Business Case:Digital Preservation for the Visual Resources Association

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Executive Summary

The Visual Resources Association's (VRA) digital collection is of value to the organization, both as a means to facilitate its business activity and as a way to solidify institutional memory. Digital collections, if neglected may be at risk for loss, damage, or format obsolescence. It is therefore necessary that the VRA design and implement a strategy to manage and preserve its digital materials.

As students of Dr. Patricia Galloway's "Introduction to Electronic and Digital Records" course in the iSchool at the University of Texas at Austin, we have created this business case in order to apply our theoretical knowledge of digital preservation to a real-world situation. Through interviews and assessing documentation provided by the VRA, we have analyzed the internal and external factors that make the management and preservation of the VRA's digital records not only important, but also particularly timely.

This business case presents a thorough assessment of the digital archival collection held by the Visual Resources Association, examines the current risks to the collection, and discusses the benefits of preserving them. It also includes several recommendations for implementing a digital preservation system. Based on professional best practices for digital archival management and preservation, these recommendations are meant to provide practical and sustainable approaches for organizing and preserving the VRA's digital materials.

1. Strategic Vision

The Visual Resources Association (VRA) is an international and multidisciplinary organization for image media professionals. Established in 1982, the organization currently has a membership of over 800 professionals working in a range of fields. The VRA is committed to furthering research and education in the area of image management in educational, cultural heritage, and commercial environments. In addition, the VRA has assumed a leadership role in the visual resources field: developing data standards and providing educational tools, publications, and events for the visual resources community. On a broader level, the VRA advocates for the value of images and image management, and addresses the professional demands associated with the emergence of new types of visual resources. In order to fulfill these goals, the VRA carries out activities ranging from producing events such as conferences to publishing educational materials. Many of the born-digital records that result from these activities warrant preservation in the VRA archives.

The VRA has already acknowledged the need to establish more robust archival processes. This awareness is indicated by the creation of a VRA Archives Task Force, which was first charged with researching and implementing best practices for the management of the VRA Archives in 2007. The 2007 Task Force demonstrated an interest in complying with applicable legal requirements through the development of retention schedules, establishing access restrictions, and determining release schedules for sensitive information.³ It also illustrated a strong desire to store digital archival materials on the VRA's electronic hosting service, so that the records would be independent of any individual institution. The 2007 Task Force identified institutional priorities as establishing foundational archival policies and practices—namely retention schedules, organization, finding aids, and online access. The task force did not survey the VRA membership about desired levels of intellectual and physical access to the archival materials, but eventually an assessment of access needs could be valuable for improving the archive. In 2013, a second task force was charged with addressing the creation and maintenance of an archive of born-digital and digitized materials, indicating the pressing need of implementing such a system. More specifically, this task force will address retention policies, archival best practices for digital formats, and the resources needed to manage and host a digital archive.⁴

This interest in archiving the Association's materials, and particularly its born-digital materials, is especially timely given the priorities for the organization as outlined in the 2009 Strategic Vision document. The 2009 document, which details goals to be addressed and implemented over the next seven years, has a distinct emphasis on moving toward more digital modes of communication and record-keeping. For example, one of the goals identified in the document is

¹ "Introduction and a Brief History," Visual Resources Association, March 2007, http://www.vraweb.org/organization/pdf/intro_history.pdf.

² White Paper Task Force, "Advocating for Visual Resources Management in Educational and Cultural Institutions," Visual Resources Association, October 2009, pp 1-2.

³ VRA Archives Task Force, "VRA Mid Year Report/Final Report," June 2008, p. 6.

⁴ "Visual Resources Association Archives Task Force charge," 2013.

to publish the VRA Bulletin in an electronic form only. Additionally, conference proceedings are also moving to web-accessible formats. The goal of establishing an accessible digital archiving and preservation system provides an underlying source of information for the broader 2009 goals of facilitating the transition of new organization leadership, fostering an open and inclusive member community, promoting and advocating for the VRA, and enhancing the VRA's web presence.⁵

The VRA Strategic Plans typically provide a five to seven year period of time to complete the specified goals. The importance of creating a digital archiving and preservation system, however, is such that a shorter timeline is highly desirable. Part of the charge of the 2013 Task Force is to realize their recommendations for a digital archiving program with measurable deliverables. As the task torce is assembled for one year, a system ought to be implemented, or at the very least identified, within that time frame. Ideally, this project would be completed in two years. In order to advocate for the profession as a whole, an understanding and directed preservation of digital records of the past activities of the VRA will help to direct the organization and its efforts in the future.

2. Background, Context, and Status

External Context

As any digitization preservation plan is drafted, it is important to examine the influence of external factors. Part of this examination includes conducting an environmental scan of similar organizations.

In 2008, the VRA Archives Task Force reported on research conducted of the best archival practices of other institutions and organizations which included The Special Libraries Association, the Museum Computer Network (MCN), the Society of American Archivists (SAA), the Herb Society of America (HSA), and the Art Libraries Society of North America (ARLIS). From that report it was felt that the Special Libraries Association had relevant and upto-date materials that could be of use to the VRA. SLA revised their policies in 2009, but at that time only offered temporary storage solutions for electronic records.

The newly created 2013 VRA Archives Task Force also chose to conduct an environmental scan. Currently, the task torce is researching policies for the New England Archivists, SAA, and the Mid-Atlantic Regional Archivists. The task force found that these three organizations store their

⁵ Leigh Gates et al, "2009 VRA Strategic Plan," Visual Resources Association, 2009. http://vra.memberclicks.net/assets/documents/2009VRAStrategicPlan.pdf.

⁶ VRA Archives Task Force, "VRA Mid Year Report / Final Report," June 2008, pp. 14-15.

⁷ Special Libraries Association, "Practices for Division Archives," 2009. http://web.archive.org/web/20100706210354/http://www.sla.org/pdfs/divisionarchivespractices_revised2009.pdf.

archives at other academic institutions, and further findings will be reported at the next meeting. The 2013 Task Force is projected to look at further organizations, similar in size and volunteerrun. They are focusing on the accessioning processes, access restrictions, and how deposits with other repositories are handled. 9

Other organizations have been updating and determining their plans for handling digital materials. One such organization, which the VRA previously examined, is the Art Libraries Society of North America (ARLIS/NA). Since the initial environmental scan by the VRA in 2008, ARLIS/NA has released an updated strategic plan and action plan. One goal of their 2011 strategic plan was to emphasize the importance and uniqueness of their collections and their role as stewards of their collections. An action plan was created to complement the strategic plan, and the specific actions for this goal included forming a task force to assess their electronic collections, similar to the current VRA Archives Task Force. ¹⁰ Like NEA, SAA, and Mid-Atlantic Regional Archivists, ARLIS house their materials at a separate institution, the University of Illinois Archives. ¹¹

The role of digital materials within other professional organizations in the information field is ever-increasing, and many organizations and institutions are currently assessing how best to handle these born-digital and digitized materials. It is imperative that the VRA pursue that same goal, either by looking to other organizations as an example or establishing a unique system that could provide an example for other organizations. The VRA is at the forefront of the field as a vital resource through the creation and maintenance of data standards, such as the VRA Core. By creating a digital preservation plan, the VRA can continue to provide best practices for others facing similar issues of digital preservation.

Internal Context

As a result of the previously mentioned environmental scans the Executive Board has recognized the importance of preserving digital materials, which was not previously considered by the 2008 Archives Task Force. ¹² The creation of the current task force denotes the VRA's preparedness to implement a digital archiving plan.

The VRA 2013 Task Force will formulate the best practices and other archival recommendations. This will be followed by the implementation process by the VRA, which will include continual archival activities going forward. It is likely that the 2013 Task Force will face the same implementation challenges as the 2007 Task Force. Given the Association's

http://www.arlisna.org/organization/admindocs/planning/stratplan11-15actionsFINAL.pdf.

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⁸ Meeting Minutes, Archives Task Force, October 24, 2013.

⁹ Molly Tighe, message in "Task Force: Archives," Basecamp project, 5 November 2013.

¹⁰ "ARLIS Strategic Plan and Action Plan 2011-2015," p. 4.

^{11 &}quot;ARLIS/University of Illinois Archives," 2009. http://archives.library.illinois.edu/arlis/index.php.

¹² VRA Archives Task Force, "VRA Mid Year Report / Final Report," June 2008.

¹³ "Visual Resources Association Archives Task Force charge," 2013.

constant creation of digital materials, the VRA will need to be prepared to assign archival responsibilities to volunteers or members.

By the very nature of the organization, many members of the VRA possess the knowledge necessary to responsibly archive digital assets. However, members are spread out geographically and have other professional responsibilities. The VRA has previously relied on volunteers to aid in the archival process. ¹⁴ The Association has members with the archival expertise to implement the current task force's recommendations going forward. If the budget will allow, it would be advisable for the VRA to supply paid training for volunteers on any technologies adopted for the preservation of materials, or to provide other remuneration for work performed.

When the Executive Board created two task forces to archive their materials they acknowledged the VRA's need for a plan to collect and preserve the items they create. The professional knowledge and experience of the 2013 Task Force members ensures that effective recommendations will be made which the VRA can utilize to create an archive. This business case can be used by the VRA as a beginning step in this process.

Understanding the Collection

In order to carry out the Association's mission of furthering research and education in image management, the organization conducts a range of activities. The VRA publishes the VRA Bulletin, a scholarly journal, an online newsletter, an annual directory of members, and occasional Special Bulletins. The VRA also hosts a members-only listserv and multiple websites with separate public and members-only sections. The Association organizes an annual conference and co-sponsors a Summer Educational Institute in conjunction with the Art Libraries Society of North America. The Association has also worked toward being a leader in the visual resources field by creating data standards for images, including the VRA Core and the Cataloging of Cultural Objects. Through the process of these activities, a number of digital records are generated.

There are currently no collection or retention policies formulated for the VRA. The present physical archive consists of a storage unit filled with a desk and non-archival boxes filled with items that were collected as a result of the 2007 Task Force. There is no inventory, nor are there finding aids or a catalog. Digital artifacts were not considered during previous archival planning.

The VRA is now focusing on the path ahead by deciding to do an environmental scan of similar or like organizations so that they can formulate a plan for their entire collection of documents. Moving forward, the task force will be focusing on digital artifacts and the best ways to preserve them. Most of what the Association currently creates is born-digital documents and the challenge will be to ensure that they are effectively archived and easily accessible to all necessary members in the future.

¹⁴ Meeting Minutes, Archives Task Force, October 24, 2013.

The VRA Collection encompasses:

- Board output (internal items: meeting minutes, project work, etc. and external items: press releases, membership messages, etc.)
- Board communications: external e-mails, VRA-L communications and Basecamp communications
 - Basecamp:
 - VRA subscribes to Basecamp Classic. Account started in 2009
 - 54 projects
 - 17 "archived" projects archived in basecamp terms means a project has been marked by an administrator as not editable
 - 799 MB of storage space used
 - Listserv
 - VRA-L is hosted by the University of Arkansas, messages are organized by year and month, starting in December 1996 to the present
- Conference planning records
- Conference output (proceedings, photos, SlideShare compilations, PowerPoints, etc.)
 - PDFs: VRA Bulletin, Brief History, Articles of Incorporation, Business meetings, Annual Reports, Leadership Guides, Sourcebook Guide, Conference Programs from 1983-2013
 - HTML: newsletter bimonthly (every two months) starting in 2004 and links to 13 committee html pages
- Committee documents: correspondence, reports (both mid-year & annual)
 - for specific formats see Conference output
- VRA publications: Special Bulletins, newsletters, etc.
 - for specific formats see Conference output
- Website, current and future versions
 - VRA domains and registration info:
 - www.vraweb.org
 - Creation date: May 28, 2000
 - Expiration date: May 28, 2017
 - Domain name server (DNS): ipower.com
 - Administrator: Billy Kwan, Metropolitan Museum of Art
 - Tech name: Ann Woodward, Johns Hopkins University
 - www.vraweb.org/conferences/vra32/

- Conference web page using WordPress a sample of what the VRA site will migrate towards using WordPress
- www.vrafoundation.org
 - Creation date: August 1, 2007
 - Expiration date: August 1, 2014
 - Domain name server (DNS): mediatemple.net
 - Contact info: private vrafoundation.org@contactprivacy.com
- Sub-websites from vrafoundation.org are:
 - http://cco.vrafoundation.org Cataloging Cultural Objects Commons standards and instructions, includes PDFs, embedded videos
 - http://sel.vrafoundation.org Summer Educational Institute, html links
 - http://vreps.wordpress.com Visual Resources Association Emerging Professionals and Students
- Social Media
 - Facebook Account created December 2008, 601 followers
 - Twitter Account created date unknown, 364 tweets, 347 followers
 - SlideShare Account created 2010, 196 SlideShare presentations, 50 followers
 - LinkedIn Account created December 2009, 498 members, minimal discussions
 - Flickr
 - VRA Events 23 members, 411 images
 - VRA photo sharing 59 members, 2,566 image
 - VRA + ARLIS 2011 19 members, 184 images

All of the aforementioned materials are being targeted by the VRA for archiving because they have unique and specific value to the organization and its members. For example, every conference held by the VRA creates internal documents that can facilitate the planning of future conferences as well as provide a thorough record of the event. The output from the conferences, including photos, presentations, and proceedings, are also valuable because they provide educational information to professionals working with visual resources, many of whom are members of the VRA.

Some of the VRA materials may legally require access restrictions due to the confidential nature of the documents. For example, a portion of the records will contain personal information about members, account and financial information, or ideas that the VRA does not want made public when they are mentioned (for instance, in meeting minutes). Appropriate levels of security and the development of access guidelines will be needed to be accounted for as the task force develops its plan.

Stakeholder Analysis

The proposed plan will most significantly impact those members of the Visual Resources Association that are directly involved with various committees whose purpose is the management and administration of the organization. As such, these individuals are considered to be the primary stakeholders in this project. It is their documents as they contribute to the workings of the VRA that are of primary concern. Without a considered approach to storing and preserving these documents, which are themselves key to maintaining the VRA's institutional memory, their degradation and loss remains a potent risk. The proposed approach to continued preservation will account for members' access to their materials. As the VRA is an organization characterized by remote members and communication mainly occurring in virtual spaces, access to shared documents is of critical importance.

These risks, however, have already been identified and acknowledged by the VRA. Chief within the organization's membership, the members of the Archives Task Force will be instrumental in bringing about significant change and implementing a coherent preservation plan for their materials. This will ensure the continued access of materials by members relying on these records. The population of VRA members using digitally stored documents goes beyond those members directly involved in the running of the organization (i.e. board members and committee members) to the broader membership of the VRA. Even beyond the scope of the VRA membership, non-members' access to bulletins, newsletters, and conference publications is a vital means of outreach and advocacy for the VRA.

3. Digital Preservation Risk Analysis

This risk analysis considers the types of materials that are outlined in the Understanding the Collection section of this report. To perform our analysis, we used the Simple Property-Oriented Threat (SPOT) Model for Risk Assessment as outlined in the D-Lib Magazine, September/October 2012. The SPOT model uses the six categories detailed below. Once the VRA decides on a direction for creating a digital repository they may want to undertake a more specific risk analysis to ensure the digital preservation strategy they adopt functions effectively in the long term. This analysis essentially looks at the collection in its pre-repository state and identifies the threats to the records in their current state.

Availability

Because all the digital records of the VRA are currently in a "pre-repository" state they all have a substantial threat to their long-term availability. Until a strategy and procedures for digital objects are identified and preservation is enacted, this threat to their availability will exist. The current operations of the VRA indicate that electronic records are now produced and accessed in four main categories:

- 1) VRA websites
- 2) ListServs
- 3) Basecamp internal workspace
- 4) Social Media sites such as SlideShare and Flickr

All four sources depend on "cloud" storage and are dependent on access through third party services such as web hosts, subscriptions, and free (advertising based) social media. The VRA is not in direct control of the long term stability of any of these third party companies, therefore a major threat to availability exists in this dependency.

Identity

The identity of digital objects is highly dependent on the metadata of these objects. The current state of the VRA's digital records contains significant metadata that both identifies and provides context for the digital objects. Any long term strategy for preservation of these digital objects should include the capture and preservation of the metadata currently associated with these objects. For example the preservation of the current SlideShare records off line should preserve the conference titles and dates that the records are currently tagged with as well as the category of the VRA website that the slides shows are currently linked from.

Persistence

There are two crucial factors in ensuring the persistence of digital objects. They are preserving the bit sequence of a digital record so that it is not corrupted, and ensuring that the medium on which the bit sequence is located remains readable. With the VRA material currently stored on non-repository web servers and cloud based services, they are in a "pre-repository" state with no controls for fixing the bit sequence of their data or ensuring the long term readability of data from the mediums they are currently stored on.

It is worth noting however that cloud services such as Basecamp do claim that accessibility and backing up of users data is a core part of their service.

Renderability

The idea of renderability is to ensure that the appropriate software and hardware are maintained and kept available. This ensures that digital objects can be read and interacted with in a manner consistent with how it was used by its creator. An example of this might be an interactive website that is heavily dependent on Flash animation.

Our analysis has not identified any digital records that are being created in especially "exotic" formats. The bulk of the records are in formats such as HTML, XML, JPEG, PDF, etc. All of these standard formats can reasonably be expected to be maintained into the future.

There are however two important exceptions to consider. First, are the current presentations on SlideShare and future presentations that may be created in web based software such as Google Drive or Prezi. The second concern is the records created in Basecamp Classic. Documents created in the "writeboard" section of Basecamp Classic can not be exported as well as any files that are uploaded by users into Basecamp Classic. If Basecamp Classic is upgraded to Basecamp the "writeboard" documents can be exported as html pages and the files can be exported in their native formats.

Understandability

Understandability is similar to the above concept of identity in that the metadata that identifies an object is also essential for its users to understand the purpose of the object. Understandability goes beyond just the metadata of the object, however, and includes the context in which the object was created and used.

Preservation of the current website, ListServ threads and Basecamp projects will provide an accurate picture of the activities of the VRA and the context in which the records from these locations were created. A threat exists to understandability if selected documents are separated from their current online context in the process of preservation.

Authenticity

Authenticity is the property that a digital object, either as a bitstream or in its rendered form, is what it purports to be. It is the job of the digital repository to insure the authenticity of their records, and this must be taken into consideration when the VRA establishes their standards and procedures for digital archiving.

4. Potential Benefits

The VRA's board members have recognized the importance of implementing a digital preservation plan, evidenced from the two task forces they have charged with its research. Success will come not only through incorporating digital preservation into the workflow, but also by making the preservation process a top organizational priority to any future strategic plan. By doing so, the Association will reap numerous short and long-term economic, social, and reputational benefits.

Included in each subsection are relevant quotations drawn from best practices of professional archival organizations that support our expected benefits for the implementation of the plan.

Archives and Information Management Best Practices

The VRA will conform to best practices for both archives and information management, and by doing so promote the institution as forward thinking and responsible managers of their information.

"[E]ncourage professional development among their co-workers, foster the aspirations of [others], and actively share their knowledge and expertise."

— SAA Core Values and Code of Ethics

Maintain a Strong Reputation

The VRA will further its reputation by continuing to be at the forefront of imaging standards, data sharing and storage by adapting to change and growth.

"The Visual Resources Association Data Standards Committee has updated the Core Categories in order to conform to ongoing developments in data standards, data sharing, and data storage technology."

— VRA Core 4.0¹⁵

Smooth Transition

The VRA will create a smoother transition when introducing new members and will increase shareability and flow of information within the organization.

"Access to records is essential in personal, academic, business, and government settings, and use of records should be both welcomed and actively promoted."

— SAA Core Values and Code of Ethics

"Maintaining smooth transitions from one VRA Board to the next has been a challenge....VRA Board positions are increasingly complex and diverse. It has become evident that more time is needed to bring newly elected officers up to speed with their duties and responsibilities. Two months on the VRA Board email list and 'on the job' training at the conference are simply not enough."

— 2009 VRA Strategic Plan

Achieve More in the Future

Devoting time to and prioritizing digital preservation will help the VRA maintain any collaborative resources or systems and more successfully engage in educational opportunities.

¹⁵ Full document available at http://www.loc.gov/standards/vracore/VRA Core4 Intro.pdf.

"[Image professionals] help integrate these new initiatives and technologies into pedagogy through outreach and instruction; and in some cases they actively participate in the design of collaborative systems...."

"With only a few years of practical experience, collaborative image collections point toward learning environments that benefit an entire institution or multiple institutions."

— VRA White Paper on Visual Resources Management

To "preserve a wide variety of primary sources for the benefit of future generations."

— SAA Core Values and Code of Ethics

Stay Current

The VRA's prioritization of digital preservation will improve the life-cycle continuum of their visual image resources, keeping the organization ahead and ensuring the lasting care of the images.

"Staying current with research on emerging technology and participating in experimentation...."

"Many digital images created just ten years ago—in situations where professional standards were ignored—have been abandoned because they have become inadequate for today's higher resolution monitors and projectors."

— VRA White Paper on Visual Resources Management

Future Reference to and Use of Conference Proceedings

The value of the VRA's conferences will increase from the preservation of the conference as whole, including the planning process, the proceedings, and output for reference and use in the future. Preservation will also help especially in the planning of future conferences.

"Develop policies for making PowerPoint Presentations and other conference content available to VRA members as soon as possible after the conference."

— 2009 VRA Strategic Plan

5. Recommendations

These recommendations are intended to provide guidelines for establishing and maintaining the digital archives of the VRA. In addition, these recommendations include an overview of some strategies for archiving the range of materials created by the VRA. Based on professional best practices for archival management and preservation, these recommendations are meant to provide practical and sustainable approaches for organizing and preserving archival materials. In order to achieve these objectives, the following recommendations are:

- Establish a trusted digital repository or pursue an archival partnership
- Create a records management plan and records retention schedule
- Create position of Digital Archivist
- Upgrade Basecamp and export files
- Determine a preservation strategy for current and future websites
- Determine a preservation strategy for VRA listserv
- Determine a preservation strategy for social media content

Establish a Trusted Digital Repository or Pursue an Archival Partnership

It is highly recommended that the VRA establish a central storage location that supports digital preservation for its born-digital and digitized materials. Although many digital materials are currently stored in Basecamp, this service does not fill all of the requirements of a trusted digital repository. A trusted digital repository is the best place to store and preserve digital materials. Such a system should have the capability to preserve digital materials long-term by both obtaining control over digital objects and their metadata as well as following documented procedures to protect materials against potential threats. A trusted digital repository must also be able to ensure the authenticity of the digital records by conducting integrity checks to make sure that the bitstreams are maintained. It must also be able to provide users with authentic information, including all relevant metadata and rendering software. "Trusted Digital Repositories: Attributes and Responsibilities," a report issued by OCLC and RLG in 2002, provides a good overview of the requirements and responsibilities of a trusted digital repository.

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The VRA could establish its own digital repository managed and stored on local servers. Alternatively, the VRA could pursue an archival partnership. This requires identifying an institution, most likely a university, that would be willing to house the digital records of the VRA. For example, the American Library Association deposits physical materials at the University of Illinois at Urbana-Champaign (http://archives.library.illinois.edu/ala/). The university also hosts the archives website, which includes online archival content, as well as publicly accessible finding aids. Although the VRA Archives Task Force 2008 report recommends against housing the archives at another institution for accessibility reasons,

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¹⁶ See Appendix for resources

establishing an archival partnership may allow the VRA to avoid incurring some of the costs of setting up its own digital repository.

Create a Records Management Plan and Records Retention Schedule

A need for a more detailed records management plan, and specifically a records retention schedule, was identified in the VRA Archives Task Force 2008 Report. As a schedule has not yet been fully implemented, this remains as a high priority recommendation for the VRA. In addition to covering the materials produced by the various committees and branches of the organization, the VRA might consider how archiving its web presence (web site, social media, blog) should be addressed. It is advisable to have a legal counsel look over the final retention guide to ensure that the VRA is fulfilling all legal retention obligations.

Create Position of Digital Archivist

The 2008 VRA Archives Task Force Report recommended that the VRA Archivist charge, description, and responsibilities be revised to "address electronic migration, records retention and access schedules." However, we recommend that the VRA create an additional position of digital archivist officer in order to ensure that the organization of both digital and physical records receive equal treatment. Establishing a digital archive is a complex task and warrants its own officer position. Designating an officer position to be the main digital collection organizer and records management point person will help the VRA to maintain a reliable record transfer workflow to the digital archives. Creating a digital archivist position would also indicate the organization's strong commitment to digital archiving. Hiring a short term professional archivist in addition to the officer position could help speed the development and implementation of a records retention schedule and digital preservation workflow, as well as increase the speed with which the digital records backlog is addressed. If the paid position cannot be financially sustained, an archives graduate student could assist with the project as an internship opportunity.

Upgrade Basecamp and Export Files

The VRA currently subscribes to the online project management software Basecamp and is using its legacy platform called Basecamp Classic. We recommend that VRA migrate its past and current projects from Basecamp Classic to the current version of Basecamp because of important differences in how much of the projects will be exported with the two versions. Both the current version of Basecamp and Basecamp Classic have a feature to export a full project in the form of a zip file that contains html pages for the Discussions, Dates, and To Do lists. In Basecamp Classic the export feature will not export the "Writeboards," the comments related to the writeboards, or any files that have been uploaded to the project. The current version of Basecamp will export the full project including files that were uploaded to the project in the file's native format.

All Basecamp Classic projects can be migrated forward to Basecamp. When this happens the Writeboard files are now titled Documents and are exported as html pages. All other parts of a Basecamp Classic project are migrated as is and can then be exported with the project. There are however two exceptions that should be planned for before migration takes place:

- The comments related to a Writeboard document are not migrated when the project is moved to Basecamp. The only solution for this is to manually copy them.
- Basecamp Classic has a function to track the time that users spend on a project. This function is eliminated in Basecamp so that information is lost when a project is migrated forward. Again, the only solution to export this information is to manually copy it.

Migrating from Basecamp Classic to Basecamp is an important step before exporting each project to archive them offline. Once a project is completed and is no longer being added to or edited, we recommend these projects are exported and archived within the structure that the VRA adopts. Currently Basecamp states that users can migrate on a project-by-project basis and that when a project is migrated from Basecamp Classic to Basecamp the classic version is left untouched and will continue to be available with the user's subscription. With this in mind we recommend the VRA begin its migration to Basecamp with a test of the 17 projects they currently have archived. Once a workflow and archiving procedures are set, we would then recommend upgrading the projects that are currently active.

Determine a Preservation Strategy for Current and Future Websites

We understand that the VRA is currently planning a migration of the entire website from their current design to one that will be created through Wordpress. It is therefore an excellent time for the VRA to consider both the archiving of their current website, as well as how to develop their new website with a digital preservation strategy built into it. As the entire digital preservation strategy is currently being considered, the VRA may wish to start with designing their website preservation plan and build the rest of their strategy around this. Of paramount importance will be deciding where the archived website files will be hosted and housed.

A website is a complex structure to archive and the VRA must first decide how much of the website they want to mark for preservation. Will the various blogs and social media sites be included in the web segment of the preservation strategy, or do they want to consider each area of communication as a discrete element? From a thorough examination of the current site—vraweb.org—we can see that it has evolved in a haphazard manner since the domain was registered in 2000. The page designs and menu layouts change throughout the site.

Once the scope of preservation is determined the next step will be to consider the frequency of web capture for preservation. This could range from a one time capture of the current site before it is migrated to the new design to a scheduled weekly crawl on a blog page to capture the

changing content. This will be somewhat contingent on what the strategy and schedule for changing website format is. Certainly, the VRA will want to capture the site in its current state before changes to its fundamental structure take place.

There are a number of tools and resources to consider for actually undertaking the task of capturing and archiving the website. Archive-it, a division of the Internet Archive, is a subscription-based service that allows for several levels of archiving, including the possibility of capturing social media streams such as Facebook. Archive-it has developed the Web Archiving Life Cycle Model that is a good resource to help the VRA decide what elements of website preservation are important to them. The VRA may not want to use the subscription service of Archive-it because of the costs involved, but Web Archiving Life Cycle Model will provide a useful framework for deciding how to proceed.

An open-source solution that the VRA should consider is the Web Curatorial Tool (WTC), which was developed by International Internet Preservation Consortium (IIPC) for the use of cultural heritage institutions. WTC uses the Heritrix web crawler, which is the same web crawler that Archive-it uses but with a user interface designed by IIPC and each institution is responsible for hosting and preserving the data once it is harvested.

As the VRA develops pages using Wordpress, and looks to migrate the full site onto a Wordpress platform, they should consider incorporating an automated backup procedure into Wordpress template. When backing up websites or blogs that are hosted on Wordpress, or any other Content Management System, both the content and the underlying database that supports the site must be archived. More information about the best practices and tools for backing up Wordpress and available free plugins for automating the process are detailed below in the "Examples of tools" section on page 17.

Determine a Preservation Strategy for VRA Listserv

The VRA-L listserv, which relies on the L-soft LISTSERV software (version 16.0), is currently hosted by the University of Arkansas. Listserv archiving is enabled by the software, and it is publicly accessible through the University of Arkansas. While this is an acceptable short-term solution, including these archives in a centralized trusted digital repository in the future would be ideal. It would be advisable to consult with the University of Arkansas to learn how their listserv archiving works, such as how and when they harvest listserv content, and determine if the archives are held in a trusted digital repository. Eventually, these archives should be transferred to the VRA's trusted digital repository, if possible. Questions to ask the IT department at the University of Arkansas include:

- How are the listsery emails collected?
- How often is this done?

- Are these archives stored in a trusted digital repository? Are there any security measures in place to ensure that the archives are not lost or deleted?
- Can the listserv archives be exported for transfer to another location, should the VRA establish their own digital repository?

Determine a Preservation Strategy for Social Media Content

Creating a strategy for preserving the VRA's social media accounts is advisable. The educational and promotional content posted on these sites, as well as any responses to posted content, may be worthy of preservation. The VRA must determine which sites should be preserved, if it is feasible to capture all of the included information, or if responses to postings are beyond the scope of their digital archive. It is essential for the VRA to create a schedule for how often each social media site is backed up and if or when old backups of these materials should be disposed of. The files that result from archiving social media can be stored in the newly created digital repository.

Some options do exist for archiving multiple social media outlets in one place. One service that is offered is by SocialBckup (https://www.socialbckup.com/?gclid=CO-j3-zR-7oCFcKDQgod4B4A2g), which can archive your Twitter, Facebook, and LinkedIn accounts. If the VRA wanted to outsource this archival service, there is a \$7.95 per month fee after a 30-day free trial. Archive-it, as previously mentioned, is another subscription service that includes the archiving of social media. Below are individualized free options for archiving each social media outlet.

Examples of tools that can be used:

Facebook

- Facebook's "Start My Archive" feature
 - This will download your Facebook timeline information, posts shared with others, messages, photos, ads clicked onto, IP addresses used, and more.
 - https://www.facebook.com/help/131112897028467
- ArchiveFacebook 1.4, add on for Mozilla Firefox
 - Free tool that allows you to archive messages, activity streams, friends list, notes, events, photos and groups to your hard drive. The activity of friends is not included.
 - https://addons.mozilla.org/en-US/firefox/addon/archivefacebook/

Twitter

- Twitter's Archive Option
 - In Twitter's Settings section you can request a file that has an archive of your messages. Once the file is generated, an email will be sent to the account owner notifying them that an archive of their account has been created. You will receive

a .zip file containing an excel spreadsheet of your Twitter activity, as well as an "index.html" file which will be an offline archive of your account. This file can be stored in the newly created digital repository by the VRA. A new request for an archive of your messages can be made based on any retention plan developed by the VRA. Unfortunately, the Twitter archive only contains the tweets and retweets made by your account, not your followers or who is following you.

Tweetake & TweetDumpr

- Tweetake will save your tweets, followers, friends, favorites and messages in a CSV file format (which can be read by any spreadsheet software).
 - http://twitdom.com/tweetake/
- TweetDumpr is a free application that exports your Twitter timeline with timestamp to a CSV file format.
 - http://twitdom.com/tweetdumpr/

Wordpress sites

- Wordpress has been used by the Emerging Professionals and Students group with VRA as well as by others planning Conferences. It is advisable for the VRA to preserve these blogs and sites. There are multiple plugins available that will automatically backup Wordpress.
 - These plugins can be found here: http://wordpress.org/plugins/tags/backup
- One example of a tool that can be used to back up Wordpress databases is DB Backup which has options to backup in SQL or CSV file formats and has save and print options.
 - More information can be found here: http://wordpress.org/plugins/db-backup/
- An example of tool that allows you to backup your Wordpress site is Ready!Backup. Automatic backups can be scheduled to download to a Dropbox account FTP and other locations. Logs are kept of backups and Wordpress sites can be restored using these backups.
 - More information can be found here: http://wordpress.org/plugins/ready-backup/
- For additional information on best practices for backing up Wordpress blogs and sites, see the below resources:
 - http://www.noupe.com/wordpress/how-to-backup-your-wordpress-website.html
 - http://codex.wordpress.org/WordPress_Backups

SlideShare

- The VRA can back up the Slideshare presentations manually. Each presentation can be downloaded to ensure that important materials from Conference presentations are not lost over time. These can be saved to the newly created digital repository.
- If the VRA would like to view, utilize and archive analytics for their SlideShare account, it will require a subscription for SlideShare Pro. Once a Pro account is purchased the analytics can be exported into a CSV file.

http://www.slideshare.net/features?cmp_src=analytics&cmp_src_from=main_nav

LinkedIn

- LinkedIn does not offer an all-inclusive archival feature like other social media sites. However, the Association's profile can be captured manually by copying it and pasting it into a text document. LinkedIn has a built-in tool to preserve your contact information. There are settings options in the contacts section of the website, one of which is "Export LinkedIn Connections". This option allows users to save their contacts information as CSV or VCF files, and can export to various email clients.
- The LinkedIn Export options can be found here: http://www.linkedin.com/people/export-settings
- An article with directions on how to complete this process is available here:
 http://www.linkedin-makeover.com/2012/01/09/backup-your-linkedin-account/

Flickr

- Flickr does not have a batch download option at this time, but third-party applications
 have been created to allow this. One is an application called Bulkr and allows for
 batch downloads, including the tags and descriptions of the photos.
 - http://www.flickr.com/services/apps/72157622874451890/

Conclusion

This business case addresses many challenges facing the collection. It will make it easier for the VRA to access information and will ensure that their artifacts are located in a central location that members or leadership can access at any time. This plan also helps to preserve and backup the information they produce. This proposal will fit with the wider organizational policy strategy and help the VRA determine a starting point for further archival practices.

Appendix: Resources

Archive-it: Web Archiving Life Cycle Model:

https://archive-it.org/static/files/archiveit_life_cycle_model.pdf

International Internet Preservation Consortium:

http://netpreserve.org/web-archiving/tools-and-software

Records Management for SAA.

http://www2.archivists.org/governance/saa_archives

SPOT Model reference:

http://www.dlib.org/dlib/september12/vermaaten/09vermaaten.html

Trusted Digital Repositories:

OCLC-RLG. "Trusted Digital Repositories: Attributes and Responsibilities." RLG, May 2002. http://www.oclc.org/content/dam/research/activities/trustedrep/repositories.pdf.

Web Curator Tool:

http://webcurator.sourceforge.net/

Wordpress:

http://codex.wordpress.org/WordPress_Backups

Young, Sandra Florand, et al. "Don't Throw It Away! Documenting and Preserving Organizational History." Special Collections, The University Library, and Jane Addams Hull-House Museum, College of Architecture and the Arts, The University of Illinois at Chicago, 2006. http://www.uic.edu/depts/lib/specialcoll/pdf/DTIA.pdf.

Appendix: Statement of Contribution

Our team members divided the project among the following sub-groups:

- Catherine B., Megan, and Sydney worked on the Strategic Vision, External Context, and Potential Benefits sections.
- Mallorie and Stacy worked on Understanding the Collection and Institutional Readiness sections.
- Catherine C. and Tim Mapp worked on the Stakeholder Analysis and Digital Preservation Risk.

After revising and editing the sections within our groups, we combined all three groups' sections. Everyone contributed to researching and formulating the recommendations for the VRA. All members helped edit the report as a whole, and approved the final draft of the document.

We, as a group, feel this was an equitable division of labor and are pleased with the results of our project.