didn't have external funding" (Spiro, 2008). Because Archon is open source and still in the earlier stages of development, one can expect that significant changes and improvements will be made to the software in the near future. Users said that when they report problems to the Archon developers, the problems are resolved in the next version of the software (Spiro, 2008).

Summary of Strengths

- Easily put collections on the web
- Easily generate EAD and MARC records
- Simple public search function

Summary of Weaknesses

- Limited customization without technical knowledge
- Poor help manual
- Limited accession form
- Limited search options
- No reporting features

Recommendation

Archon is a good option for organizations with limited budgets whose primary goal is to provide web access to their collections through an attractive user interface. Collections management features in Archon are weak or lacking, so it would also suit an organization with simple administrative processes. In the near future, I believe that many of the issues with usability will be resolved and missing features will be added, and Archon will be suitable for a wider range of archives.

Demonstration Copy

A demonstration version of Archon can be accessed through the Archon website by clicking on the *Sandbox* link on the menu and following the directions provided. One can also link to the University of Illinois Archives' online catalogue from the Archon website and see their public user interface. There is a link provided to the online demonstration copy of the software on the CNSA Software Review Project laptop.

4. Eloquent Archives 4.0

Software program	Eloquent Archives
Developers	Eloquent Systems, North Vancouver, B.C.
Website	http://www.eloquent-systems.com/
Type of licence	Commercial
Hosted service provided as alternative to purchasing licence	Yes
Technical Requirements	
Operating system required	Any operating system that can support a web browser.
Additional hardware or software required	No
Accessioning	
Record or generate deed of gift	This cannot be done in the accession form but instead through creating the accession record, searching for the accession record, and then printing a deed of gift in PDF.
Track donors	Yes
Record condition	Yes
Record conservation treatment	No, but there is a field to record physical condition and a note field for physical condition where you could record conservation treatment.
Manage physical locations	Yes
Manage copyright	Yes
Control access to restricted materials	Yes
Accession records keyword searchable	Yes
Track method of accession (transfer, donation, loan, or purchase)	Yes
Set processing priorities	No
Manage processing status	Yes, accession form has fields for Processed By, Processed Date, Accessioned By, and Archivist Assigned.
Manage monetary appraisals	Yes, fields for Appraised By, Appraisal Date, and Appraisal Note.
Deaccessioning	Limited - accession form has field for Deaccession Date and a status field where you can set the status as deaccessioned.
Description	
Create description record from accession record and automatically populate	No

fields	
Link accession and description records	Yes, you create accession record, then description record, then link through accession record.
Link accession record to multiple description records	No, but can be customized to do this.
Link description record to multiple accession records	Yes
Hierarchical - create records for fonds, collection, sous-fonds, series, sub-series, files, items and link fonds with its parts in a hierarchy.	Yes, you create each record level separately with a field that indicates its level in the hierarchy and then link them together by linking a lower level record with the record above it. There is only one data entry form for records in all levels of the hierarchy.
Ability to reorganize hierarchies	Yes
Allow text fields of unlimited length	Yes
Standards supported	RAD, ISAD, DACS. When you create a new description record, you can select a standard in which to create it.
Batch modify records	No, but this can be customized by the vendor.
Searching	
Basic search	Yes
Advanced search (by field)	Yes
Date-range search	Yes
Browse	No
Search results clearly indicate hierarchical relationships of records	In list of search results the hierarchical relationships between records is not visible but the results are displayed in hierarchical order and the level of the record (series, file) is clearly displayed. When you select a record you can easily see the other levels of records in the hierarchy.
Records linked to other parts of hierarchy	Yes, the other levels in the hierarchy are hyperlinked and you can click on them to open them.
Print search results	Yes, you can print through your web browser but not through Eloquent Archives. You can select different formats in which to view the search results.
Reports	
Generate reports	No, the system does not come with a function to generate reports except through performing searches and selecting different modes of display. Reports can be set up by the vendor during the implementation phase.
Customize reports	No, you cannot create or customize reports except with purchase of the development tools.

Authority Records	Yes, can create name, geographic location, and subject thesauri.
Link authority record to unlimited description records	Yes
Link description record to unlimited authority records	Yes
User Access and Data Security	
Public search interface	Yes
Publish finding aids online	Yes. With purchase of the HTML Publishing module you can also make the content indexed and searchable by web crawlers, such as Google.
Control when record becomes publicly accessible	Yes
Control who can delete records	Yes
User permissions management	Yes
Manage loans	Yes, with purchase of the Tracking and Retrieval module.
Backup/Restore utility	Yes, can schedule a regular backup.
Keyboard shortcut options	No
Allows offline data entry	Yes
Multimedia	
Accommodates multimedia files	Yes, can import documents, images, and multimedia with Content Management module.
Link description record to word processed documents or image files	Yes
Include metadata about linked image files	A brief description of the image can be added.
Importing and Exporting Data	
Import single EAD record	Yes
Import single MARC record	No
Import multiple EAD records (batch import)	Yes
Import multiple MARC records (batch import)	No
Export single EAD record	Yes, with purchase of EAD Publishing module
Export single MARC	No

record	
Export single METS record	No
Export single HTML	Yes
Export PDF	Yes
Export multiple EAD records (batch export)	Yes, with purchase of EAD Publishing module
Export multiple MARC records (batch export)	No
Export multiple tab-delimited files (batch export)	Yes
Software Support and Training	
Help Manual	No
Context-specific help	Yes
Installation instructions	Yes
Technical support provided by developers	Phone and e-mail support available for customers with support contracts.
Online user forum or listserv	No
Training available	Yes, online training available.
Customization	
User customization permitted	No, only with purchase of the development tools.
Developer customization available	Yes, for a fee.
Localization options	Support is available for users to translate the field labels and help text into another language for a fee.
Price Information	
Single-user licence for basic software	\$9,850.00 *
Additional user licences	Additional \$300.00 for 20 additional users or \$15,000 for unlimited users
Additional modules	
Web publishing	\$3,000.00 for HTML Publishing and HTML Index modules
Multimedia	Included
Tracking and retrieval	\$2,500.00
Research management	\$2,500.00
EAD publishing	\$2,500.00
Development tools	\$8,000.00

Training	\$250.00 for 2 hour online session
Customization	\$110.00/hr for minimum of 3.5 hrs.
Data conversion/migration	\$110.00/hr
Annual maintenance and support fees	15% of total software cost
Annual fees for hosted service (includes maintenance and support)	\$3,725.00
Annual fees for hosted service shared among 10 institutions (includes maintenance and support)	\$9,630.00 or approximately \$963.00 per institution

* Eloquent prices everything separately, so this includes WebGENCAT software platform, WebGENCAT application server, 1 read/write client, unlimited read-only clients, Eloquent Archives module, Content Management module, and Accessioning module, and has a discount applied of \$7,500.00 for under 5,000 records.

Review

Eloquent Systems is a small software development company in North Vancouver, BC that was started in the early 1980s and continues to be operated primarily by President Merv Richter. Initially, it used DOS-based generic cataloguing software GENCAT as a foundation for software applications for libraries, records management, archives, and museums (Parab, 2004). In 1999 it developed WebGENCAT, a web-enabled version of GENCAT and from 2000 to 2002 rebuilt its applications using this software (Parab, 2004). Now customers can purchase the WebGENCAT software platform and application server, then purchase any number of modules to work on this platform and carry out different functions. The main modules continue to be for archives, libraries, records management, and museums.

General Usability

Eloquent Archives is accessed entirely through a web browser, but no internet connection is required unless you are subscribing to the hosted service. The menu screen contains five main menu items, which further divide into sub-menu items. The terminology used for menu commands is straightforward, and it is easy to navigate through the main menu. However, many of the commands used in other parts of the system are unusual and take time to learn. Each time you navigate to a different part of the system a new browser window opens. I found this process of opening new browser windows to be problematic because if you are carrying out more than one task at a time you can have multiple windows open and lose track of what task you are doing, especially if you are using your web browser for other tasks. As well, having only one menu limits the number of functions that a user can carry out in the system and there are not direct paths through the menu to many of the functions I wanted to carry out. I often had difficulty figuring out how to do things and needed to consult the vendor for instructions on many tasks. For example, there is no way to view a list of authorities or controlled vocabulary and edit them.

Authorities can only be accessed through searching or when filling out specific fields linked to authority lists. To edit an authority record, you have to search for an authority record, retrieve it, then click the Take button in order to edit it.

On the whole, I found the user interface for Eloquent Archives to be counter-intuitive and difficult to navigate compared to other systems. This feeling was echoed by other users of the product. Users also reported that the system can be "buggy," which I experienced as well. One user said that often the system can be very slow in carrying out a task but does not give any indication if it is working or if it has crashed. At one point I clicked on the Help button in my search results window and a new window opened that contained no help text at all, so I assumed no help was available for that screen. But later I clicked Back to go back to the menu and I found that another tab had opened in my browser with the help information I had asked for earlier.

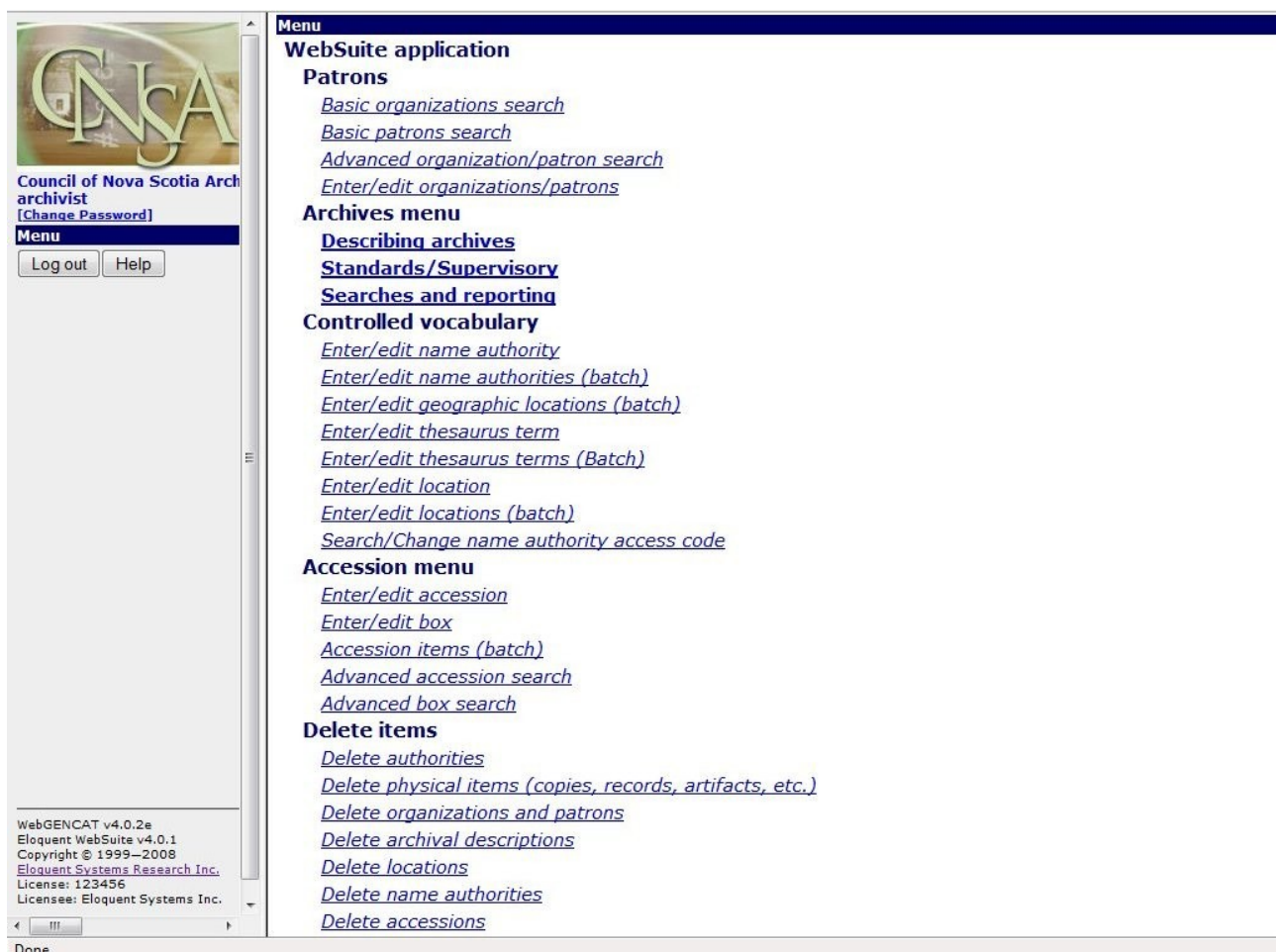


Illustration 8: Main menu screen for Eloquent Archives

Data Entry, Accessioning, and Description

The accession and description forms are each one long form that you scroll down to fill out. They are divided into sections and to the left of each form there are links to different sections that you can select to jump to. One long form can make it less likely that users will miss sections when doing data entry. Every field in the data entry forms is only 1 line long in terms of what you see

on the screen. You can enter more text than is visible but then it becomes hidden unless you use your cursor keys to move through it. This makes editing and checking records difficult. Some of the fields are linked to authority lists. To select a term from an authority list, you enter a word in the field and then click the Search button next to it. The system then looks up similar terms to what you entered and shows them in a new window. You then select a term and it is inserted into the field. If there is no similar term, the system opens a blank window and does not give any kind of error message. I found this system to be overly complicated compared to having a simple drop-down menu to select a term from.

Accession and description records can only be linked from the accession record, so you must either create a description record at the time of accessioning or go back into accession record after you create a description record and link them. You can only link one accession record to one description record, which means that if records accessioned together end up belonging to more than one fonds, you would need to create additional accession records for each description record. This can increase workload.

The accession form is quite detailed and contains all standard fields except the Creator field. To record a creator, you instead look up a name from a separate creator table and enter it into the Secondary Access Points section, where you can add up to three names.

When you create a description record in Eloquent Archives, you can select which archives standard to use. If you select RAD, a description form appears with all of the RAD fields, including all of the notes fields. There is only one data entry form for records in all levels of the hierarchy. One user found this to be a major problem with Eloquent Archives because lower-level records do not require the same fields as fonds-level records. This user spent a great deal of time figuring out which fields are needed at each level and then had the vendor customize separate data entry forms for each level. You link records in a hierarchy by creating each record level separately and then linking a lower level record with the record above it. You cannot create a lower level record from a higher level record and populate it with the same data, but you can easily copy data over from the current record to a new record by using the Copy button.

Searching and Public Access

Eloquent Archives contains a public search interface and an administrative search interface. The public search interface is set up so that users can search in fields only. There is no basic search box and it is unlikely that the general public would understand all of the field names used, such as Number, Subject Name, and Subject Topical. The administrative search form does not have an explicit basic search function but you can search across all fields by performing a search without selecting a field. There is no browsing feature provided. You can also search descriptions or accessions by keyword from within each of these sections of the system.

I preferred the public search interface to the administrative search interface. With the public search interface the search form is displayed on the left and search results are displayed on the

right, so you can easily move back and forth. With the administrative search interface, on the other hand, search results open in a new window. In both, search results display in hierarchical order but do not clearly display the relationships between records. In the public search, when you select a record to view it in detail, the hierarchy is clearly displayed on the left, with the detailed record on the right. You can easily link to other records in the hierarchy. In the administrative search, detailed records do not display the hierarchy as clearly but it is still visible. You can select different ways to display the search results and can print or export results.

Eloquent Archives offers good public access to collections. With the basic system you can offer public access through a networked computer or put your finding aids online if you have web hosting. Purchasing the HTML Publishing module in addition will make your content indexed and searchable by web crawlers, such as Google.

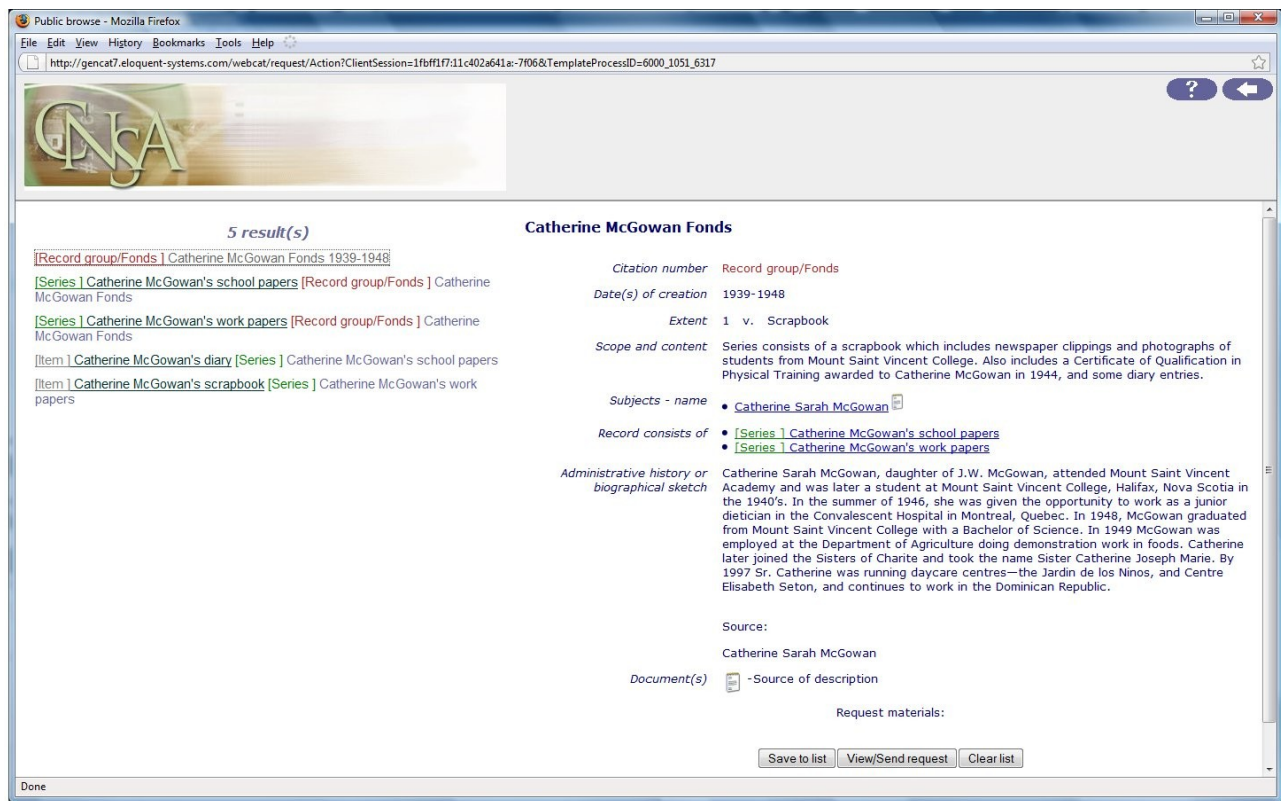


Illustration 9: Detailed record from public search results in Eloquent Archives

Installation, Maintenance, Importing, and Exporting

Users did not report any problems installing the software, but one said the system crashes fairly often. Users did not have problems importing existing data into the systems. Users of Eloquent Archives cannot export data themselves and instead must have Eloquent Systems do it for them. Some users found that took a long time and Eloquent made a lot of mistakes.

Eloquent also does not allow users to create or customize reports without purchasing the development tools, except through performing searches and selecting different formats in which to

display them. The system does not come with any reports set up, but users can have the vendor set up reports for them.

Customization

Eloquent Archives can be heavily customized by the vendor when the software is implemented for a fee that is included in the initial proposal. No user customization is possible without purchasing the development tools. One user who was interviewed complained about the amount of customization that needed to be done and the length of time Eloquent took to do the customization. She has had the system now for three years and the customization is still not finished. The user has not been charged for the customization work, “But it's still cost us in terms of staff resources. We had to go through the system and figure out what we need and whether they did what we asked.”

Software Support and Sustainability

Eloquent Archives does not come with a help manual. There is help available within the system but it is limited. There is no main help menu or index of help topics and no step-by-step instructions of how to do things or overall explanations of how features work. There is only context-specific help, such as explanations of fields. This means there is no way to figure out how to do something if you do not already know where it is in the system. Without a help manual, users would be heavily reliant on support from the vendor.

Some users say they have good support from Eloquent Systems but others say support is weak and unreliable. One user described the poor service she received from Eloquent Systems: “They're not very responsive. Sometimes I wait weeks or months to hear back from them.” In my dealings with Eloquent Systems, I found them to be satisfactory in their responses to my requests but not as prompt or helpful as other vendors.

Eloquent allows clients to have one staff person act as a single support contact. One user complained that she was not informed of this by Eloquent: “One of our employees was not listed as a support contact so when she called Eloquent ignored her but never explained why or that the people who could contact them were limited, and they never called one of the designated contacts.”

Cooperative Purchasing Option

The cost of purchasing a single-user licence for Eloquent Archives costs more than the limit that was set for this software review. However, Eloquent Archives was still included in the review because Eloquent Systems has offered to sell a shared cooperative subscription to their hosted service to a group of archives at an affordable price. The cost of this service shared among ten archives is noted in the features table above. There would also be initial costs for customization and data migration. This shared option could be ideal for archives with similar collections and software needs, as the database structure, features, and controlled vocabularies would be the same for all organizations. One organization would be designated as the main support contact and other

organizations would have to communicate with the vendor through that organization.

Summary of Strengths

Extensively customizable by vendor

Compatible with Archway, the Nova Scotia provincial archives database

Description fields are RAD compliant

Detailed accession form

Displays and manages hierarchical relationships well

Easy data entry

Summary of Weaknesses

Unreliable vendor support

No help manual

No user customization permitted without purchase of development tools

Cannot create or modify reports

Recommendation

Users reported choosing Eloquent Archives because data entry is easy, it uses RAD standards, and hierarchical relationships between records are displayed very clearly. Indeed, Eloquent Archives would be a good options for a larger organization that can spend money on customization and that needs hierarchical relationships displayed clearly, such as a university or municipal archives. However, it is one of the higher priced systems yet does not have as many features as other programs in that price range, such as STAR/Archives. As well, the lack of help manual and options for user customization means the user would need to rely heavily on the vendor, and support from the vendor could be unreliable.

Demonstration Copy

To obtain a demonstration copy of the software you can visit the Eloquent Systems website and click on the menu item *Try it free*. There are 2 options here: Request demo and Pilot Project Offer. Request Demo means receiving an online demonstration from an Eloquent representative. Pilot Project Offer means receiving access to a web version of the software, hosted by Eloquent. The software can currently be accessed by CNSA members on the CNSA Software Review Project laptop.

5. PastPerfect 4.0

Developers	PastPerfect Software, Inc., Exton, PA, USA
Website	http://www.museumsoftware.com/
Type of licence	Commercial
Hosted service provided as alternative to purchasing licence	No
Technical Requirements	
Operating system required	Windows, Mac, or Linux
Additional hardware or software required	No
Accessioning	
Record or generate deed of gift	Yes, there is a button on the accession form you can click to automatically create a deed of gift. The form is filled out but you can edit the information contained in it. You can also check off if deed of gift has been sent and the date and if the deed of gift has been returned and the date.
Track donors	Yes
Record condition	Yes, in descriptions.
Record conservation treatment	In description record you can record maintenance information.
Manage physical locations	No, only in descriptions.
Manage copyright	Yes, in descriptions.
Control access to restricted materials	Yes
Accession records keyword searchable	Accession records can be searched but only by specific field.
Track method of accession (transfer, donation, loan, or purchase)	Yes
Set processing priorities	No, although you can create "to-do lists."
Manage processing status	Yes, accession and description forms have sections where you can record dates that certain tasks were completed and who by. In description form there is a Description Control tab where you can record the name of the archivist, notes, dates, and standards used for creating the description.
Manage monetary appraisals	Yes. In accession form you can record the price or value of an accession. In description form you can record detailed information about an appraisal, including date, appraiser, value, notes, and insurance information.
Deaccessioning	Yes, there are fields on the accession form to record dates that object was reviewed for deaccession, offered to other institutions, and

	deaccessioned.
Description	
Create description record from accession record and automatically populate fields	Yes
Link accession and description records	Yes
Link accession record to multiple description records	Yes
Link description record to multiple accession records	No
Hierarchical - create records for fonds, collection, sous-fonds, series, sub-series, files, items and link fonds with its parts in a hierarchy.	Yes, but there is only 1 data entry form for records at all collection levels and you must create each record separately and then link them using a View/Setup Links button on the description form.
Ability to reorganize hierarchies	Yes
Allow text fields of unlimited length	Yes
Standards supported	ISAD(G)
Batch modify records	Yes
Searching	
Basic search	Yes
Advanced search (by field)	Yes
Date-range search	Yes
Browse	Yes
Search results clearly indicate hierarchical relationships of records	List of results does not indicate hierarchical relationships. It does state the level of the record, although item level records are instead called more specific names like "postcard" and "letter." When you select a record you can see its hierarchical relationships by clicking on View/Setup Links.
Records linked to other parts of hierarchy	Yes you can link to other records in the hierarchy by clicking on View/Setup Links.
Print search results	Yes
Reports	
Generate reports	Yes, there are a number of reports that come with the system.
Customize reports	Yes, can customize existing reports or create new reports in Reports Maker.

Authority Records	Yes, the Revised Nomenclature for Museum Cataloging is built into PastPerfect. You can edit or add to these terms but you cannot add an entirely new thesaurus yourself. The vendor can import a thesaurus into the program for you but there will be a small import or conversion fee. There are also links to Library of Congress Subject Headings and Getty Art and Architecture Thesaurus from the description form.
Link authority record to unlimited description records	Yes
Link description record to unlimited authority records	Yes
User Access and Data Security	
Public search interface	No
Publish finding aids online	Yes, through purchase of PastPerfect – Online module.
Control when record becomes publicly accessible	Yes
Control who can delete records	Yes
User permissions management	Yes
Manage loans	Yes
Backup/Restore utility	Yes
Keyboard shortcut options	Yes, there are programmable function keys
Allows offline data entry	Yes
Multimedia	
Accommodates multimedia files	Yes, purchasing Multi-Media module allows you to add audio; video; Excel, PDF, and word processing documents; and web links. You can also modify images within the program.
Link description record to word processed documents or image files	Yes
Include metadata about linked image files	Yes
Importing and Exporting Data	
Import single EAD record	No
Import single MARC record	Yes, if you purchase the ezMARC Upgrade.
Import multiple EAD records (batch import)	No

Import multiple MARC records (batch import)	No
Export single EAD record	No
Export single MARC record	Yes
Export single METS record	No
Export single HTML	Yes
Export PDF	Yes
Export multiple EAD records (batch export)	No
Export multiple MARC records (batch export)	No
Export multiple tab-delimited files (batch export)	Yes
Software Support and Training	
Help Manual	PDF help manual and bound, printed help manual come with purchase of software.
Context-specific help	Yes
Installation instructions	Yes, included in help manual.
Technical support provided by developers	Yes, phone and e-mail support available for fee.
Online user forum or listserv	There was a user forum but it has been suspended since March 2008. Archives are still available to view.
Training available	Online training for anywhere or in-person training for regions of the United States.
Customization	
Developer customization permitted	Users can customize reports, browse screens, function keys, authority files, pull down menus, and user-defined fields. Field names, types (character, numeric, date, memo, etc.), and lengths, and databases and their relationships cannot be customized.
Vendor customization available	Vendor will customize reports only.
Localization options	No
Price information	
Single-user licence for basic software	\$922.00 (US\$870.00)
Additional user licences	Additional \$525.00 (US\$495.00) for 2-5 users; \$933.00 (US\$880.00) for 6-10 users; \$1,282 (US\$1,210) for 11-25 users; \$1,633.00 (US\$1,540.00) for unlimited users
Additional modules	

Web publishing	\$263.00 (US\$248.00) for PastPerfect-Online \$435.00 (US\$410.00) for annual hosting \$248.00 (US\$236.00) for hosting each additional 10,000 records
Multimedia	\$392.00 (US\$370.00)
ezMARC Upgrade	\$211.00 (US\$200.00)
Training	\$126.00 (US\$119.00) per class for regional training in US. \$62.00 (US\$59.00) for three 2 hour online training sessions
Customization	NA
Data conversion/migration	\$53.00/hr (US\$50.00) (usually takes 10 hours)
Annual maintenance and support fees	Contracts available for unlimited support contacts by toll-free phone or e-mail: <ul style="list-style-type: none"> • First year single user \$350.00 (US\$330.00) • First year network users \$435.00 (US\$410.00) • Additional years single user \$440.00 (US\$415.00) • Additional years 2-10 users \$546.00 (US\$515.00) • Additional years 11-25 users \$763.00 (US\$720.00) With no support contract, single incident costs \$90.00 (US\$85.00) Software updates are available as free downloads for anyone who owns a licence to the software, regardless of whether they have a support contract.
Annual fees for hosted service (includes maintenance and support)	NA

Review

PastPerfect Software was founded in 1998 and is located at a single office with a small staff in Pennsylvania. The PastPerfect program is its only application. It was developed primarily to manage museum collections but it also includes modules to manage archival, museum, photograph, and library collections. The PastPerfect software package comes with all of these modules built in, whereas other vendors sell them separately.

General Usability

Having capabilities to manage diverse collections means that PastPerfect is more complex than some other programs. While the user interface uses buttons, graphics, and commands that are easy to understand, there are a lot of different options to take in, and it is likely that many archives would not use all of the available functions. The main menu is attractive, with good quality images of collection objects displaying to the right. One user said she found the overall interface to be quite easy to navigate and figure out.



Illustration 10: Main menu screen in PastPerfect

Data Entry, Accessioning, and Description

The forms for viewing and entering accessions and descriptions are quite “busy,” with different sections of information and different tabs of information within some of those sections. It could be easy to miss things at first. However, I think once you got used to the layout of the forms they would be efficient because they store most data you would need pertaining to an accession or description record in one place, and from these forms you can browse, edit, search, or print with the click of a button. A new user who was interviewed said she finds the data entry form long and complex and finds that data entry takes time because of it, but someone who had been using PastPerfect for longer said she finds it easy to use and that volunteers pick it up quickly.

There is one accession form that is used for accessioning archival records, museum objects, and photographs. Accession and description records can be linked in PastPerfect and description records can be created from accession records. At the bottom left of the accession form there is space to view all description records that are linked to the accession in table format, and from here you can select a record to open and view it in detail or create a new description record by clicking a button. Any relevant data from the accession record is automatically added to the description record, which reduces workload.

The accession form has limited fields. It does not have fields for creator, biographical sketch/administrative history, custodial history, dates, condition, or copyright. Many of these fields are instead found on the description form. The software seems to be set up on the assumption that description records are immediately created after accessioning has occurred.

Accession# 2003.1 Received as Gift

Source: Hanley, Kristopher K.
 Contact:
 Address: 1051 Central Street S.E.
 City, State, Zip: Olympia WA 98501
 Email / Country:
 Web site:
 Credit Line: For my father, Clair Norton Hanley

Received by: Parr, Mary L.
 Accessed by: Parr, Mary L.
 Other#:
 Price or Value: Calculate

Deed of Gift / Thank you Letter
 TC Receipt# View
 Contact Id# View

Phone Numbers
 Home# 360/352-4477
 Work# / -
 Fax# / -
 Cell/Pager / -

Brief Description of Accession
 3 - Letters
 10 - B&W photographs - Naval subjects WWII
 1 - set of Naval uniform epaulets
 1 - Dogtag
 1 - Uniform bar with 3 stars
 1 - Medal American eagle with anchors
 1 - Passport 1919
 4 - Diaries 1915

Restrictions

Accession includes 15 catalog records

Object ID	Objname	Title	Description / Summary
A 2003.1.1	Fonds	Hanley Family Collection	The earliest of these family papers include a letter from Grandp
A 2003.1.2	Series, Archival	Hanley Correspondence	3 Letters
A 2003.1.3	Letter	Letter from Major Harold V	Letter from Major Harold W. Hanley to his son, Warren Hanley, r
P 2003.1.4	Print, Photographic	Crew of the P.I.B.	Crew of the Old "01" U.S.S. PC (C) 1601. Known to the crew as
A 2003.1.5	Letter	Letter to Warren T. Hanley	A one-page letter, typewritten, from Herbert Hoover to Warren T.
P 2003.1.6	Print, Photographic	Japanese Plane at Luzon	An American naval officer, Jack Tanqnev, examines an abandor
P 2003.1.7	Print, Photographic	Sailors	Unidentified crewmen aboard the U.S.S. PC (C) 1601.
P 2003.1.8	Print, Photographic	Gunner	Gunner at battle station on the 1601.
P 2003.1.9	Print, Photographic	USS Fierce	The U.S.S. PC (C) 1601 coming into an unidentified port. This s
P 2003.1.10	Print, Photographic	Officers of the 1601	Officers of the "1601" known to its crew as the P.I.B. (Big Iron Ba

Record 16 of 23 Updated 06/06/2004 05:53 PM Updated by Unknown Update History

Illustration 11: Accession record in PastPerfect

There is one form for entering descriptions at all different levels in a hierarchy. Hierarchies are set up by creating records individually and linking them. You cannot automatically add data from a fonds-level record to a lower level record, but you can use the “Fill from Current” button to automatically copy data from one record to a new record. The users who were interviewed said they had problems with how hierarchical relationships were set up in PastPerfect and they needed to customize the program to make the relationships work properly. The description form contains all of the RAD fields plus 1 general notes field and 22 custom fields. Some fields have different names but are for same purpose as RAD fields. The description form for archives also contains customized tabs for cataloguing a map, music collection, or oral history.

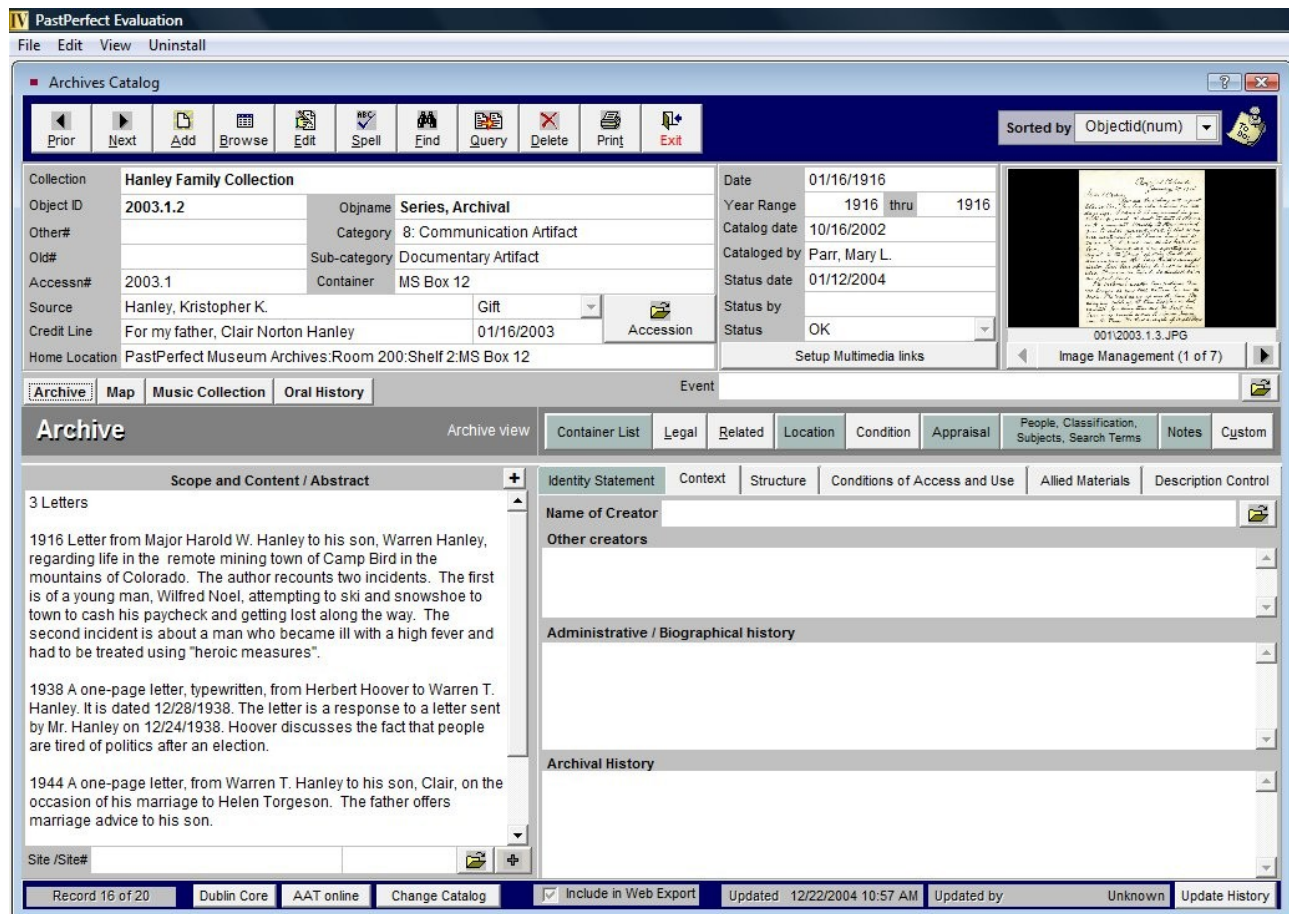


Illustration 12: Description record in PastPerfect

Searching and Public Access

From the data entry form for accessions or descriptions you can click Browse to see a list of all accessions or descriptions in the system in table format. Searches can be executed from the Research button on the main menu page. PastPerfect provides many different options for searching and allows you to search across all four catalogues (museum, library, archives, and photographs) or only in a specific catalogue. The interface of the advanced search form is clear, with the search options displayed at the top and the results displayed in table format at the bottom. When you are in the archives catalogue, you can also search in two different ways, Find and Query. I found all of these different search options to be confusing. However, the users who were interviewed were very satisfied with the search capabilities and possibilities in PastPerfect.

The search results do not display hierarchical relationships. But when you select a record to view it in detail you can click on View/Setup Links to see the hierarchical relationships and link to other records in the hierarchy.

PastPerfect does not have a public search interface. To put your finding aids online you can purchase PastPerfect Online, which allows you to make a copy of the catalogue and put this on the web. This means that web content does not automatically get updated as you make changes or add

new content to the system and you must instead take the action of publishing to the web on a regular basis. However, this is an easy process that is done with the click of a button. Virtual Exhibit is another module that enables web publishing, but only of a few thousand records, so it is only used for putting small collections online. After purchasing the PastPerfect Online module, you can either have your website hosted elsewhere or pay PastPerfect to host it. The vendor's website links to websites that were created with PastPerfect Online under *Resources – Client List*. I found the design quality of these sites to be basic and not as professional as some other programs.

Installation, Maintenance, Importing, and Exporting

No problems were reported installing or maintaining PastPerfect.

Users often reported having problems importing their legacy data into PastPerfect. One user complained that when the vendor imported their data they made major errors with mapping it to the wrong fields and not linking things properly. The user chose to fix the system themselves instead of paying the vendor to do it, and they spent over 200 hours correcting the errors. Another user complained that they were not able to import any of their existing data into PastPerfect because it was reportedly corrupt. The user then had to enter all existing data into the system. It is advised that users who decide to implement PastPerfect make an explicit agreement with the vendor about data import and how errors will be managed.

No problems were reported exporting data from PastPerfect. From the description record you can automatically generate an XML tagged Dublin Core record with the click of a button. The system comes with reports already set up or the user can create or customize reports. I did not find the the process for creating reports as user-friendly or intuitive as other programs.

Customization

Customization options with PastPerfect are limited. The vendor does not do any customization. Users can customize reports, browse screens, function keys, authority files, pull down menus, and user-defined fields but they cannot customize field names, field types and lengths, or databases and their relationships. One user who was interviewed said that customization had been easy, but another user had problems customizing authority files.

Software Support and Sustainability

Users reported receiving good support from the vendor. I also received timely and helpful responses from the vendor. The PDF copy of the help manual that comes with the demonstration copy of the software consists of separate PDF documents for each chapter. This makes it very difficult to use without printing it out because it is indexed by page number. However, when you purchase the software you receive a printed help manual.

The software is frequently updated and a list of features with each update can be viewed on the PastPerfect website under *Software Updates*.

Summary of Strengths

Can manage museum, archives, library, and photograph collections together
Variety of search options
Good reporting features
Description form extensive and RAD compliant
Good features for managing multimedia
Good linking between accessions and descriptions

Summary of Weaknesses

Few options for user customization and no customization available from vendor
Potential difficulties importing data
Limited accession form

Recommendation

One user has been recommending PastPerfect to small organizations in her area and helping with implementation because she feels the program is very easy to use and accessible for organizations with small budgets. Indeed, PastPerfect is the least expensive of the commercial software programs for basic archives management and putting collections online. It is also the least expensive way to manage different types of collections with one software program, since the core software comes with the ability to manage museum, library, archives, and photograph collections together. Both organizations who were interviewed said they chose PastPerfect largely because it can manage archives and museums together, with the low price as another major factor. These users found that some aspects of the archives module did not work as well as they could and that the program was designed more with museums in mind than archives. Thus, PastPerfect is recommended for organizations with museum and archives collections and a limited budget.

Demonstration Copy

To obtain a demonstration copy of the software, you can visit the vendor's website and select, *Click here to download your FREE trial version of PastPerfect Version 4*. After filling out a form, you will be directed to a screen where you can download a copy of the software containing sample data. A demonstration copy of PastPerfect is currently installed on the CNSA Software Review Project laptop. The help manual is also available on the laptop.

6. Re:discovery Proficio 8.6

Developers	Re:discovery Software, Charlottesville, VA, USA
Website	http://www.rediscoverysoftware.com
Type of licence	Commercial
Hosted service provided as alternative to purchasing licence	No, but does offer a "usage-only" option where organization uses the software for a yearly fee but does not own a perpetual licence.
Technical Requirements	
Operating system required	Minimally, Windows 2000 Server and Windows 2000 Professional on the desktop. Recommend Windows 2003 Server and Windows XP Professional, SP2.
Additional hardware or software required	No
Accessioning	
Record or generate deed of gift	Yes, can run report that creates deed of gift from accession record.
Track donors	Yes, field linked to separate donor table.
Record condition	No
Record conservation treatment	Yes, in descriptions.
Manage physical locations	Yes
Manage copyright	Yes
Control access to restricted materials	Yes, in descriptions.
Accession records keyword searchable	Yes
Track method of accession (transfer, donation, loan, or purchase)	Yes
Set processing priorities	No
Manage processing status	Fields in accession form to note who has done accession and when and action required. Should indicate processing status at accessioning and description stage, but it doesn't matter where this is indicated.
Manage monetary appraisals	Yes. In accession form you can enter value of acquisition and in description form you can enter detailed appraisal information, including reason, basis, appraisal, insurance, date, and notes.
Deaccessioning	Yes, there is a detailed Deaccessions module where you can record the reason, status, comments, date, who made the decision, and more.
Description	

Create description record from accession record and automatically populate fields	No
Link accession and description records	Yes, link through description record.
Link accession record to multiple description records	Yes
Link description record to multiple accession records	Yes
Hierarchical - create records for fonds, collection, sous-fonds, series, sub-series, files, items and link fonds with its parts in a hierarchy.	Yes, there are different data entry forms to create records for fonds, series, files, and items. The forms do not have a field to select the type of record, however, which means it would be difficult to create a sub-series or sous-fonds or another sub-level record. Records are linked through tabs called Hierarchical Parents and Hierarchical Children, where you can view the other records and link to them.
Ability to reorganize hierarchies	Yes
Allow text fields of unlimited length	Yes
Standards supported	No standards supported.
Batch modify records	Yes
Searching	
Basic search	Yes
Advanced search (by field)	Yes
Date-range search	Yes
Browse	Yes
Search results clearly indicate hierarchical relationships of records	Search results list all collections, then all items, then all series and do not show relationships, but when you select a record you can view its relationships with other records. If you use Advanced Word Search and choose to search across levels of the hierarchy, the search results do show relationships.
Records linked to other parts of hierarchy	Yes, when you open a detailed record you can link to other levels of the hierarchy.
Print search results	Yes, with some search functions but not with others.
Reports	
Generate reports	Yes, can create own reports.
Customize reports	Yes
Authority Records	Can create authority files by adding new terms one by one as you catalogue, or you can import a thesaurus with assistance from the vendor. You can also purchase lexicons to be included in the system.

Link authority record to unlimited description records	Yes
Link description record to unlimited authority records	Yes
User Access and Data Security	
Public search interface	Yes
Publish finding aids online	Yes, through purchasing Re:discovery for the Internet.
Control when record becomes publicly accessible	Yes
Control who can delete records	Yes
User permissions management	Yes
Manage loans	Yes
Backup/Restore utility	Yes
Keyboard shortcut options	Yes
Allows offline data entry	Yes
Multimedia	
Accommodates multimedia files	Yes, image and multimedia files. Images cannot be edited in the program.
Link description record to word processed documents or image files	Yes
Include metadata about linked image files	Yes
Importing and Exporting Data	
Import single EAD record	No, but can import XML
Import single MARC record	Yes
Import multiple EAD records (batch import)	No, but can import XML
Import multiple MARC records (batch import)	Yes
Export single EAD record	Yes
Export single MARC record	Yes
Export single METS record	No
Export single HTML	Yes

Export PDF	Yes
Export multiple EAD records (batch export)	Yes
Export multiple MARC records (batch export)	Yes
Export multiple tab-delimited files (batch export)	Yes
Software Support and Training	
Help Manual	Help manual available electronically in the system.
Context-specific help	Yes
Installation instructions	Yes, instructions come with software.
Technical support provided by developers	Yes, e-mail and telephone support available for a fee.
Online user forum or listserv	Yes, there is a user group established in Google groups.
Training available	Yes, on-site or phone or web training available.
Customization	
User customization permitted	Yes, can modify field properties, including names of fields, but not add or remove fields. Can select fields to include in My View List and public search and design own reports.
Developer customization available	Yes, for a fee.
Localization options	None
Price Information	
Single-user licence for basic software	\$3,222.00 (US\$3,000.00)
Additional user licences	\$3,222.00 (US\$3,000.00) or \$2,724.00 (US\$2,600) per user licence at 4 concurrent users.
Additional modules	
Web publishing	\$5,586.00 (US\$5,200.00) plus \$3,222.00 (US\$3,000.00) to set up each directory and \$1,199.00 (US\$1,116.00) yearly maintenance fee.
Multimedia	Included
Training	2 hours of web training included with purchase of software; additional training at \$134.00/hr (US\$125.00) plus travel costs if training is on-site.
Customization	\$161.00/hr (US\$150.00)
Data conversion/migration	\$134.00/hr (US\$125.00)
Annual maintenance and support fees	1.5% of the licence fee.

Annual fees for hosted service (includes maintenance and support)	\$1,194.00 (US\$1,140.00) for single-user licence for "usage-only" (the institution would not own a perpetual licence)
---	--

Review

Re:discovery Software, Inc. was founded in 1988 in Charlottesville, VA and in 1989 released its first collections management software program, Museum Information Systems, for managing museum collections, archival records, and archaeological records. In 2005 Re:discovery became a Microsoft Certified Partner and in 2007 released Proficio, a new version of its collections management software implemented using Microsoft technology. Proficio includes separate modules for managing museum and archival collections together in the same system.

General Usability

The overall user interface is intuitive and easy to navigate through. It is set up quite similar to a Microsoft product such as Windows Explorer or Outlook. The main menu screen consists of a menu on the left that includes items for archives and museum collections. Selecting one of these opens a sub-menu on the right. The main menu stays on the left and remains accessible from anywhere in the program. At the top is a tool bar with commands such as File, Edit, Tools, and Help. The commands used in the menus are clear and easy to interpret. From the archives menu you can select Collection to browse the fonds level collection records (Re:discovery uses the term "collection" instead of "fonds"). This screen is set up well with the list of fonds at the top and a detailed record below.

Data Entry, Accessioning, and Description

The data entry forms for accessions and descriptions are separated into sections of information with tabs. They contain a fair amount of information but not so much as to be overwhelming. Lookup fields are clearly marked. Accession and description records are linked through the description record. You can easily access an accession record from a description record by selecting Accessions within the description record and can easily access description records associated with accession records by selecting the Accession Objects tab within an accession record. You cannot create a description record from an accession record and automatically populate fields.

The accession form lacks some important fields, including creator, biographical sketch/administrative history, dates, and condition. Many of these are instead in the description form.

There are different data entry forms to create description records for fonds, series, files, and items, each containing slightly different fields. The forms do not have a field to select the type of record you are creating, however, which means it would be difficult to create a sub-series or sous-fonds or another sub-level record. The sample data in the system gets around this by using "Subseries 1" as a title for one record and linking it to the series record. At the file level you can choose a category for what you are cataloguing, such as photograph or diary, and then additional customized fields appear relating to that specific type of object.

The fonds-level description form has the main RAD fields but not many of the notes fields. However, there are whole sub-sections on the description form for recording information about condition, conservation, and restrictions and there are five user-defined fields. Some field names would need to be customized to conform to RAD. The description form has some extra fields that likely would not be used, such as Publications and Shipping Database. There is a button that allows you to copy data from the current record into a new record for quick data entry.

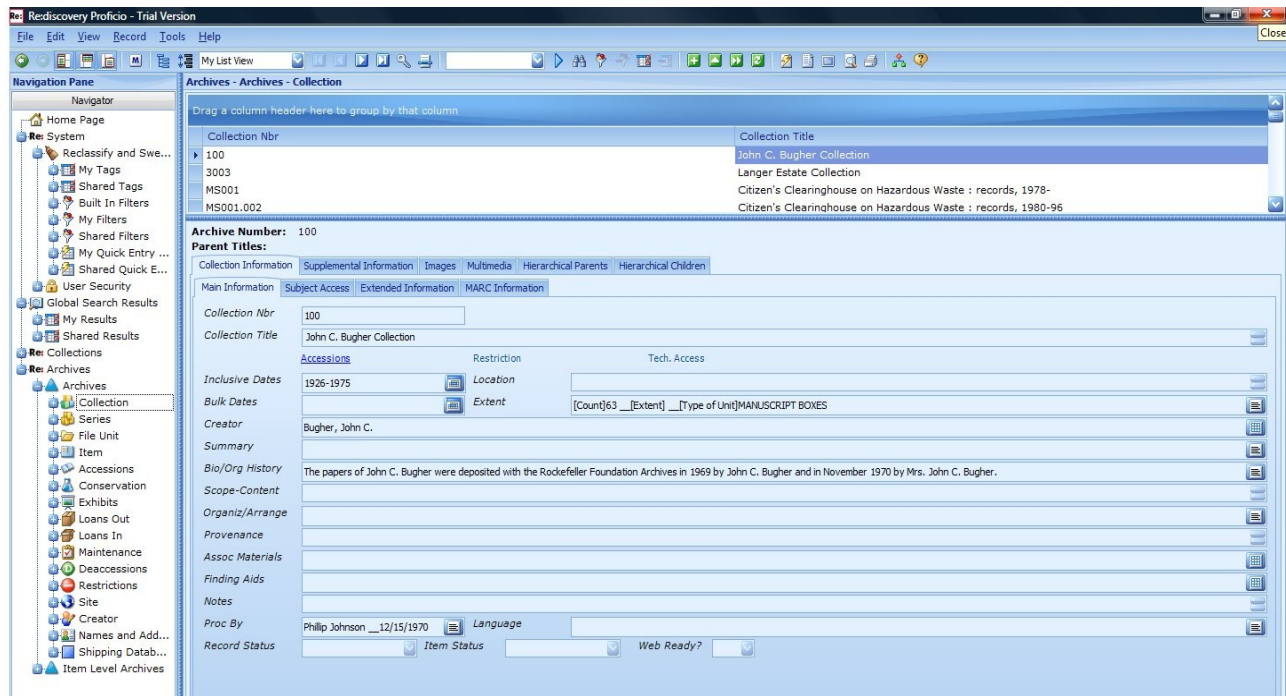


Illustration 13: Description record and main menu in Re:discovery Proficio

Searching and Public Access

Proficio has many different options for searching, but I had difficulty understanding how they all work. From within accessions or fonds-level records, you can do a basic search by keyword, which is called a Word Search. However, you can also search using Get, Find, Advanced Search, or Advanced Filter. Advanced search does not allow you to search in fields, but instead allows you to search using Boolean logic. Advanced Filter allows you to search in fields. Advanced search also allows you to search across all archives records or in archives and museum records.

The search interface for advanced search allows you to tab between the search form and search results. You can also move your search results to a window where you see the results list at the top and can select a record to view it in detail below. Search results are not displayed hierarchically. Instead, all fonds, all items, all series, and so forth are grouped together. From within a record it is easy to link to other records within the hierarchy. There is also a search function called hierarchical browse, which shows all records and their hierarchical relationships, expanded or collapsed, and if you use Advanced Word Search and choose to search across levels of the hierarchy, the search results show relationships.

After using the system for some time, one could become more familiar with how the different search functions work and appreciate the variety of options. However, one user who was interviewed complained that the search functions in Proficio are “very clunky to use and not easy for a researcher to search” without a lot of explaining. This user was instead exporting data to Excel and running queries there, as she found this easier.

Proficio also has “Web 2.0” features that allow you to create subsets of records that can only be viewed by you or shared with other users through using tags or creating sets of filtered records that can only be viewed by you or shared with other users.

Proficio comes with a public search interface that is accessible through a web browser but is not actually on the web. To publish collections on the web you need to purchase the Re:discovery for the Internet module. I was not able to view the public search interface using the demonstration copy of the software I installed because of a problem with running the demonstration software on Windows Vista.

Installation, Maintenance, Importing, and Exporting

One user said the system occasionally crashes, but no problems were reported with installing Proficio. There were also no problems with importing data. Proficio allows you to create a MARC record from an item record with the click of a button and has a lot of options for importing and exporting in different formats. Users can easily create their own reports and save them as templates or create quick reports through using the Advanced Filter function.

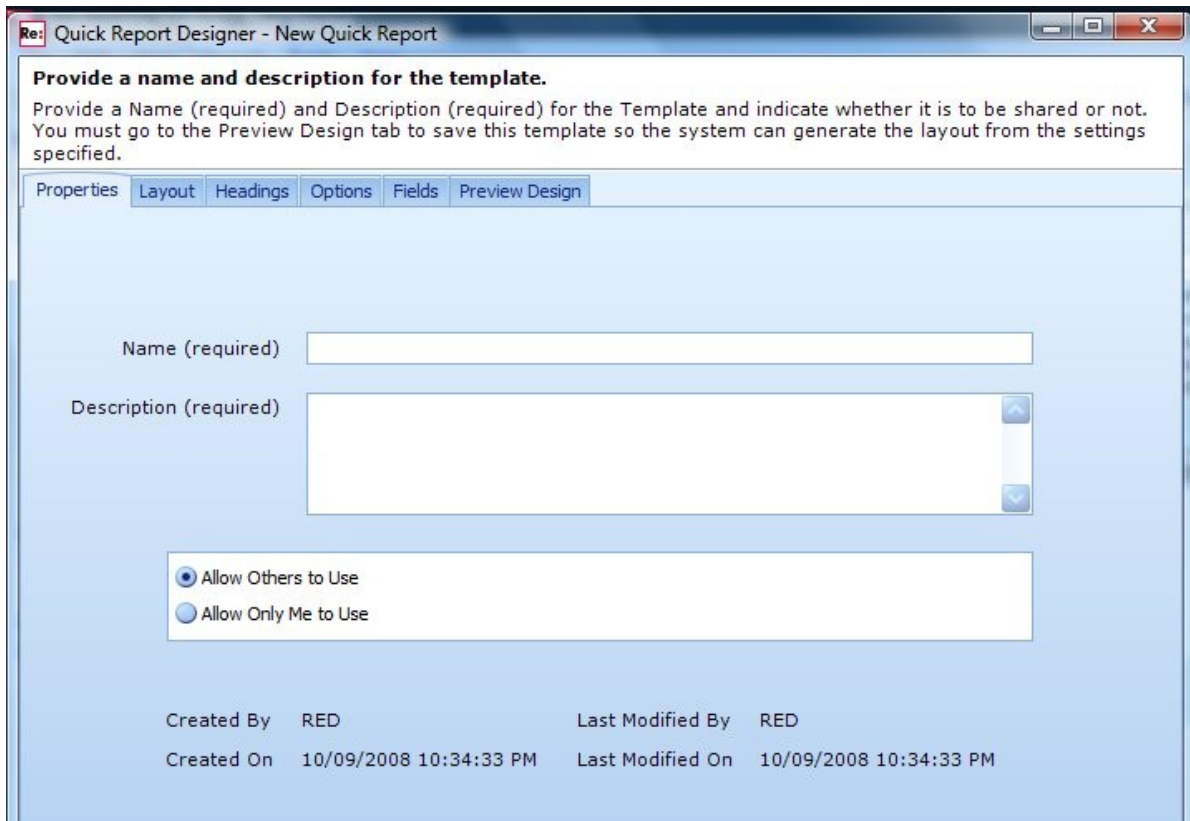


Illustration 14: Interface for designing custom reports in Re:discovery Proficio

Customization

Options for user customization are fairly limited in Proficio. A user can modify field properties, including names of fields, and modify user-defined fields but not add or remove fields. Users can also select fields to include in the public search interface, edit context-specific help text, and create reports. One user of Proficio found the inflexibility of fields and limited ability to add fields to be problematic.

Software Support and Sustainability

The help manual for Proficio is accessible through the system itself. I did not find it helpful because it is poorly organized and contains limited information. For example, the section on accessions consists of one page with six sentences and one large screen shot. The help manual mainly explains what features are but not how to do things in Proficio.

Users reported that support available from the vendor is good. I accessed phone support from the vendor when installing the demonstration copy of the software and I found them to be very helpful. Re:discovery does not have a toll-free number but when I expressed concern about long distance charges the person I was talking to offered to call me back. She then stayed on the phone with me for a long time and tried a lot of different things until she was able to fix my problem.

Cooperative Purchasing Option

Proficio can offer an option where a group of organizations purchase the software together and set

up different directories within a single installation. The group of organizations would still need to purchase separate user licences, but the cost would be lower if they were sharing the same installation of the software. One organization would need to host the software and the others would access it through an internet connection.

Summary of Strengths

- Manage diverse collections together
- Detailed description form
- Good linking between accessions and descriptions
- Good management of hierarchical relationships
- Good reporting and import/export features
- Extensive collections management features

Summary of Weaknesses

- Limited accession form
- Limited user customization options
- Poor help manual

Recommendation

Re:discovery Proficio would be a good option for an organization with both museum and archives collections because it can manage both within the same tool and allows searching across both collections. While the array of options could be too complicated for a small archives staffed by volunteers, I believe Proficio would be suitable for a medium-sized archives that could pay for some customization work to improve the accession form and invest some time in learning the software. One user I interviewed felt that the program is better for managing three-dimensional museum objects than archives, especially “unique items that don't easily fit into fields.” However, this user did not have any customization done on the software because of the cost.

Demonstration Copy

A 90-day trial version of the software can be obtained by visiting the website, selecting Purchasing Information from the menu, and then filling out an online form. There is a demonstration copy of Re:discovery Proficio installed on the CNSA Software Review Project laptop but it will expire on October 26, 2008.

7. STAR/Archives 4.0

Software program	STAR/Archives
Developers	Cuadra Associates, Inc, Los Angeles, CA
Website	http://www.cuadra.com/
Type of licence	Commercial
Hosted service provided as alternative to purchasing licence	Yes

Technical Requirements	
Operating system required	Windows
Additional hardware or software required	None
Accessioning	
Record or generate deed of gift	No, but there are fields to record information about correspondence and documentation.
Track donors	Yes
Record condition	Yes
Record conservation treatment	No
Manage physical locations	Yes
Manage copyright	In accession record there is a field to note current legal owners and notes. In description record there are fields to record reproduction rights and rights granted, including names and contact information of rights holders.
Control access to restricted materials	Yes, in accessions and descriptions.
Accession records keyword searchable	Yes
Track method of accession (transfer, donation, loan, or purchase)	Yes
Set processing priorities	No
Manage processing status	Yes, at accessioning and description stages the system records who created record and updated record and users can make comments.
Manage monetary appraisals	Yes, fields to record price/value as of what date and notes on price/value.
Deaccessioning	Yes, in description form there is a tab for deaccessions where you enter the date and other information about the transfer.
Description	
Create description record from accession record and automatically populate fields	Yes
Link accession and description records	Yes
Link accession record to multiple description records	No, 1 accession record can only be linked to 1 description record.
Link description record to multiple accession records	No, 1 accession record can only be linked to 1 description record.
Hierarchical - create	Yes, there are different data entry forms for creating records at

records for fonds, collection, sous-fonds, series, sub-series, files, items and link fonds with its parts in a hierarchy.	different levels in the hierarchy and relevant data entered at one level in the hierarchy is automatically transferred to a record created at another level.
Ability to reorganize hierarchies	Yes, but if you make something a top-level record you have to delete it in order to change the arrangement.
Allow text fields of unlimited length	Yes
Standards supported	ISAD at fonds and series level; EAD and Dublin Core at item level
Batch modify records	No
Searching	
Basic search	Yes
Advanced search (by field)	Yes
Date-range search	Yes
Browse	Yes
Search results clearly indicate hierarchical relationships of records	Yes, hierarchy is clearly displayed in search results.
Records linked to other parts of hierarchy	Yes, when a record is selected the hierarchy tree is displayed on the left side of the screen and the user can link to any record in the hierarchy
Print search results	Yes
Reports	
Generate reports	Yes. A number of reports are set up in the system.
Customize reports	Limited - you can create reports through searching and can customize the reports in terms of selecting fields to display, assigning sorting levels, and setting up format.
Authority Records	Yes, authority files can be created.
Link authority record to unlimited description records	Yes
Link description record to unlimited authority records	Yes
User Access and Data Security	
Public search interface	Yes, accessible through web browser.
Publish finding aids online	Yes
Control when record becomes publicly accessible	Yes

Control who can delete records	No
User permissions management	Yes
Manage loans	Yes
Backup/Restore utility	No
Keyboard shortcut options	No
Allows offline data entry	Yes
Multimedia	
Accommodates multimedia files	Yes, image, PDF, word processing, presentation, and spreadsheet.
Link description record to word processed documents or image files	Yes
Include metadata about linked image files	Yes
Importing and Exporting Data	
Import single EAD record	Yes, with support from the vendor.
Import single MARC record	Yes, with support from the vendor.
Import multiple EAD records (batch import)	Yes, with support from the vendor.
Import multiple MARC records (batch import)	Yes, with support from the vendor.
Export single EAD record	Yes
Export single MARC record	Yes
Export single METS record	No
Export single HTML	No
Export PDF	No
Export multiple EAD records (batch export)	Yes
Export multiple MARC records (batch export)	Yes
Export multiple tab-delimited files (batch export)	Yes
Software Support and Training	
Help Manual	PDF help manual available from the vendor.

Context-specific help	Yes, select F1 to get context-specific help at any point and help button on most forms.
Installation instructions	Distributed with software.
Technical support provided by developers	Yes, phone and e-mail support provided for a fee.
Online user forum or listserv	No
Training available	Yes, online training available for a fee.
Customization	
User customization permitted	Yes, users can customize fields, forms, and other things but they must receive training from Cuadra first.
Developer customization available	Yes, for a fee.
Localization options	None
Price Information	
Single-user licence for basic software	No single user licence available.
Additional user licences	\$8,813.90 (US\$8,300.00) for 2 editing (administrative) seats and 5 search-only (public access) seats
Additional modules	
Web publishing	Included
Multimedia	Included
Training	\$175.00/hr (US\$165.00)
Customization	Quoted on review of data
Data conversion/migration	Quoted on review of data
Annual maintenance and support fees	Included in first year; \$3,292.00 (US\$3,100.00) in second year, and \$6,896.00 (US\$6,500.00) in subsequent years
Annual fees for hosted service (includes maintenance and support)	\$1,909.00/year per editing (administrative) seat (US\$1,800.00) plus \$1,153.00/year per search-only (public access) seat (US\$1,080.00)

Review

Cuadra Associates, Inc. opened its Los Angeles office in 1978. It now also has offices in Silver Spring, Maryland and New York City. The STAR software product, a database management system, was released in 1982 and for a number of years was used by organizations to custom-build their own systems. Now core STAR technology is used as the basis of a number of applications for libraries, museums, and archives. The applications can be purchased individually or as a package. STAR/Archives consists of a public access module that is accessible through a web browser, such as Internet Explorer or Mozilla Firefox, and an administrative module that is accessed through software that is installed on a server or local machine.

General Usability

The user interface is on the whole complex but fairly user-friendly. The main menu screen for the administrative interface consists of 9 main “tasks,” such as Search and Maintain Accessions, Maintain/Enhance Levels of Description, and Maintain Authorities, which further subdivide into other menu items. There are a lot of options but they are organized well and it is fairly easy to find things. At the top of the screen is a toolbar with other menu items, such as File and Edit, which are recognizable to users of Windows. The next version of STAR/Archives is expected to be released in early 2009 and it will be accessed entirely through a web browser, which will mean the administrative interface will change considerably.

Data Entry, Accessioning, and Description

The data entry forms for accessions and descriptions are quite complex. They are arranged into different sections of data in two ways. There is a drop-down menu at the top from which you can select different sections, then within each of these sections there are tabs that contain different sections of data. The large numbers of sections mean that you can record a large amount of data in accession and description records, but it also means that data entry can be complicated. Users commented that data entry forms in STAR/Archives have a lot of different choices, options, and places to fill in information, and contain a lot of unnecessary fields for their organizations. Some felt they would be too complex for volunteers to use and that it would be hard to keep data standardized if there were a lot of different people entering data. One user said her organization had created a procedures manual explaining where to enter information but they still get some variation. However, one user said, “I only have one volunteer trained on using it who has no computer skills at all. I give very detailed step-by-step directions and she's doing well and not screwing up. The interface is a little deep and detailed but it's logical.” Users could have the data entry forms customized to not have unnecessary fields.

Accession and description records are linked, but only one accession record can be linked with one description record. One user was frustrated with this: “We have a lot of collectors that donate material and stuff they donated doesn't always stay together. We can't split up an accession and link it to different records. We have to split up collections as we accession and create small accessions. You can put different accession numbers into different collections and link from descriptions, but it's duplicate work.”

The accession form is extensive and contains most standard fields. The description form is also quite extensive and contains most RAD fields plus six user-defined fields. Many of the notes fields that are found in RAD have been developed into entire tabs of information in STAR/Archives, such as Ownership Data and Languages of Materials. There are different data entry forms for creating description records at different levels in the hierarchy and relevant data entered at one level in the hierarchy is automatically transferred to a record created at another level.

Illustration 15: Data entry form for description record in STAR/Archives

Searching and Public Access

STAR/Archives has a public search interface and an administrative search interface. The administrative interface allows you to search by specific fields or do a basic keyword search. The results display very clearly and you can select different ways to sort results or formats in which to view results. The results appear in hierarchical order but relationships between records are not made visually apparent, unless you sort by hierarchy.

The public search interface allows users to do a basic keyword search or do an advanced search. Hierarchical relationships are displayed better through the public search interface. If you select Display Finding Aid you can see the detailed record on the right side of the screen and all records in the hierarchy on the left side of the screen. The other records can easily be linked to.

STAR/Archives comes with a public access interface and the ability to put your findings aids online without having to purchase any additional software. Even if you don't publish your finding aids online, you can still provide public access to your collection through a web browser set up on a public computer that is networked to your server or machine where the software is installed. The public search interfaces on STAR's clients' websites are attractively designed.

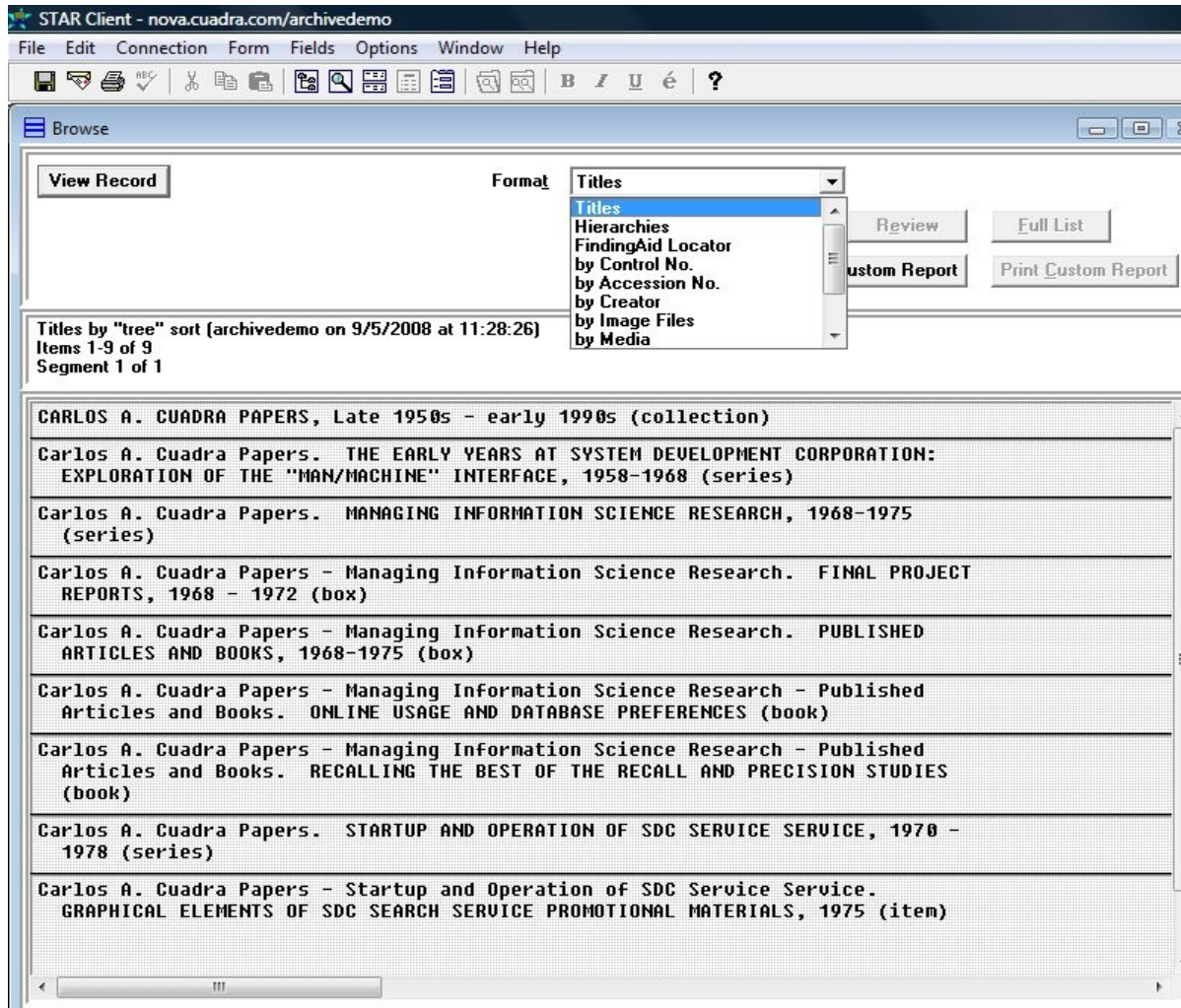


Illustration 16: Search results for administrative search in STAR/Archives, showing options for display format

Installation, Maintenance, Importing, and Exporting

Users interviewed did not have any problems installing or maintaining the software or with importing or exporting data. The system comes with a number of reports set up but the ability to customize or create reports is limited. You can create reports through searching and can customize the reports in terms of selecting fields to display, assigning sorting levels, and setting up format. Customized reports cannot currently be saved but it will be possible in future releases. Cuadra can set up new reports for a fee.

Customization

Users can customize the software extensively, but only after receiving training from Cuadra. Users who were interviewed and had received this training said customization is fairly easy to do. With the next version of STAR/Archives that will be accessible entirely through a web browser, users

will only be able to customize the software if they have programming skills. Customization is available from the vendor for a fee. The users who were interviewed had purchased customization from the vendor and were happy with the results.

Software Support and Sustainability

All users who were interviewed were very impressed with the quality of support they received from Cuadra. Even small organizations felt they receive personalized, prompt service. My experiences with the vendor have been mixed. I was given a long, detailed online demonstration of the software that was extremely helpful. But I also had to e-mail the vendor twice and phone them once over a period of five weeks before I received a response to my request for access to a demonstration copy of the software. The help manual is long and detailed at 430 pages, but I found it difficult to follow because of how it is organized, and other users agree (Spiro, 2008).

Some users specifically mentioned that Cuadra keeps their software up-to-date. One commented, “Cuadra is always changing the software and adapting to changes,” while another expressed that the software is being supported and developed, and is therefore sustainable.

Cooperative Purchasing Option

The licence fees for Eloquent Archives and STAR/Archives exceed the budget limit that was set for this review by a small amount, but the vendor offered a hosted option that was judged to be more affordable. The vendor also discussed the option of a number of institutions with similar needs and collections cooperatively purchasing the software, running it off a single server housed at one institution and allowing the other institutions to access the software through an internet connection. The users could set up a number of different repositories in the system to represent their separate institutions and each repository could contain its own collections. It would be possible to search within a single repository or across all of them. It would cost approximately US\$1,000.00 in consulting fees to set up the shared system, and then the users would pay for the number of licences required. One institution would host and maintain the software, have a support agreement with Cuadra, and would be the contact person for technical support for the rest of the institutions.

Summary of Strengths

- Detailed accession and description forms
- Good vendor support
- Simple and attractive public search interface
- Can provide web access to collections
- Extensive options for searching and displaying search results
- Can also be used to manage museum and library collections
- Accommodates different types of media

Summary of Weaknesses

- Data entry could be complicated
- Limited ability to create or customize reports

Limited ability to customize without training or with hosted service
One accession record can only be linked with one description record

Recommendation

All three people I interviewed about STAR/Archives were extremely happy with the product and the support they received for it. Two of them could not think of anything they disliked about the software, and only had good comments to make. The third disliked the fact that one accession record cannot be linked to more than one description record. The complexity and price of STAR/Archives makes it more suited to a medium-sized archives. One user said, "I guess I would be hesitant to recommend this program for a volunteer organization because of the technical support needed and the overwhelming amount of information that's possible to enter. But for a small shop with 1 person it could work well. It has a lot of flexibility." STAR could also be a good option for organizations with mixed collections because there are also modules for museums and libraries. Some users cited this as a reason for purchasing the software. However, the museum and library modules would need to be purchased separately.

Demonstration Copy

A 30-day trial version is available through visiting Cuadra's website, clicking on *Request Info/Demo* on the right, and filling out a form. Cuadra also offers online training sessions. You can view clients' websites that were created with STAR technology by selecting *Meet Our Customers* from the top menu, and then *STAR Sites on the Internet* at the bottom of the screen.

8. Microsoft Access and Filemaker Pro

At the early stages of research, I sent out a message to archives across Canada asking what programs they were using to manage their archival collections and if they would be interested in speaking with me about their experiences. A large majority of those who responded reported using Microsoft Access database software as their primary tool. Some reported using Filemaker Pro database software as well. These programs provide users with the basic structure and tools with which to create flat or relational databases. The user is responsible for creating tables, fields, and field properties, and setting up search functions and reports. The CNSA decided not to review Access and Filemaker Pro in the same way as other programs used for archives management because every archive that uses Access or Filemaker Pro structures its database uniquely and there is incredible variation across how the programs are used. To some degree, every feature that is present in the other programs that were reviewed could be created in Access or Filemaker Pro with enough knowledge of programming and database design, but at the same time an organization could use Access or Filemaker Pro and have almost none of the features found in other programs. Thus, it was concluded that Access and Filemaker Pro could not be fairly reviewed in the same way as the other programs or examined for particular features, and instead the advantages and disadvantages of using these programs for archives management will be discussed. This discussion is based on interviews done with archivists using the programs.

The most common reasons that archives choose to use Microsoft Access or Filemaker Pro to manage their archival collections are low cost, easy availability, and the ability to extensively customize the software to meet local needs. Both programs are inexpensive, with Access selling at approximately \$229.00 and Filemaker at approximately \$316.00 (from US\$299.00). In addition, many organizations already own licences for the Microsoft Office suite of programs that includes Access, and Macintosh computers come with Filemaker Pro software installed. Because these software programs provide a basic database structure that can be custom built by an organization, it is possible to create a heavily customized system that accommodates mixed collections, conforms to archival standards, and meets other unique needs. One user I interviewed adopted Access partly because she needed an affordable program that could do records management as well as archives management. Another advantage cited for using Access in particular is that the software is quite common so it is possible to obtain support and advice from other organizations, and employees are often already familiar with the software so little training can be required. Some organizations reported choosing to use Access initially because there was an archivist on staff who already had experience with it. Many organizations have built a system with Access or Filemaker Pro that works to their satisfaction.

However, there are disadvantages and challenges to using these programs. Both Filemaker Pro and Access are reportedly easy to use for data entry and searching once things have been set up. However, many archivists also said they faced challenges in setting up the tables and search functions to their satisfaction and encountered difficulties when things are not set up effectively. In particular, search functions need to be created from the ground up and ineffective search

functions were a problem for all users interviewed. An inefficient system can cost an organization in the added time it takes to carry out day-to-day functions. As well, a large amount of time and work needs to be put into initially setting up and customizing an Access or Filemaker Pro database, which is another cost that should be considered on top of purchasing the software licence. This work can continue after the initial set-up phase, as one archivist pointed out that “any time you want to make a change, it involves a considerable learning curve in both the software and the database structure,” especially if the archivist who initially set up the system leaves the organization. When these time costs are factored in, it could be more cost-effective to purchase an 'out-of-the-box' archives software program. Some users ended up needing to bring in an outside programmer to do what they wanted, which is another potential cost to consider. Another issue is that there is no support offered from the vendors for Access and Filemaker Pro. While there may be other users who could be consulted, one user stated, “It's hard to get really knowledgeable support. Many people seem to not know how to do certain things, and there is no one you can call up and ask about more complex functions.”

In addition to using Access and Filemaker Pro on their own, there are programs available that are essentially Access and Filemaker Pro databases that have been customized for use in archives by organizations and then made available to other organizations. These programs include Tabularium and HERA2, which are both based on Access, and Virtual Archives, which is based on Filemaker Pro. See Appendix 1 for more information about these programs.

III. Factors to Consider in Selecting an Archives Management Software Program

Implementing a new software program is a huge investment of time and money, taking into account not only the cost of purchasing the software but also time spent researching software, communicating with vendors and developers, learning how to use the software, training staff and volunteers, and customizing the software. It is important to take the time to choose the right program for your organization's unique structure and needs. The following pages outline important factors to consider in determining your organization's software needs.

Are there other collections to manage other than archival records?

Many archives are combined with museums, libraries, or records management departments. There are software programs that allow you to manage different collections and functions simultaneously, either through a single software purchase or through the purchase of several modules that work off the same platform. Selecting a program that can manage diverse collections can save money because it means buying only one product instead of two or three. It can also simplify technical maintenance, financial management, and staff training. However, it is important to assess the program carefully and ensure that it meets the needs of all departments or collections, as some participants in this study found themselves stuck with a less than ideal program because it was selected to meet the needs of a department or collection other than archives.

Which features do you need?

Before assessing available programs, make a list of the features you need, the features you want, and the features you do not need. When researching different programs, do not rely on others telling you that a feature exists in a program. Try it out for yourself and make sure it works the way you need it to work. For example, all of the programs reviewed in this report have accessioning, but it is much more robust in some programs than others and different programs accommodate different accession data. The features included in the software reviews section were assembled by the CNSA's ArchWay Committee based on their perception of the needs of CNSA members. There may be other features important to your organization not included here. If a program is lacking a feature that is important to your organization, look at whether it is something that can be easily added on by you or the vendor and how much it would cost. Also note whether features are included in the basic software program or can be added on by purchasing other modules for the software.

How much customization will be required and how is it going to be done?

This is a very important factor to consider. Every archivist who was interviewed reported having some customization done to the software program they were using or they felt that the system would work better if they had customized it more. No out-of-the-box system is going to be structured exactly as you want it, and customization can greatly improve workflow and save time and money in the long run. It is important, then, to consider what customization options exist for

a particular software program. Some allow the user to customize while others can only be customized by the vendor. Of those programs that can be customized by the user, some are easier to customize than others or require less technical knowledge than others. Survey the technical skills within your organization and determine how much customization can be done in house. Look at how much customization needs to be done by the vendor and include this in your calculation of the overall cost of a software program. Even if there is no one in your organization currently who has the technical skills to do customization, a program that allows user customization still may be more desirable than one that does not because this broadens your future options – someone may join your organization in the future with more advanced skills, your organization may introduce an IT department, or you could hire an external consultant to do customization if you were unhappy with work done by the vendor.

Open source software or proprietary software?

Recent years have seen the development of open source software (OSS) programs for the archives community, two of which are reviewed here, the Archivists' Toolkit and Archon. OSS is software in which the original software code is made available to the user and the software can be freely modified, redistributed, and used without paying any fees to the developers. The central philosophy of the open source movement is that technological resources and expertise should be shared in order to create the most functional and usable software. In contrast, users of proprietary software, which make up the rest of the programs that were reviewed here, do not have access to the source code and pay a licence fee in order to use the software, and the code can only be altered by the developers. Because the open source programs available for archives management are still relatively new on the market, some of them lack the robustness and variety of features that the proprietary programs have. However, they are all being developed very quickly and with a great deal of input from the archives community, so it is likely that any features or functionality that are currently lacking will be included in future versions. All of the users of open source programs who were interviewed for this review reported that developers of the software were extremely receptive to their requests for changes in the software and most of the changes were incorporated in the next version.

One user who was interviewed chose open source software because she believes it is more sustainable than proprietary software: “We have concerns about the sustainability of commercial products. In the library world we've seen vendors go out of business and the software stop being supported.” Others choose open source because of financial limitations or because they support the philosophy of the open source movement.

One thing to consider in considering open source is that it usually comes with different technical support than proprietary software. Typically users do not have a toll-free number to call for support but rather can contact the developers or the user community by e-mail. The response is generally quite prompt and helpful but may not be as immediate or personalized as telephone support. As well, e-mail support necessitates having consistent internet service.

Some archivists shy away from OSS tools because they believe a great deal of customization is required and that they need to have advanced technical skills to install, maintain, and customize the software. While this may be true of some other open source programs, it is not true of the open source archives management programs reviewed here. The open source tools reviewed here potentially required as much customization as the proprietary ones and users with average technical skills did not report difficulties installing, maintaining, or customizing the software.

How sustainable is the software?

One important but difficult question to answer in choosing a program is, how sustainable is it? As mentioned above, one archivist interviewed felt that open source software is more sustainable than commercial products because open source software is supported by a community of users whereas proprietary software depends on a single company for support and development, and if that company goes out of business all support could be lost. However, open source software can also lose support, so when considering an open source tool one should always look at how mature the software is and how large and active its community of users is. Technology changes so quickly that it is essential that you select a product that will continue to be updated and developed in response to changing user needs. For proprietary programs, look at how frequently the vendor updates the program and whether the updates reflect changes and trends in the archives community. To determine whether the vendor or developers are responding to the needs of its users, you can ask current users of the software how well the vendor has responded to their requests for new features.

What kind of support is available?

Most vendors of proprietary software provide support for an annual fee, which often also includes software updates. It is important to look at what is included in support contracts and to ask current users of the software how responsive and helpful the support is. Most developers of open source software offer free support through e-mail or online user groups. If you are considering an open source tool, it is advised that you sign up for the project listserv and observe how active and helpful it appears to be. This can be done through visiting the project's website. Support for proprietary software can also be sought from the user community, whether through formal or informal channels. Some vendors host online user forums or regional meetings on a regular basis. You could also consider whether there are other users of the software in your area who you could consult for support.

Training is another aspect of support offered by most vendors. The most common type of training is online training, in which the vendor uses a program that allows you to share a desktop, demonstrates how software features work on this shared desktop, and simultaneously explains processes over the phone. Sometimes a certain amount of training is included in a software purchase or recommended by the vendor upon implementation. Some users reported getting training upon implementation but not finding it helpful this early on, particularly if the system was later customized. It may be more useful to pay for training later on after staff are familiar with the system and have specific questions or would like to learn more complex processes.

How much does the software cost?

It is important to look at all costs when calculating and comparing the price of different programs, not just the licence fees. Other costs to consider that may or may not be included in the licence fee and may or may not be necessary for your organization are:

- Additional hardware or software
- Licences for additional users
- Additional modules or features
- Web publishing capabilities
- Training
- Data migration or conversion
- Customization

Ongoing costs include annual maintenance and support fees. These additional costs are included in the features table for each program reviewed.

Some vendors provide the option of paying a yearly fee for you to use the software that they host on their own server. A hosted service offers advantages. Usually annual hosting fees include support and the vendor is responsible for all maintenance and data security. This can be attractive for small organizations with no IT support. A potential disadvantage of subscribing to a hosted service is that you will not be able to customize the software yourself and instead will depend on the vendor for this. As well, hosted services are accessed via the world wide web, so you will need to have a reliable and relatively fast internet connection. When calculating the cost of purchasing a licence fee versus subscribing to a hosted service, make sure to do long-term calculations. One user who subscribes to a hosted option commented, “The hosted option ends up being more money in the long run but it was a good option for us. Our IT department would much rather have them hosting us. Security issues are the responsibility of the vendor. We’re paying for peace of mind and database administration time that we don’t have knowledge or time to do. It is also easier for keeping up with upgrades.”

Some vendors also offer the option of purchasing a licence or subscribing to a hosted service cooperatively with other archives as a way to cut costs. This could work well for organizations that have similar needs and collections to other archives in their regions. A reliable internet connection would be needed for this. Vendors of Eloquent Archives, Re:discovery Proficio, and STAR/Archives suggested this possibility to the CNSA, but other vendors could be approached with the suggestion as well.

To what degree do you want to provide public access to your collections?

Software programs can offer differing degrees and quality of public access to collections. Some have a public user interface that can be used for public searching on a public access computer. Some offer the ability to publish collections online and create webpages, either as part of the main software package or by purchasing an additional module. Usually web publishing within archives

management software programs can be done quite easily and requires no knowledge of web design or HTML. If putting your collections online is essential, it might be wise to adopt a program that includes this feature, as it can be quite expensive to purchase the additional modules required for web publishing with other systems. Many archivists who were interviewed and had recently put their collections online reported a vast increase in collection use by the public as a result. However, many organizations do not require software that has this feature because they already contribute to a provincial archives database that offers web access to the public or they are able to add their collections to their affiliated library's catalogue.

IV. Research Methodology

The research for this report was carried out between June and September 2008 by Amanda Stevens under the supervision of the CNSA and the ArchWay Committee. The ArchWay Committee is a CNSA committee made up of volunteer archivists who oversee the ongoing development and administration of ArchWay, the CNSA's online database of members' archival descriptions. This was not a scientific study. Information was gathered from articles and reports listed in the bibliography, websites for the various software programs, communication with vendors and developers by telephone and e-mail, interviews with archivists who use or have used the software programs under review, and basic testing of the software programs and their features.

Between one and three users of each software program at archives in Canada and the United States were interviewed, and users all participated in the study on a volunteer basis. All participants were interviewed over the telephone. See Appendix 2 for a list of questions that were asked of participants. However, please note that the interviews were conducted informally and all questions were not asked of every participant.

A demonstration copy of each software program under review was obtained and examined for specific features and general usability. Please note, however, that the researcher spent a limited amount of time using each program, only a small amount of data was entered for the purposes of testing, and some features were not tested, such as importing and exporting of data. The software reviews are based on testing that was done by the researcher on demonstration copies of the software and experiences and opinions shared by users who were interviewed. Software vendors and developers were consulted at many points throughout the research process for clarification and instructions and some vendors provided the researcher with online training on the software programs.

Features included in the software features table were selected by the ArchWay Committee from features tables used in other comparative software reviews (Spiro, 2008; Lake, Loiselle, & Steidel Wall, 2003; Archivists' Toolkit Project, 2008) and based on their knowledge of the needs of CNSA member archives.

V. Acknowledgements

I would like to thank the following for providing me with valuable assistance in preparing this report.

- Sales representatives, technical support staff, and developers at software companies and open source projects
- Interview participants
- Lisa Spiro, who generously shared her data and methodology

Bibliography

- Archivists' Toolkit Project. *Features Matrix: Archivists' Toolkit, Archon, and PastPerfect*. Retrieved from the Archivists' Toolkit Web Site: http://www.archiviststoolkit.org/Comparison_of_Archival_Management_Software_3.pdf
- Ataman, B.K. (2000). Automating Yapi Kredi Bank archives – a case study. *OCLC Systems & Services*, 16(3), 144-150. Retrieved from Emerald.
- Atkinson, L. (2006, June). The rejection of D-Space: Selecting theses database software at the University of Calgary. 9th International Symposium on Electronic Theses and Dissertations conducted in Quebec City, QC, Canada. Retrieved from Google Scholar.
- Canadian Heritage Information Network. (2003). *Collections Management Software Review*. Retrieved from http://www.chin.gc.ca/English/Collections_Management/Software_Review/index.html
- Clough, M.H. (1998). A question of access. *Archives and Museum Informatics*, 12, 293-298. Retrieved from SpringerLink.
- Collections Trust. (2008). *Collections Management Software Review*. Retrieved from <http://www.mda.org.uk/software>
- Cornish, A. (2007, August 31). More at: version 1.1 demonstration. Message posted to <http://libtechissues.blogspot.com/2007/08/more-at-version-11-demonstration.html>
- Dahlstrom, N. (2000). Managing the Space Business Archives with DB/TextWorks. *OCLC Systems and Services*, 16(2), 76-83. Retrieved from Emerald.
- Dahlstrom, N. (2001). Providing web access to the Space Business Archives through DB/text WebPublisher. *OCLC Systems and Services*, 17(2), 65-70. Retrieved from ABI/INFORM Global.
- De Catanzaro, C., Thompson, J., & Woynowski, K. (2007, July). The Archivists' Toolkit: Testing and Implementation at Georgia Tech. *SGA Newsletter*, 39(2). Retrieved from http://smartech.gatech.edu/bitstream/1853/15538/1/Newsletter%20article_2007.pdf
- Donahue, M.J. (1999). The Sommervogel Archive: An online database in the social scientific study of religion. *The International Journal for the Psychology of Religion*, 9(4), 283-286. Retrieved from Library, Information Science, and Technology Abstracts.

- Estorino, M.R. (2003, February). *Digitization and preservation of selected Afro-Cuban and Cuban exile collection: Final report October 1999 - September 2002*. Retrieved from the University of Miami Libraries Web Site:
http://www.library.miami.edu/chc/about/imls1999_repfinal.html
- Fingerman, S. (1999). *Take two on InMagic DB/TextWorks*. Retrieved from Integrated Library System Reports Web Site: <http://www.ilsr.com/taketwo.htm>
- Goodman, C., Forbes, M., & Kaufman, S. (2007, April). OpenCollection web-based collection cataloging and access software. Symposium conducted at Museums and the Web 2000, San Francisco, CA. Retrieved from
<http://www.archimuse.com/mw2007/papers/goodman/goodman.html>
- InMagic DB/TextWorks database software: Library automation software for Windows-based PCs and networks. (1995, October). *Information Today*, 12(9), 45. Retrieved from ABI/INFORM Global.
- Kansas State Historical Society. (2007, May 29). Archon, Archivists' Toolkit, or ICA AtoM? Message posted to <http://kansasarchives.wordpress.com/2007/05/29/hello-world/>
- Kooyman, S. (1993, Spring). Believing InMagic: How RAD and automation changed the Glenbow Archives. *Archivaria*, 35, 340-346. Retrieved from Google Scholar.
- Lake, D., Loiselle, R.F., & Steidel Wall, D. (2003, January). International Council on Archives market survey of commercially available off-the-shelf archival management software. Retrieved from <http://www.ica.org/sites/default/files/ICA%20Study%2012%20Archival%20Software%20Survey.pdf>
- Levine, J.A., Kumar, A., Schreibman, S., & Evans, J. (2005, June). Creating an archives management system at the University of Maryland Libraries. Symposium conducted at 17th Joint International Conference of the Association for Computers and the Humanities and the Association for Literary and Linguistic Computing, Victoria, BC. Retrieved from
http://mustard.tapor.uvic.ca:8080/cocoon/ach_abstracts/proof/paper_44_levine.pdf
- Lynn, A. (2008, February 19). University of Illinois develops free, easy-to-use web toolkit for archivists. *News Bureau: University of Illinois at Urbana-Champaign*. Retrieved from <http://www.news.uiuc.edu/news/08/0219archon.html>
- Matienzo, M.A. (2006, December 21). The state of open source archival management software. Message posted to <http://thesecretmirror.com/archives/the-state-of-open-source-archival-management-software>

- Monika. (2007, March 12). My adventures in getting data into the ArchivistsToolkit. Message posted to <http://code4lib.org/node/173>
- Morgan, E.L. (1998). We love databases! *Computers in Libraries*, 18(2), 38-39. Retrieved from Library, Information Science, and Technology Abstracts.
- Parab, N. (2004). *A Strategic Analysis of Eloquent Systems*. Unpublished master's thesis, Simon Fraser University, Burnaby, BC, Canada. Retrieved from Google Scholar.
- Porter, S. (2007). Digital library technology review. Unpublished master's project, Southern Connecticut State University, New Haven, CT, USA. Retrieved from <http://www.eou.edu/~sporter/documents/PastPerfect.pdf>
- Prom, C. (2007). The Archon system: Its genesis and future. *MAC: Newsletter of the Midwest Archives*, 34(3), 25-26.
- Puacz, J.H. (2000). Bringing archives to life on the web. *Computers in Libraries*, 20(2), 32-36. Retrieved from Library, Information Science, and Technology Abstracts.
- Rice, R.S. PastPerfect software: Better access to collections. (n.d.) *The Filson Newsmagazine*, 5(1). Retrieved July 2, 2008, from The Filson Historical Society Web Site: http://www.filsonhistorical.org/news_v5n1_pastperfect.html
- Schwartz, S.W., Prom, C.J., Rishel, C.A., Fox, K.J. (2007). Archon: A unified storage and retrieval system for lone archivists, special collections librarians and curators. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 2(2). Retrieved from <http://journal.lib.uoguelph.ca/index.php/perj/article/view/246/506>
- Spiro, L. (2008, July 15). *Archival description and Management Tools*. Unpublished draft.
- Westbrook, B. (2006). The Archivists' Toolkit: Another step toward streamlined archival processing. *Journal of Archival Organization*, 4(1/2), 229-253.

Appendix 1: Archives Management Software Programs Excluded from Review

ADLIB Archive

<http://www.uk.adlibsoft.com/>

ADLIB Archive is a full-featured archives management software program developed by a company in the Netherlands and available internationally. It was not included in this software review because its cost exceeded the decided limit.

HERA2

http://fishability.biz/HERA2/Packages/portal_url

HERA2 is an open source software program that was developed by a software consulting firm called Fishability in British Columbia. Clients must use an Access or MySQL database as the back end. It is currently being used by ten museum and heritage organizations in British Columbia. The program is mainly used for cataloguing museum collections and the developer has stated that it is not an archival tool, but one organization has developed an archival component for the software and the developer sees potential in using the program as a tool for managing archives. HERA2 was not included in the CNSA's software review because of its limited use in managing archives and the limited support that would be available for users in Nova Scotia.

ICA-AtoM

<http://ica-atom.org/>

ICA-AtoM is an open source archives management program that was developed by the International Council on Archives for archives worldwide to provide web access to their collections. The software was released for beta-testing in July 2008. The current version supports description of archival records but not accessioning. Version 1.2 is scheduled for release in 2009 and expected to include an accessioning module. ICA-AtoM was not included in this review because it currently does not include accessioning.

IDEA@Arc

<http://idea-alm.com/>

IDEA@Arc is a software program for archives management that was developed by IDEA Software, a company based in Israel. Since 1998 the company has done more than 1,600 installations of their archives, library, museum, and combined software in Europe and the Middle East. They recently entered the North American market and currently have four customers in North America. While the software was not examined in detail, it appears to offer extensive features for archives management, including web publishing capabilities, and it supports RAD. A single user licence for up to 7500 records costs approximately \$4,500.00 and support costs are 14-17% of the licence fee. The company also offers an integrated software program called IDEA@ALM to manage museum, archive, and library collections. The vendor was extremely helpful and responsive to my requests for information. The CNSA did not include IDEA@Arc in its review because it was discovered

during the later stages of the project when sufficient time was not available to examine the program in depth.

KE EMu

<http://www.kesoftware.com/>

KE EMu is collections management software that was developed by KE Software, an Australian company with offices around the world. It is primarily used by museums but can be used to manage archival collections. KE EMu was not included in this software review because its cost exceeded the decided limit.

M2A MINISIS Management for Archives

<http://www.minisis.com>

M2A MINISIS Management for Archives is a full-featured archives management system that was developed by MINISIS Inc. in Vancouver, BC and is used by many archives in Canada . This program was not included in the CNSA's software review because its cost exceeded the decided limit.

OpenCollection (OSS)

<http://www.opencollection.org/>

OpenCollection is an open source program developed by software development company Whirl-i-Gig in New York, NY, in partnership with the Museum of the Moving Image and a number of other institutions, for collections management in museums and archives. Planning and development began in 2003; in August 2006 it was officially launched as an open source project; institutions began adopting it in late 2006, and the software was publicly released in March 2007. I explored OpenCollection quite extensively and carried out an interview with one archivist who is using the software in a corporate archives. The software has many good features, including the ability to accommodate diverse multimedia and easily put collections online with an attractive user interface and visuals. Users also reported that the developers offer excellent support and are very responsive to requests for new features. At this stage, however, the software is largely oriented towards use in museums, although it can be used by archives. Cataloguing and accessioning is set up so that museum objects and archival records are accessioned and catalogued using the same data entry form. This means that there are many fields relevant to museum objects that would not be used for archives and there are quite a few fields commonly used by archives that are missing. OpenCollection also does not support archival standards. The software could be customized but the average user with no programming capabilities would need to pay the developers to do this customization. Thus, while the software may be an excellent choice for large organizations with mixed collections or the means to pay for extensive customization, and future releases of the software could be better suited for use by archives, at present we cannot recommend this program for the CNSA members.

about	search	edit	registrar/lots	file space	preferences	authorities	reporting			
editing history		new object		new object from template		new lot		log out		
basic	numbering	custodial	attributes	cataloguing	registrar	relationships	log	rights	comments	summary
< previous (no. sk.photo.129)			back to search results				next (no. sk.photo.pumpcon.010) >			
Currently editing: Trolley (Brooklyn & Queens Transit 2534) on Sea..., No. SK.Photo.141										
Save										
Title ?										
Trolley (Brooklyn & Queens Transit 2534) on Sea Gate line										
Id number ?										
SK .Photo.141										
Preliminary? ?										
<input type="checkbox"/>										
Status ?										
Completed/Publish										
Classification ?										
Documentary										
Collection category ?										
Coney Island History Project Study Colle...										
Physical dimensions (in.) ?										
8 X 10 inches										
Description ?										
Trolley (Brooklyn & Queens Transit 2534) on Sea Gate line (Surf Avenue) passing Luna Park. The Kisters building is also visible. 										
						Reupload				

Illustration 17: Description record and main menu in Open Collection

Tabularium

<http://tabularium.records.nsw.gov.au/>

Tabularium is an Access database that has been customized for archives and was developed by the State Records Agency of the Government of New South Wales in Australia. It can be downloaded for free from the website noted above, but it is not open source, meaning that the source code is not available and cannot be altered. The project website states, “neither the author nor State Records can provide software support. The author will endeavour to answer queries sent by email and will gladly accept comments and suggestions for improving Tabularium.” I attempted to contact the developers but did not receive a response. Due to the absence of available support from the developers or an active community of users, the CNSA did not include this program in its software review. However, one user of Access who was interviewed said that she had used Tabularium and further customized it herself, and was satisfied with the program.

Vernon CMS

<http://www.vernonsystems.com/>

Vernon CMS is collections management software that was developed by Vernon Systems in Auckland, New Zealand. It is used by some organizations to manage archival collections but it is primarily designed for museums, galleries, and heritage organizations. I obtained a demonstration copy of Vernon CMS for testing and interviewed two archivists about the software. Like OpenCollection, archival records are accessioned and catalogued using the same forms as museum objects. Vernon CMS is a sophisticated system that can accommodate a large and diverse range of information. Thus, the description form contains an overwhelming number of different sections of

data and fields, most of which would not be relevant to describing archival records. One user reported that the program has limited abilities to manage hierarchical relationships among records. The other user I interviewed, however, was pleased with Vernon CMS overall and particularly its range of reporting options, powerful search function, extensive customizability, and importing and exporting abilities. This user had Vernon Systems customize the user interface and collection hierarchy. However, the CNSA still decided to exclude Vernon CMS from its review because the software is designed more for museums than archives and does not have a separate module for archives.

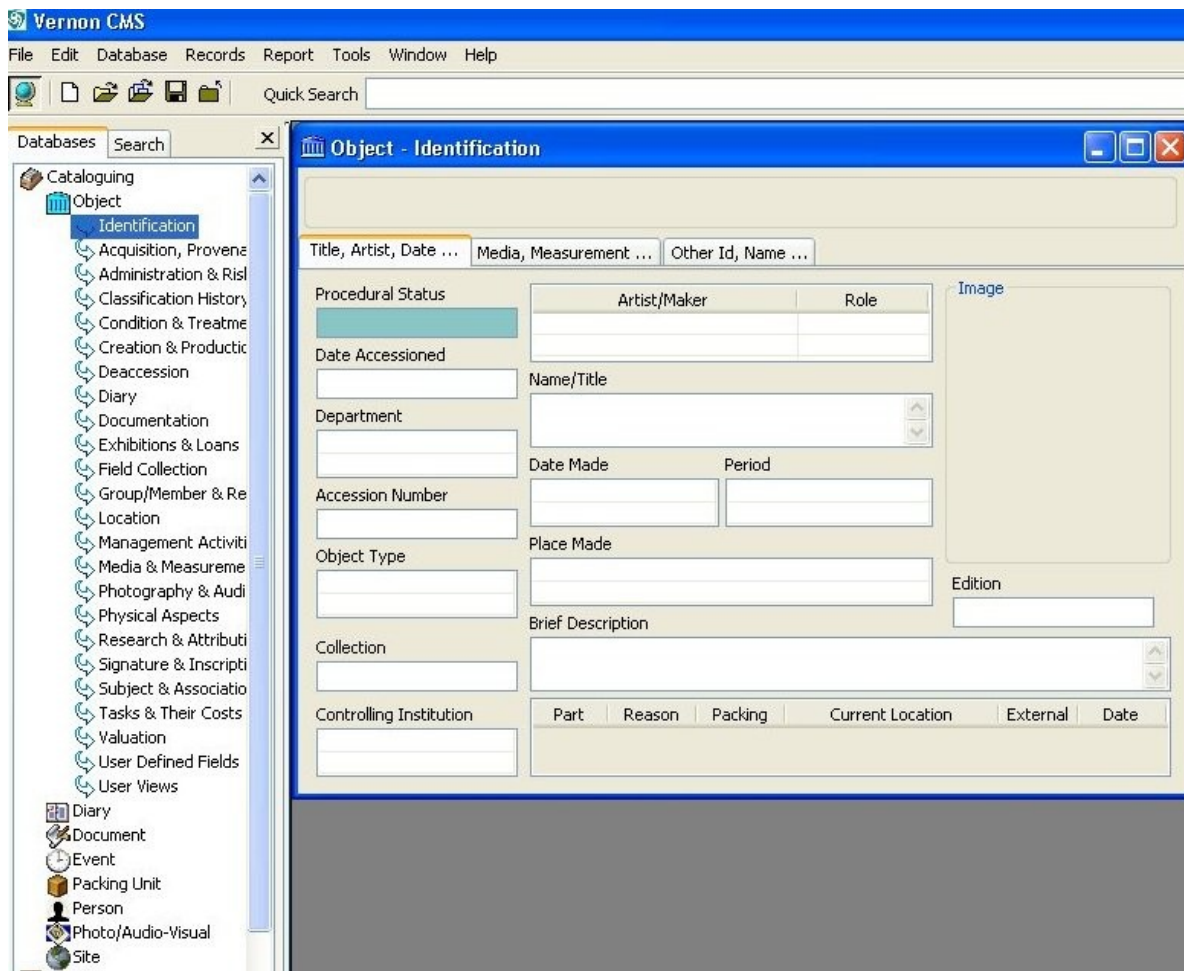


Illustration 18: Data entry form for description record and descriptive cataloguing menu in Vernon CMS

Virtual Archives

<http://host33.evolutra.com/>

Virtual Archives is a program based on Filemaker Pro software that was customized for archives by GCI Inc., a software company in Quebec. I interviewed two archivists who are using this program and both were satisfied with it. It was chosen because of being affordable, totally RAD compliant, easy to use, and easy to customize in any way. Both users had some problems obtaining support from the vendor because support is primarily available in French and documentation for the

software is inadequate. As well, both users said they have never received updates for the software since implementing it a number of years ago. Virtual Archives was not included in this software review because very little information about the program was available in English and the majority of the CNSA's members are English-speaking.

Appendix 2: Interview Questions for Archivists

1. What are the software tools you are using to manage your archival collections?
2. Focusing specifically on the archival management system, how long have you been using it?
3. Why did your organization decide to adopt this particular tool?
4. What other tools did you consider?
5. What do you like about the software?
6. What do you dislike?
7. How easy is it to use the software program for searching, data entry, etc.?
8. Are there any additional features you would like to have in the software?
9. What kind of customization of the software was required?
10. Who did this customization?
11. If you did it yourself, how easy was it to customize the software?
12. Do you make your descriptions compliant with a particular standard? Which one?
13. Does this software allow you to conform to that standard?
14. Is there an IT person or department in your organization that maintains the software you use?
15. Have you had any difficulties installing or maintaining the software?
16. What kind of training did your staff receive when the software was first implemented?
17. How helpful was this training?
18. Did you have any problems importing your existing data into the software?
19. Have you had any problems exporting data into other formats or programs?
20. What kind of support do you have for the software?

21. How helpful is it?

22. Do you feel that the vendor updates the software adequately/enough?

23. Has the vendor responded to requests for features and updates?