

Educating Archivists and Their Constituencies
National Historical Publications and Records Commission, #4373-MN
July 2003

1. Executive summary

The Educating Archivists and their Constituencies project started in January 2001. The project sought to address a critical responsibility that archives have discovered in their work with electronic records: the persistent need to educate a variety of constituencies about the principles, products and resources necessary to implement archival considerations in the application of information technology to governmental functions. The project supported several other goals, aiming to:

- raise the level of knowledge and understanding of essential electronic records skills and tools among archivists,
- help archivists reach the electronic records creators who are their key constituencies,
- provide the means to form with those constituencies communities of learning that will support and sustain collaboration, and
- raise the profile of archivists in their own organizations and promoting their involvement in the design and analysis of recordkeeping systems.

To bring these goals to a practical level, the project focused on two areas of clear and growing importance to both archivists and their constituencies: metadata and eXtensible Markup Language (XML). The final deliverables included prototype stand-alone full-day workshops on both of these topics, as well as two-hour overview sessions intended as “executive-level” introductions.¹

The State Archives Department of the Minnesota Historical Society (MHS) administered this project, working in collaboration with several partners: the Delaware Public Archives, the Indiana University Archives, the Ohio Historical Society, the San Diego Supercomputer Center, the Smithsonian Institution Archives, and the State of Kentucky. This group represents a variety of institutions, records environments, constituencies, needs and levels of electronic records expertise.

Overall, the project was notably successful. As the evaluations of the workshops indicate, the participants overwhelmingly appreciated the content and the presentation. To any archives interested in adapting the materials, the project staff would recommend a close analysis of its unique environment, with an eye to customization. That would lead to the ideal of a product expressly designed to meet the particular needs of the targeted audiences.

Failing that, however, the project staff would certainly recommend the workshops “as-is” for any archives working within a complex institution. The standardized materials definitely represent a critical mass of information that is of proven value to both archivists and their constituents. This is especially true now that the subject matter of the workshops is broadened to be more inclusive, in that it refers to archival concerns in a larger context of the management of information resources in digital formats. There is a commonality of interests, across professional and organizational lines, in the management of digital information. Archivists have a great deal to contribute to that conversation; they need only to package their message in a form that others will understand and appreciate.

¹ All project-related items are available online at <http://www.mnhs.org/preserve/records/edarchivists.html>.

2. Project narrative

Shawn Rounds and Bob Horton, of the MHS, began work on the project in January 2001. They had two initial tasks: to hire a project archivist and to start planning for the meeting with the project partners. They hired Jennifer Johnson as the project archivist and she began work in March. Together, the three constituted the project staff.

To prepare for regular communications with the project partners, the project staff developed a web site to distribute information to project partners. To complement the web site, the project staff created a listserv for easy communication among the partners.

Prior to the March 2001 meeting with the partners, the project staff identified a series of issues and questions that were circulated for review. The goal was to gather information about the status quo at each partner's institution and to establish a baseline of understanding about XML, metadata, electronic records and the constituencies of each archive. On the basis of this, all partners developed and then presented a report on where they stood in regards to these topics. After the presentations, the group engaged in a facilitated discussion to define a common ground.

The partners agreed that these three premises informed the project:

- XML and metadata are the way to go. The initial supposition was correct: these are basic tools for electronic records management, whatever the archival environment or role.
- Education is a useful service and benefit to deliver to constituencies.
- There is a need for basic electronic records education: there should be some basic level of understanding, calibrated by audience, to lay the groundwork for education about XML and metadata.

In the course of the meeting, the partners explored how these concerns would work out in practice during the project. They developed a work plan and assigned responsibilities for the rest of the calendar year. Subsequent to the meeting, the project staff began to develop prototypes of the courses. There were two aspects to this activity: creating the content and designing the format of the courses. The project staff also addressed the third premise noted above – the need for basic electronic records education.

For the XML course content, the project staff built on extensive readings in print and online resources. Jennifer Johnson and Shawn Rounds also attended a number of courses offered in the Minnesota area. Richard Marciano, of the SDSC, helped to compile a list of online courses and contributed texts from a variety of presentations he had made, including one at a meeting of archivists in California. For metadata, the staff generated content primarily from readings and from work with state agency partners in Minnesota government. All the information was formatted for the annotated web resources lists.

Since the potential range of available information was so enormous for both topics, the staff developed a number of filters. To a certain extent, these were intuitive, based on previous knowledge and experience, and keeping in mind the proviso that the courses could not be comprehensive. The first goal was to put the topics into a persuasive framework, showing how and why they are pertinent to the participants' immediate needs. From there, the goal was to give participants the basic knowledge and confidence they needed to learn more.

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To deliver that content, the staff needed to work out the design of the course. A number of issues about audiences and messages raised in the March meeting led the project staff to pay close attention to the possible ways to design the course. As the staff examined these, they articulated some specific concerns, particularly a need to ensure some level of consistency while planning for a variety of instructors and allowing for customization across a variety of institutions. As the complexities of adult education were not the specialties of any of the project staff, they decided to seek out some expert assistance. After some research, they established a cooperative effort with Advanced Strategies Inc., of Atlanta, GA (ASI).

ASI is an information technology consulting firm that also offers an extensive array of training opportunities for its clients.² It supports the Minnesota Office of Technology with a variety of courses on such fundamental topics as project management, modeling and technology architecture. The project staff asked ASI about the possibility of developing a “train the trainers” workshop. This was not something ASI offered to clients; but it had a version it used in-house, for training its instructors, and it was willing to adapt that for use in this context. The idea was that the experience would serve as a means for ASI to test and refine the course before, so to speak, going into full production. To meet the needs of the project, all the examples and hands-on exercises would focus on the topics of metadata and XML. The result was three days of intensive instruction and analysis of the content for the proposed courses. This gave the project staff a template for the courses and a model for an instructor’s manual.

The ASI workshop crystallized a design concept the project staff had been examining. They began to look at the courses in terms of three parts: what occurs before the class, the class itself and then post-class contacts. Before the class, there was a need to prepare the participants. This ultimately involved providing some basic resources on information technology and electronic records that will put the course into a familiar context, as well as contacting participants by e-mail to gauge their expectations and experience. The class itself, the content, was discussed above. After the class, the project staff could support continued learning by maintaining a variety of web resources that point to where to learn more and how to apply what participants learned in class, as well as through a series of e-mails addressing issues raised during the session.

A major component of the pre-class material addressed one of the issues raised in the meeting of partners in March: the need for some basic electronic records education, so that the class participants would have some basic level of understanding for learning more about XML and metadata. To meet this need, the project staff decided to develop and present an electronic records course. The idea was to test some ideas and concepts with an unscientific sampling of MHS staff in a six-week course. This also gave project staff an opportunity to gain some additional instructional experience.

From that, the project staff concluded that the best way to prepare for further education in XML and metadata was to establish a conceptual framework based on the idea of a sustainable electronic records program. This took the form of an equation with several factors (e.g., resources, partners, standards/methodologies, technology, education, etc.), which, together, equal a program. Programs would vary from institution to institution because these factors are

² For more information on ASI, see its web site at <http://www.advstr.com>.

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variables that would be unique - not everyone has, for example, the same resources or partners. But, to develop a program, all the factors would have to be addressed.

The project staff decided to focus on the metadata workshop first, since that course content was most familiar and easily gathered. The intention was not only to create the course itself, but also a model for the XML workshop down the line. A participant course book, consisting of the slides to be used during the workshop plus supplementary material, was drafted, as was an instructor course book, which included presentation “patter,” cues, questions, etc. Pre-course and post-course materials were selected and crafted into packets, and a standard course invitation was developed.

In mid-September, MHS project staff presented the metadata workshop in an abbreviated “chalk-talk” form to others in the State Archives Department. This allowed staff to get initial feedback on the invitation, the pre-course packet and the workshop itself (format, presentation, content). Second drafts of all items were then completed and circulated to the project partners in early October in preparation for the second full project meeting.

The second meeting of the project partners took place on 17 October 2001 at the Indiana Historical Society, with all partners attending except Delaware and Indiana. The session was held in conjunction with the Midwest Archives Conference (MAC) fall meeting in Indianapolis. MHS project staff organized and facilitated the project meeting, which included a “chalk-talk” run-through of the metadata workshop, discussion of the pre- and post-course packets and a brainstorming session on next steps and future plans.

Meeting participants offered valuable comments and suggestions, which were captured and summarized afterwards in a “turnaround” document posted on the project web site. Suggested directions included developing a more compelling and persuasive tone; focusing on digital information and content rather than records per se; making the terminology and approach less exclusively archives-oriented, such as building in an emphasis on business processes and needs in addition to archival and records management ones; and pointing it all towards a recommendation that participants will have to make decisions about their own needs and implementation in light of their unique environments.

The project team took full advantage of the opportunity presented by the MAC fall meeting to promote the project and solicit input from those not directly involved. Jennifer Johnson and Shawn Rounds, both from MHS, and Judy Cobb, from the Ohio Historical Society, presented a full session on the topic which was met by interest and enthusiasm. Johnson and Rounds were approached by planners of the spring 2002 MAC meeting about offering the metadata workshop as a pre-conference session, and they accepted the invitation.

Per the work plan, drafts of each all-day workshop and accompanying materials were completed and sent to the project partners for review and comment by mid-May 2002. As well, each was tested in-house at the MHS. To facilitate the process of delivering the workshops in a consistent manner, the project staff devised an organizational approach that included the following basic steps:

- send e-mail invitations to perspective participants one month in advance
- send pre-course packet (including suggested readings and a self-evaluation form to be returned beforehand to allow instructors to familiarize themselves with the group) by e-mail two weeks before session

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- arrange for necessary equipment and facilities
- prepare participant copies of course books and related materials
- present the workshop to the audience
- revise the workshop content as necessary in response to participant comments
- send three post-course e-mails, at roughly two-week intervals, to participants with pointers to further resources

On 1 May 2002, project team members Shawn Rounds and Jennifer Johnson presented the metadata workshop as a pre-conference offering at the MAC spring meeting in Minneapolis. The level of interest was very encouraging; the registration limit of ten for this first field test of the workshop was reached weeks before the deadline despite the clear caveat that this was a work-in-progress and not a polished session.³ Participants came from a variety of organizations (universities, the military, religious archives and the private sector) and with a range of experience in the management and use of digital information and metadata. As a test audience, this group offered a great deal of useful feedback on the course materials and the presentation itself. Overall, response was very favorable in terms of organization, content and usefulness.⁴

Following the same organizational approach outlined above, the project team worked with the Ohio group to identify prospective participants and make on-site arrangements for a first true “field test” of each session. The metadata workshop was presented on 17 June at the Ohio Historical Society, followed by the XML workshop the next day. Nine individuals participated in the metadata workshop and thirteen attended the XML session (six people attended both). Each workshop drew a mix of archivists and technologists from organizations such as the Ohio Supreme Court, the State Library of Ohio, the University of Cincinnati, and the Ohio Bureau of Workers Compensation.

Both the MAC and Ohio field tests challenged the project’s initial assumptions and offered valuable lessons. Participants showed that they already understood, to some significant degree, the general context of the management and use of digital information, and they did not want to spend much time covering that ground. Instead, they expressed a strong desire to learn more about standards and how to apply them in a practical sense, as well as how to build partnerships with others. Real-life implementation examples, the process of actual implementation (both technical and on the business side) and information on tools and applications were of particular interest. As a result of this feedback, the content of the workshops was substantially altered.

On the promotion side, project team members Robert Horton and Jennifer Johnson presented a session at the annual NAGARA (National Association of Government Archivists and Records Administrators) conference in Denver in July 2002. The presentation covered the project’s background, partners, goals and work plan, workshop structure and content, lessons learned, and eventual deliverables.

Project staff Bob Horton and Jennifer Johnson then spent a busy summer and fall on the road, testing versions of the workshops in the field. After presenting the sessions to Ohio

³ Eleven people actually participated. One additional person showed up the day of the workshop under the impression that she was registered when she was not.

⁴ Feedback was encouraged and solicited during the course of the workshop, and afterwards participants filled out anonymous evaluations.

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audiences in June, they traveled to Kentucky in early August, Washington D.C. in mid-August, Indiana in September and Delaware in October.⁵ At all of these presentations, the audiences comprised a mix of archivists, recordkeepers, and other information management professionals such as librarians, web content managers, and systems architects and designers.

Each field test provided valuable feedback from participants as to what worked and what didn't. On a high level, it became apparent early on that the working titles of "Metadata for Archivists and Recordkeepers" and "XML for Archivists and Recordkeepers" were too limiting, both in terms of describing the content and attracting the audiences which the partners wanted to reach. New titles of "Metadata for Information Resources" and "XML for Information Management" better communicated that the content of the workshops was not exclusively of interest to archivists and recordkeepers and their projects, but held value for anyone involved in information management.

Along this same line, the content of the workshops underwent a constant cycle of revision and refinement after each test. Care was taken not to skew the content solely to archivists and recordkeepers, but rather to keep it at a high enough level so as to be useful to people in other areas of information management as well. The rationale for this was the consensus of the project partners that accenting the commonalities between these various groups would set the stage for future collaborations. It became evident during the field tests that there was great value in bringing everyone together in the same room for the workshops; not only did that give people an opportunity to learn about others' work, but the discussions stemming from the presentations allowed for spontaneous connection-building and networking.

In both workshops, the emphasis was on sharing practical knowledge through examples, case studies and exercises. The goal was to get the participants actively involved in the learning process, thinking about how they could apply the content to their particular situation and eager to learn more when they left. Post-course e-mails following up on questions and issues raised during each workshop encouraged participants to re-visit the material.

For those individuals who would only want a brief introduction to the topics of metadata and XML, the project team developed two-hour sessions that hit the highlights of the all-day workshops with the persuasive message that these tools potentially have great value for information management applications of all varieties. Here, the envisioned audiences were at a relatively high level, that of resource allocators and/or decision makers, who need to understand their options at a conceptual level, but do not necessarily care to learn all the details consequent to implementation. As with the workshops, these sessions emphasized practical implementation.

In early November, the project team applied for, and was given, an extension from the NHPRC through March 2003. While work had been, to that point, progressing as forecast, staff at the MHS realized that commitments to another NHPRC grant⁶ would make it difficult to fulfill

⁵ The workshops are designed for two instructors in a "team-teaching" approach that reduces instructor fatigue and keeps participants more engaged. Johnson heroically and ably did the Delaware sessions alone at the last minute because Horton had a family emergency. Project team member Shawn Rounds was not able to travel during these months for health-related reasons.

⁶ The grant for "Electronic Records Research Agenda" project ran from February 2002 through June 2003. In December, as part of the project, the MHS hosted a two-day meeting of forty-three people from around the country with expertise in electronic records management and use as related to the activities of the NHPRC. For more information on the project, visit <http://www.mnhs.org/preserve/records/eragenda.html>

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its obligations to this project by the end of December. The expanded timeline also allowed the project team to host one last partners' meeting in January 2003 in St. Paul.

As well, the extension provided the project team with the opportunity to offer the workshops in two additional places. First, in early February, on the invitation of the conference program committee, they presented the full-day metadata workshop and the two-hour XML session to members of the Southeast Archives and Records Conference (SARC) in Tallahassee, FL. In March, to facilitate the educational component of another NHPRC-sponsored electronic records project, they presented both full-day workshops to audiences selected by staff at the Wyoming State Archives in Cheyenne. Both audiences were very positive about the experience.

Finally, on 24-25 February 2003, Bob Horton and Jennifer Johnson went to Washington, D.C. for an extensive discussion with the staff of the Smithsonian Institution Archives (SIA) and one of its consultants, Charles Dollar, about the practicalities of adapting the workshops for use at the SIA. This involved an informal presentation of the two-hour XML briefing, as well as a close analysis of the environment and needs of the SIA.

As these presentations drew to a close, the project staff continued to work on the final products of the grant. To close a long, iterative and collaborative process, all the material was posted to the project web site at the end of March and now is freely available.

3. Lessons learned

The principal lesson learned is not a new one: collaboration is hard work, especially when a multi-state and multi-institutional partnership is the foundation of the project. All the partners to this project were genuinely and notably helpful, as well as signally committed and knowledgeable, but managing the effort was still a challenge.

Part of the difficulty is simply a consequence of having to manage more complex responsibilities for and mechanisms of communication. All the partners had to be comfortable about all aspects of the project and their responsibilities. E-mail and web sites help a great deal, minimizing, although not eliminating the need for travel and personal contact. But managing travel arrangements, notices, work plans and multiple drafts of documents does take time and attention. The opportunities for error are many and the opportunities for recognition and award much fewer, so it was a tremendous advantage to have two such organized, selfless and conscientious colleagues as Shawn Rounds and Jennifer Johnson on the project team. This really could not have worked without them. In this context, it is extremely important to note that the success of collaborative efforts depends not just on the technological or technical expertise of the project participants, but especially on the "soft skills" of the project facilitators. The ability to manage effectively, among other things, meeting planning, project documentation and project management was absolutely essential to the project.

Having many different partners created another form of difficulty: no two institutions were alike. As a result, no two institutions had exactly the same educational needs. To a certain extent, this problem was mitigated by the fact that none of the institutions was yet very confident about metadata and XML. These topics do represent largely new areas to everyone involved, XML especially. While that was common to all the audiences, the potential for practical applications for metadata and XML was quite different from place to place. Because of that, the particular standards covered and the specific case studies offered in the workshops were always

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only more or less relevant. Some sort of customization would be ideal and, if a single institution wanted to adapt the workshops, absolutely necessary.

Through the meeting at the Smithsonian in February 2003, the project staff had the chance to discuss closely these considerations with a single institutional staff. The general assessment of the meeting was that there were definitely opportunities, but realizing them had to wait on some necessary groundwork. The Smithsonian, through its information technology office, is developing an enterprise architecture that will eventually provide standards for the use of information technology in the institution. Most enterprise architectures stress that information is the organization's most important asset. The SIA could take this opportunity to champion the use of metadata and XML, as both will enhance the value of information throughout the enterprise. It will help that metadata and XML also facilitate the customization of standards. As the Smithsonian is a decentralized organization where the individual units have traditionally enjoyed significant degrees of autonomy, the argument should be that establishing standards for *core* metadata and for employing *extensible* markup language provides a basis for mutual understanding without limiting anyone's ability to do more to meet their special and unique needs. The most compelling area in which to work and where to demonstrate expertise is in the Smithsonian's web sites and web-based applications.

The meeting identified these as the notable areas of electronic records activity at the Smithsonian:

Web	Databases	Office software	Admin/finance/HR	Digital media
Portal	SIRIS (XML)	Word	PeopleSoft (XML)	Imaging
Static pages	CIS/CMS	Email		Audio
Dynamic pages	Research institutes	GroupWise		Video
Transactions				
TeamSite (XML)				

At the same time, these were the most important current organizational responses to the implementation of electronic records applications and practices:

Policies	Standards	Informal groups	Formal groups	Resources
TRM	Web metadata	Webmasters Web content group	Committees Working groups CIMS committee	Briefings Hands-on training Web pilot Guidelines Portable methodology

Together, the areas of activity and the organizational responses to them comprised the environment in which the SIA would have to work. Some knowledge of or contact with all of these would inform any educational services.

Because of the breadth and depth of that environment, the meeting participants thought it would be important to identify some compelling reasons for collaboration across the many units of the Smithsonian involved. Over and above the primary enterprise-wide message – that

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information is the Smithsonian's most important asset – the SIA staff wanted to build these persuasive elements, as message and goals, into the workshops:

- Promotion: the SIA wants to increase its visibility, sponsor standards, provide service and expertise, facilitate collaboration and become recognized as an authority on electronic records.
- Inspiration: the SIA can help identify and implement practical models that will provide real benefits in the use of information technology.
- Implementation: the web archives project can demonstrate a practical application of the SIA's expertise to solve a common problem.
- Preparation: the Smithsonian is already using XML and metadata, but it could make better use of them through a more complete understanding of their potential and through the application of standards.
- WWW: the Web is the point of attack, as that is where the interests of the various units of the Smithsonian in metadata and XML converge and where the SIA has the best knowledge and most substantive experience with electronic records.
- Resources: the SIA can provide better services and better results if it has the resources to hire additional staff who can manage this electronic records program.

What is most notable about these points is the fact that they simultaneously narrow and broaden the scope of the workshops. They narrow the scope in that the focus becomes more exclusive to web-based applications and projects. That recognizes both the specific expertise of the SIA staff and the interests of the SIA's audiences. But they broaden the scope of the workshops in that the focus is not just on records. Enlisting the cooperation and attention of the SIA's constituents, as well as attracting additional resources, seemed contingent on demonstrating how archival expertise and standards could complement and support a wider range of activities. This reinforced the messages heard in all the locales where the workshops were presented.

But the most important single factor to consider revolved around resources. To a certain extent, this had a "Catch-22" aura to it. The SIA staff felt that providing educational services would make it easier to justify requesting additional resources. On the other hand, developing the services in the first place required additional and specialized resources. As a result, the meeting concluded with the provisional recommendations to take these steps:

- Survey: use the institution's internal newsletters to publish a notice that the SIA wants to learn about XML applications in the Smithsonian.
- Hire staff: there was a clear concern that further work in this area was contingent on hiring the right staff to run the projects.
- Customize briefings: to build support and establish a consensus across organizational lines, adapt the two hour metadata and XML briefings to reflect the SIA's areas of expertise and the Smithsonian's overall needs (these would both be web-related).

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This combination of action items comprehensively addresses the overall context for presenting the workshops successfully in any setting. The survey would make sure that the unique institutional environment was explored and analyzed; hiring staff would make sure that the internal resources were available to develop a sustainable program; and the customizations would make sure that the immediate interests and needs of the audiences were addressed. If anything, the second item should be emphasized. The body of knowledge just sampled in the workshops is extensive and, especially with XML, daunting as well. Some dedicated staff – dedicated both in the sense of concentrating on the presentations and in learning enough about the subject matter – is especially important. It would be extremely difficult for instructors to respond to the demands for practical examples and knowledge without some hands-on experience of their own.⁷ This strongly suggests that the necessary complement to any educational program offered by an archives would be substantive knowledge derived from practical technology applications and projects.

Overall, the project staff would recommend the process and the plan developed at the Smithsonian to any institution interested in adopting the workshops. Those would lead to the ideal of a product expressly designed to meet the particular needs of the targeted audiences. Failing that, however, the project staff would certainly recommend the workshops “as-is” for any archives working within a complex institution. While the standardized materials may fall short of the ideal of a fully customized presentation, they definitely represent a critical mass of information that is of proven value to both archivists and their constituents. This is especially true now that the subject matter of the workshops is broadened to be more inclusive, in that it refers to archival concerns in a larger context of the management of information resources in digital formats. There is a commonality of interests, across professional and organizational lines, in the management of digital information. Archivists have a great deal to contribute to that conversation; they need only to package their message in a form that others will understand and appreciate.

4. Evaluations of the metadata and XML workshops

The project staff presented the workshops fourteen times from May 2002-March 2003, to a total of 135 individuals.⁸ Audience members included representatives from the archival and library communities, information technology professionals, and managers and administrators.

At each presentation, the participants had several opportunities to comment upon and evaluate their experiences. Each presentation ended with a “debriefing,” in which the project

⁷ To an extent, this could support the idea that archives need to gain much more practical experience with electronic records, to “get their hands dirty,” as some put it. But working with EAD and digitization projects would undoubtedly be helpful too, as they offer an immediate and more manageable opportunity to get involved with the pertinent standards and technologies.

⁸ The total number for both workshops was 229, but many participants attended both, resulting in a total of 135 individual participants:

Number of total participants:	229
Number of actual individuals:	135
Number of metadata participants:	118
Number of XML participants:	111

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staff asked two questions: 1) “what did we do well?” and 2) “what could we do better?” This informal conversation gave everyone a chance to speak about the workshops immediately and directly. That had a variety of advantages. The project staff could respond to questions and comments, and so to provide some additional context as necessary to the course. Participants also had the opportunity to articulate and sharpen their reactions before committing them to paper (if they so desired). Last but not least, the debriefings reinforced the message that the project staff valued the participants’ reactions and contributions and, further, that the success and continued improvement of the workshops themselves were dependent on the active involvement of the participants.

Interesting as the debriefings were, the formal evaluations most easily lent themselves to analysis. As noted, the purpose of collecting the data in the evaluations was to assist in refining the workshop materials over time. The evaluations were used to gain feedback on the pre-course, presentation, and post-course components of the workshop process. Responses in the evaluations often identified which units and topics needed to be improved, and where the project staff needed to provide further information.

In this analysis, the project staff chose to drop the evaluations from the presentations at the Spring 2002 Midwest Archives Conference Meeting and the presentations in Columbus, Ohio, June 2002, because both workshops were drastically revised after these presentations. These early workshops were entirely different products from the rest, and to include these evaluations would not reflect an accurate reaction to the final products.

The evaluations analyzed here reflect reactions from the workshops presented in Frankfort, KY; Washington, D.C.; Bloomington, IN; Dover, DE; Tallahassee, FL (metadata only); and Cheyenne, WY. The following is a breakdown of the number of participants for these six presentations:

Number of total participants:	173
Number of actual individuals:	108
Number of metadata participants:	95
Number of XML participants:	78
Number of evaluations returned:	109
Number of metadata evaluations:	59
Number of XML evaluations:	50
Rate of metadata evaluations returned:	62.1%
Rate of XML evaluations returned:	64.1%

State	Metadata			XML		
	# Parts.	# Evals.	Rate ret.	# Parts.	# Evals.	Rate ret.
Kentucky	16	7	43.7%	17	8	47%
Washington, DC	15	7	46.6%	15	6	40%
Indiana	14	9	64.2%	14	11	78.5%
Delaware	14	13	92.8%	14	12	85.7%
Florida	17	10	58.8%	NA	NA	NA
Wyoming	19	13	68.4%	18	13	72.2%

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(**Parts.** = Participants, **Evals.** = Evaluations, **Rate ret.** = Rate of return)

Participants were asked to respond to questions on the evaluations that either solicited a free-text response answer, or they were asked to rank statements among the following options: Strongly Agree, Agree, Disagree, Strongly Disagree; or Too Short, Appropriately Timed, Too Long. Overall, the responses were overwhelmingly positive, falling primarily in the Strongly Agree or Agree, and Appropriately Timed categories.

Here are the breakdowns of responses to the questions that were on the evaluations from all six of the locations. Participants did not always respond to all of the questions. It is important to note that the team-teaching questions were not applicable for the Delaware presentations, where there was only one instructor. As well, the Florida audiences experienced the full-day metadata workshop, but only the two-hour XML briefing. The reactions to the two-hour briefings are presented later in this document.

(**SA** = Strongly Agree, **A** = Agree, **D** = Disagree, **SD** = Strongly Disagree, **App. timed** = Appropriately Timed)

Metadata for Information Resources Questions	SA	A	D	SD
The pre-class e-mail provided sufficient information about what would be expected from you before the course.	19	26	1	-
The slides helped you follow the presentation.	35	22	1	-
The course book will serve as a good reference after the course.	45	9	1	-
Your knowledge of metadata has increased because of this course.	27	32	-	-
You are more confident about working with metadata because of this course.	17	38	1	-
The subject matter was relevant and will help you in your work.	20	37	-	1
You are better able to speak your stakeholders' language after this course.	11	41	2	-
The instructors were well prepared and knowledgeable.	41	15	-	-
The team teaching approach was successful.	23	19	1	-
	Too short	App. timed	Too long	
The breaks were:	3	53	-	
In relationship to the material presented the length of the workshop was:	4	49	2	

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XML for Information Management Questions	SA	A	D	SD
The pre-class e-mail provided sufficient information about what would be expected from you before the course.	12	33	1	-
The slides helped you follow the presentation.	29	19	-	-
The course book will serve as a good reference after the course.	29	11	1	-
Your knowledge of XML has increased because of this course.	28	22	-	-
You are more confident about working with XML because of this course.	13	34	2	-
The subject matter was relevant and will help you in your work.	18	32	-	-
You are better able to speak your stakeholders' language after this course.	15	28	2	-
The instructors were well prepared and knowledgeable.	32	12	-	-
The team teaching approach was successful.	22	12	-	-
	Too short	App. timed	Too long	
The breaks were:	1	41	-	
In relationship to the material presented the length of the workshop was:	6	35	1	

In order to provide a more detailed sense of the reactions of the workshop participants, the following section offers selected responses to the free-text evaluation questions. Comments which duplicated other responses have been removed. All bulleted items in this and the following sections are comments taken directly from the evaluations.

4.1 Metadata for Information Resources Workshop Evaluations

Why did the participants attend the workshop?

- There are metadata standards which I think we need to adapt to our enterprise architecture and standards.
- Interest in FindItKy and metadata for access to web pages.
- I work with metadata and always want more exposure.
- To learn/refresh my knowledge of metadata.
- We're working on a lot of metadata projects.
- I was invited.
- I was told I had to attend.

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- Because I needed to understand metadata for the digitization project my agency participates in.

Overall comments

- I am fairly familiar with metadata and these standards, but this was a significant refreshment opportunity and augmented areas of standards development I'd not paid attention to lately.
- Workshop was well planned and presented by Bob and Jennifer.
- Too short, could be two days with more on elements and data modeling.
- Excellent job – well organized, informative, knowledgeable workshop leaders, timely subject.
- Very well done. Covered the basics as well as provided the framework for continuing research on more advanced principles and evaluating standards. Content was rushed in the afternoon. Perhaps a 2-day, 10 or 12 hour course?
- Excellent content; I am not an archivist but I can make applications to my work. As someone learning, I feel I learned a lot.
- At the beginning of the presentation I was gaining lots of insight and growth. After lunch I felt a change from workshop learning to what felt more like a rehearsal for presentations to Minnesota partners, i.e., in depth, unique situations that were applicable only in broad terms – “Putting it all Together” – provided the tie in. Thanks. This would have been much more useful to move this last section to the “transition point” in the spiral as part of the intro.
- Information overload, but once I had time to process it all I appreciated (understood) it more.
- Got a lot from the varied experiences and expertise of the attendees. Was afraid I might be in over my head, but I actually went home with a substantial level of understanding.
- Wasn't really what I expected based on the pre-class e-mail. However, course was very useful and helpful.
- May want to include more practical exercises, to “force” participants to try to apply concepts.
- Very informative, easy to understand especially when you don't work with too much metadata.
- Overwhelming in scope, but exactly what I needed.
- This was one of the best workshops I've been to.
- The workshop nicely laid out the different types of metadata and their applications.
- The second half of the day seemed too detailed – suggest simplification of terms and examples.
- I would like to attend a longer, more detailed workshop on the subject of metadata. However, this was an excellent kickoff point for me.
- This course was clearly constructed so it built nicely in an easy to follow format. Even for people with a very basic knowledge, such as myself, it was possible to become comfortable with the material. Thank you. My only suggestion, some sections were more complex and spending a little more time on them would have been useful.

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- More description of more metadata standards would be helpful.

Reactions to pre-course materials

- Either you need training in metadata or you don't. No matter what the pre-course materials, you probably won't take it if you don't need it.

Invitation

- The invitation was fine. The course was more dynamic than your invite read.
- Add a list of the units that will be covered to the invitation.
- Invitation – might consider clarifying who should attend, electronic/digital versus paper focus.
- In invitation, emphasize records management for electronic records – the initial impression of the invitation emphasized XML/metadata for description, not management.

Recommended readings

- The recommended readings were a bit too long.
- Some recommended readings were a little dated – a major problem with material covering electronic records.
- Introductory material suggested to be read beforehand was very helpful and will be a good resource.
- Limit pre-course information to one read per subject. It was a little overwhelming to have so much to read and comprehend.

Self-evaluation

- The self-evaluation was very good – got me thinking. Good timing to ask for it.
- Self-evaluation is fine as it is – it helped me to focus and hopefully gave the instructors an idea of where I'm coming from and my needs.
- Felt the self-evaluation was more valuable for those planning the workshop rather than of benefit to me as a participant.
- The self-evaluation was hard to do – easier done in class when context was more clear.

Reactions to the slides and course book

- I feel it's a very substantial resource – it's obviously the product of broad and sustained research, and will be very beneficial to have available.
- Materials were comprehensive and well organized.
- Add examples of other metadata sets.
- I have already used the course book. Love the listing of additional resources. I would add more color to the slide presentation to spice things up a bit.

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Where do the participants want more information?

- Data modeling, this technique is hard for some.
- Standards in general, particularly for recordkeeping metadata.
- I would be interested in metadata in collections management systems.
- More on dealing with hybrid systems.
- How to implement a metadata system.
- More concrete examples for different types (Dublin core, MARC, etc.).
- Costs, implementation.
- Preservation, legal tracking.
- Recordkeeping metadata, I would attend a half-day workshop on it.
- Case studies, examples of applications.
- Practical information on creating metadata.
- Standards, crosswalks, useful utilities and tools.
- Access, Preservation metadata.
- More material on access metadata aimed at archival materials.

Which units were the most helpful?

- Recordkeeping metadata.
- Access and Preservation.
- Collaboration and projects.
- Overview of standards, how Minnesota did it.
- Defining metadata – very good overview. Made me re-think preconceived notions of metadata.
- Defining metadata and Using metadata with Information resources.
- Dublin Core.

Which units were the least helpful?

- Putting it all together.
- Data modeling and the section only dealing with specialized groups.
- Using metadata with electronic records. The exercises were a tad confusing.
- Crosswalks.
- Access metadata.
- Learning more about metadata and its functions.
- I don't do records management in my job, so discussions of recordkeeping metadata were less helpful.

Reactions to instructors

- Were able to answer all questions and take part in discussion. Very impressive.
- Do not read slides verbatim.
- You all did a great job. The Smithsonian Institution is a tough audience.

- Remember van pools and child care have set times – people may need to leave if you run late.
- Excellent, articulate instructors, thank you.
- Both instructors did a great job.
- One distinctly better at conveying complicated concepts. Like the non-speaker keeping track of questions and issues raised.

4.2 XML for Information Management Workshop Evaluations

Why did the participants attend the workshop?

- To hear how others are using XML; to get a different approach to presentation; to learn more about it.
- The opportunity presented itself, and I knew I was starting some work with XML soon.
- Invited by colleague.
- To find out what XML is and how it relates to metadata.
- Learn more about XML beyond what I already know about tools using it in the background.
- We will be creating finding aids natively in EAD in the near future.

Overall comments

- Focused too little on practical use of XML, particularly as import/export tool and long-term storage tool.
- Workshop served its purpose well. Some feelings of dissatisfaction about vaguely defined terms, e.g., XPointer, XLink, etc., but these are vague beyond control of presenters.
- Difficult topic that shows promise, but no practical examples.
- Excellent but mindboggling when considering implementation.
- Thank you for all of your efforts. Just the right balance between “tech talk” for specialists and neophytes to the arena.
- I really appreciate the opportunity to hear these presentations. The course materials – particularly the URLs, will be very valuable. Instructors well prepared – good stage presence – well informed.
- Excellent. It helped me to better understand XML and how it will work with various projects we are involved with.
- I got the most out of this presentation. I feel much more confident working with and talking about XML. You guys might elaborate a little more on XML Schema. I was a little fuzzy on that. Thanks for everything. You did a great job.
- Appreciate the comprehensive introduction to XML, no assumptions that we already understand XML theory and practice.
- I think both seminars could be compressed into one day by getting rid of a lot of the detail in the middle sections.

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- The generalness is very good, but since this workshop was made up of archivists/museum staff I would like more focus on those uses of XML and crosswalks to MARC and Dublin Core.
- Great – high level good for overview. Also, enough meat to hold interest and detail for technical processes.
- Well-organized, moved well from section to section.
- Reverse engineer a successful XML site. Show how it works up front, then go backwards showing how it was built. That would help pull the process together. Thanks – good workshop!
- This is a great course for beginners.
- It was appreciated to have timely breaks and a well-prepared team.
- I feel remarkably comfortable now as an “educated beginner” – this material was extremely well presented, easy to follow, especially for someone who was as new to this as me. The exercise was very useful. Having that hands-on (sort of) experience helped to “put all the bits together.” I am very impressed with how all the components build on one another. I think I do know just enough now to be dangerous and I’m ready to get busy – “bring it on!” Thanks!

Reactions to pre-course materials: recommended readings

- The recommended readings seemed to stress electronic records, but the session would be useful for any level of electronic document.
- Recommended readings are repetitive and Minnesota-heavy; this isn’t a problem if the reader is forewarned.
- More readings specifically aimed at XML (maybe implementation case studies).

Reactions to pre-course materials: self-evaluation

- Self-evaluation unneeded.

Reactions to the slides and course book

- Live examples of some of the applications, e.g., XML Cooktop.
- Very good printed material.
- More time should probably be spent on the basics of how XML and the marking up of documents work. Overall, it’s a good overview of the topic.
- Too much black and white in slides. Please add colored text and more graphics.
- Unit II, What does XML look like?, is very dense, maybe break it into two sections.
- More hands-on activities.
- More exercises.
- Fabulous appendices (very comprehensive).

Where do the participants want more information?

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- More on EAD.
- I would like more about XSLT, etc., where are these things going?
- Use with SQL queries.
- XML tools and editors – evaluations of, who’s using what, information/reviews of.
- Practical applications, more live demos and examples.
- More on the benefits, i.e., still not sure on EAD benefit for public users.
- Perhaps another XML application as an example.
- The benefits, output, results of using XML.
- XML databases, current and future trends.
- More practice in distinguishing/identifying elements, sub-elements, and attributes.
- How to use a specific tool – demo.
- How XML tags can be used as access metadata, EAD.

Which units were the most helpful?

- The business case (real estate initiative) example was excellent.
- Basic sections.
- Exercise marking up the joke.
- Available free tools.
- Defining XML, What does XML look like, Presenting XML, XML tools and editors.
- All and appendices.
- Future trends.
- The exercises.

Which units were the least helpful?

- Future trends section caused a lot of confusion.
- Most of us had a decent understanding of EAD and I thought you lost part of your audience.
- Minnesota Electronic Real Estate Recording Task Force.
- XML uses in other communities.

Reactions to the instructors

- Don’t read the slides. Better job than yesterday however.
- I’m very much impressed by the instructors’ subject area knowledge.
- Very good handouts, excellent instructors.

4.3 Two-hour briefings

In addition to the full-day workshops, the project staff also created two-hour versions of the workshops, entitled *Introduction to Metadata for Decision-Makers* and *Introduction to XML for Decision-Makers*. The two-hour briefings were developed as the project staff determined that

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shorter and more concise presentations were the best way to reach a wider variety of archival constituencies, as many audiences did not have the time for full-day sessions.

Of the two briefings, only the two-hour XML briefing was tested in front of audiences outside the Minnesota Historical Society. One presentation was given to the participants of the Southeast Archives and Records Conference in Tallahassee, FL, in February 2003, and the other presentation to an audience at the Smithsonian Institution in March 2003. Each briefing is designed to be given by only one instructor, which is reflected in the questions that were posed in the evaluations.

Number of participants: 28
 Number of evaluations returned: 13
 Rate of evaluations returned: 46.4%

Two-hour XML Questions	SA	A	D	SD
The slides helped you follow the presentation.	9	3	1	-
The course book will serve as a good reference after the course.	12	1	-	-
Your knowledge of XML has increased because of this course.	7	6	-	-
You are more confident about working with XML because of this course.	3	10	-	-
The subject matter was relevant and will help you in your work.	3	10	-	-
The instructor was well prepared and knowledgeable.	10	2	-	-
	Too short	App. timed	Too long	
In relationship to the material presented the length of the workshop was:	5	7	-	

In order to provide a more detailed sense of the reactions of the briefing participants, the following section offers selected responses to the free-text evaluation questions. Comments which duplicated other responses have been removed.

4.4 Introduction to XML for Decision-Makers Briefing Evaluations

Why did the participants attend the workshop?

- To see if XML is applicable to our project.
- To understand how XML may be applied to SI functions.
- Recommended by supervisor.
- Member of SARC group, plus need to learn about this sometime even if it kills me.

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- To better decide if our agency wants to use it.
- Learn more about XML and its potential practical application.

Overall comments

- With late starts, questions, etc., 2½ - 3 hours seems appropriate. There isn't much content that can be cut to ensure it can be done in two hours.
- Very useful, interesting, and helpful, thank you.
- Specific examples, case study for audience. Emphasize difference between XML and HTML and explain SGML applications (when would it be more applicable than XML), as new audiences won't know the difference. Structuring/practical uses of good schema down the road. Defining what the need and uses of the XML document/schema will be.
- I'm still waiting for the "Aha" moment – perhaps I need a magic bullet.
- Excellent presentation.
- Good condensation of difficult topic.
- It was a good intro, but maybe one more hour would have allowed more time for more examples.

Reactions to the slides and course book

- They were very good!
- Lists of examples of agencies/organizations using XML.

Where do the participants want more information?

- More information on actual implementation. A 10,000-foot view as opposed to 30,000-foot view.
- Examples of coding a subject-intensive text (e.g., historical narrative or historical document).
- Difference between DTD and Schema and the flexibility brought by a schema to future uses.
- More information on the basics of XML, more examples of XML in action.
- EAD (maybe an example - how it fits in). More on how archives can use XML.
- Info about wrapping other types of digital objects – e.g., databases, images, etc.

What components of the workshop were the most helpful?

- Emphasis on business need.
- The markup exercises.
- Case study very helpful in understanding how to approach a project and expectations for outcomes.
- Handouts.

What components of the workshop were the least helpful?

- Vanilla slides. Develop more dynamic slides. Yes, this is easy to say and hard to do.
- The discussion of content, structure, and context at the beginning is a little repetitive without being clear at first what it has to do with XML.
- Case study was a bit longer than necessary. Interesting but did not relate specifically to audience.

4.5 Evaluating the evaluations

A number of conclusions may be drawn from the evaluations. The majority of the participants voluntarily attended the workshops to learn more about the topics and the relevance of the topics to their work, as opposed to having their attendance mandated by their supervisors. Most walked away with an increased knowledge of metadata and/or XML. Most participants agreed that the project staff provided a lot of information to be absorbed in eight hours, yet throughout the evaluations there were demands for even more detail on a variety of topics. In general, critiques of the content or presentation focused on topics where participants felt they had not received enough information and on the desire for more practical exercises.

Specifically, in the *XML for Information Management* workshop, the project staff received requests for demonstrations of a XML tool, more information on implementation and practical uses of XML and more exercises or hands-on activities. In all of the presentations, there appeared to be a desire for more information on standards and projects actually using metadata or XML. It is also interesting to note which units the participants found most helpful and least helpful, because the lists often contradict one another. What this suggests is the need for customization. As the project staff began their presentations with the message that no two programs were exactly alike, it is perhaps hardly surprising that each audience had some unique concerns and characteristics that were not addressed in the general coursework.

While the two-hour XML briefing was only presented twice to outside audiences, the project staff received a very positive response from the participants, and enough feedback to draw a couple of general conclusions. Two hours may only be enough time for a very high-level introduction to the topic, as opposed to focusing on the technical details of XML. This reaction echoes the goal of the briefings, which is to supply the participants with enough information and pointers to resources so that they can judge the potential value of the technology with respect to their environment, and to provide them with a base knowledge from which they may pursue further XML-specific courses. The briefing is structured to provide the instructor with a customizable format, in which it would be easy to add another hour which focuses more specifically on a tool, standard, or project which may be of interest to a particular audience.

5. Project partners

Delaware Public Archives: Tim Slavin and Ed McNeeley

Indiana University Archives: Phil Bantin, Rosemary Pleva Flynn

State of Kentucky: Charles Robb, Glen McAninch

Minnesota Historical Society: Shawn Rounds, Jennifer Johnson, Bob Horton

Ohio Historical Society: Charles Arp, Judy Cobb

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San Diego Supercomputer Center: Richard Marciano
Smithsonian Institution: Edie Hedlin, John Churchman