ADVISORY COMMITTEE ON THE ELECTRONIC RECORDS ARCHIVES
MEETING NO. 1
NATIONAL ARCHIVES BUILDING

MINUTES
NOVEMBER 30, 2005

In accordance with the provisions of Public Law 92-463, the meeting was open to the public from 9:00 a.m. to lunch break, and from the end of the lunch break to 4:00 p.m. The meeting commenced at 9:00 a.m.

COMMITTEE MEMBERS PRESENT

Name	Organization
Dr. Daniel Atkins	University of Michigan
Lewis Bellardo	National Archives and Records Administration
Laura E. Campbell	Library of Congress
David Carmicheal	Georgia Archives
Sharon Dawes	Center for Technology in Government
Luciana Duranti	University of British Columbia
Dr. Richard Fennell	Administrative Office of the U.S. Courts
Daniel Greenstein	University of California
Jerry Handfield	Washington State Archives
Robert Horton	Minnesota Historical Society
Dr. Robert E. Kahn	Corp. for National Research Initiatives
Andy Maltz	Academy of Motion Picture Arts and Sciences
Richard Pearce-Moses	Digital Government Information
John T. Phillips	Information Technology Decisions
Jonathan M. Redgrave	Redgrave Daley Ragan & Wagner LLP
Adrienne Reagins	National Archives and Records Administration
David Rencher	Federation of Genealogical Societies
Mr. Richard L. Testa	U.S. Air Force
Dr. Ken Thibodeau	National Archives and Records Administration
Allen Weinstein	National Archives and Records Administration
Dr. Kelly Woestman	Pittsburgh State University

Welcome: Dr. Allen Weinstein, Archivist of the United States

Allen Weinstein, Archivist of the United States, introduced himself to the Committee and expressed appreciation for the importance of the Committee's work to the ERA Program and the nation. Allen Weinstein promoted NARA's support for the Committee, introduced Dr. Robert Kahn as the Chairperson and turned the meeting over to him.

1. Roles and Responsibilities: Lewis Bellardo, Deputy Archivist of the United States

Lewis Bellardo, Deputy Archivist of the United States, introduced himself and began with a review of the Committee's charter and the Committee's purpose, which is to make recommendations on the development, implementation, and use of the ERA system. He emphasized the autonomous nature of the Committee and the Committee's ability to set the agenda.

The Authority section of the charter, along with the Committee roles, use of minutes, logistics, scope, determining each member's term length, and report procedures were also reviewed.

2. Logistics: Adrienne Reagins, ERA Training Officer and ACERA Secretariat

Adrienne Reagins, ERA Training Officer and ACERA Secretariat, reviewed the meeting logistics noting the public was present in an adjoining room and the process for gathering and submitting public comment.

3. Legalities: Gary Stern, NARA General Counsel

Gary Stern provided a brief overview of FACA regulations, focusing on the openness of most Committee actions to public review and comment. A brief Committee discussion was held on conflict of interest issues and the appropriate forms to be submitted.

4. Overview of NARA: Lewis Bellardo, Deputy Archivist of the United States

Lewis Bellardo covered the following topics: Review of NARA's mission, review of NARA's organization chart, Record Management Initiative, Business Process Reengineering, New Certification Program, Effort to document how records are appraised, and NARA's Record Custody policy.

5. NARA's Electronic Records: Lewis Bellardo, Deputy Archivist of the United States

Lewis Bellardo reviewed new formats in Electronic Record Management, the Record Management Profile, and Record Management Service Components recently spearheaded by NARA.

6. ERA History and Current Status: Dr. Ken Thibodeau, ERA Program Director

Dr. Ken Thibodeau reviewed the chronological history of the ERA program, emphasizing key milestones and paying specific attention to describing the role of the ERA Research Program and the Incremental Acquisition Strategy.

After his brief presentation, Committee members engaged Ken Thibodeau in a question and answer session regarding the ERA system and the acquisition.

Question: Will there be open access to open source solutions?
Answer: Yes, Lockheed Martin's solution does provide the capability of open source solutions into the system. Lockheed Martin recommends open source for preservation digital adapters.

Question: Will ERA software be developed by the Federal Government and then given to the states or will the Federal Government require the states to buy ERA software?
Answer: ERA software developed for NARA can be given to the states. NARA is evaluating generically developed software for preservation. For example, Harvard/MIT is working on a global registry of digital formats. Once completed, there will be only one (1) registry that everyone will go to. The Mellon foundation asked for funding for a Government version of the registry. NARA will participate in funding a Government version.

Question: Who else bid on the ERA RFP?
Answer: That information cannot legally be released at this time.

Question: Is NARA able to use elements developed by Harris during the competition?
Answer: There are many desirable elements in the Harris submission. For example, Harris created a strong archival architecture that was well informed. However, the work was done prior to the proposal. NARA is has submitted the issue to legal review to determine what, if any, elements NARA can use.

Question: Is the problem with getting the data due to the method of data accessioning?
Answer: The problem is dynamic because systems change so quickly. In our experience, even if you have a good idea of the load, there will still be much variance in the other characteristics of what is received.

Question: On the issue of latency, are you looking at including the hour glass to indicate how long the system will take?
Answer: Yes.

Ken Thibodeau concluded his presentation with a brief description of ERA oversight. He emphasized that the annual GAO report said the ERA program has not misspent a single dollar. NARA's response to the National Research Council (NRC Report) is included behind the Notes tab in the Committee member's portfolios.

7. NARA Perspective: Lewis Bellardo, Deputy Archivist of the United States

Greenstein motioned to hold an open session next and to suspend Robert's Rules of Order until the lunch break. The motion was seconded and approved.

Lewis Bellardo was very brief in his remarks. He stated that in NARA's perspective, the Committee can drive itself. Lewis Bellardo then turned the meeting over to Robert Kahn.

8. Chairperson's Perspective: Dr. Robert E. Kahn, National Research Initiatives

Robert Kahn expressed his view that a successful ERA will be good for NARA and the whole world. Two (2) key factors he would like the Committee to focus on are:
1. The Committee should be aware of ERA's network environment, and
2. The Committee needs to ensure that whatever is created is independent of the choice of platform and underlying technology.

Robert Kahn went on to list other issues that he feels are important and impact many Agencies.
- The use of persistent identifiers within ERA.
- Metadata and metadata standards – he advocated for a strategy of enabling the use of multiple standards as the ERA evolves.
- Dynamic vs. static formats and their impact on performance.
- Ability to identify the original source (i.e. software product) of each digital object.
- Providing for authentication of digital objects and audit trails, as appropriate.
- Open architecture or COTS (commercial off-the-shelf software) and the need for the Committee to stay abreast of this area.
- Complexity of issues surrounding multiple geographic locations of the data repository.
- Proprietary software formats and the possible role of the Committee in arranging for data and metadata to be extracted from these formats.

9. Committee Member's Perspectives: Committee members

The session continued with an invitation to all Committee members to describe the topics and issues they wish ACERA to address.

An unedited list of suggested topics and issues include:

- How ERA fits into NARA's bigger picture?
- How is this a centralized vs. distributed initiative?
- How ERA can be a catalyst to bring others into this area?
- What constitutes an archives vs. a library?
- What is the relationship between ERA and the Library of Congress?
- Further discussion on the process of building this system. Use of iterative design approach
- Reality of making records available on every desktop

- Explore implications of NARA as people, processes, and priorities. ERA is embedded into NARA's modernization.
- Relationship between NARA and other agencies. How we should work together.
- Data transformation protocols.
- ERA design and architecture specifics.
- ACERA needs to understand the terminology. For example, we need to understand what is a record, content, metadata, context for the purpose of placing it in archives. We also need to understand the legal arena, areas of dispute, and competing initiatives. The legal and governmental definitions of a record may be different from private industry.
- Cost and process impact of hardware and system/data migration.
- The various means of access for all of this.
- Keeping a close eye on human factors
- Information is not monolithic and this has policy implications on managing the different levels.
- Consideration to search capability due to different compression.
- Virtual storage – archives more of a librarian with control over usage but stored elsewhere with a mechanism to ensure the record is not altered.
- Issues in predicting the level of demand for records.
- Leveraging things going on now. Shared vocabulary, process how we can engage in conversations across multiple communities.
- Keeping an eye on components of infrastructure to benefit multiple communities
- ERA's relationship to a larger structure.
- Identifying common components – essence of creating an infrastructure – hard to do but the initiative is worth talking about.
- NARA is working with Federal Enterprise Architecture. Other states and agencies are looking at this and it is worth sharing.
- Authenticity, privacy, security, and copyright issues. All of these issues are tied to litigation.
- Legal perspective and the way the law uses records. There is a connection between this effort and how the law defines records. Do we need the capability to change what is deemed authentic?
- Multiple standards for metadata
- Definition of archival/public record. A textual record is transferred to the Archives after 20 or 30 years. With electronic records, the need is to transfer as soon as possible after creation to facilitate authenticity confirmation and disaster recovery.
- Interoperability and extent it is desirable
- What does it mean for the archives to control a record? When does the control start and goes beyond security issues?
- Clarification of what ERA is going to accomplish. Is NARA intended to create ERA for themselves and then collaborate beyond to others? ACERA needs to make sure NARA is looking beyond that.
- Federated searching in distributed architecture. The impact on search capability with regards to a virtual vs. central repository. ERA design must consider records down at the state level.
- Extent to which ERA is able to handle records that are not born digital.

Kahn closed the session on Committee Members' Perspectives by highlighting the following three (3) topics:
1. Library vs. Archives notion – look at this distinction.
2. Federated Archives – applications that are built to increase usability and automate access to means of authentication.
3. How do we speak to growing interest in our work? How do we deliver consistent messages from the Committee?

10. ERA Architecture and Design: Steve Hansen, Lockheed Martin Corporation

Steve Hansen, Chief Engineer of the Lockheed Martin ERA Development Team, presented an overview of the ERA system architecture and design.

Business View Slide – Steve Hansen explained the slide, moving from the left to the right hand side of the graphic.

Action Item (?): NARA will determine if the ACERA committee is able to receive copies of the design document.

Question: Who decides on the interfaces? Lockheed Martin, NARA, or is it a joint decision?
Answer: In some cases, Lockheed Martin will be first to decide, if there is no external interface or an interfacing strategy at a higher level.

Comment: Robert Kahn: Determining data types solely by the use of extensions is not a good strategy over time.

Question: Is this a modular view of the architecture?
Answer: It shows service level packages. It is a conceptual organization of the services. Services can interact with one another. Only some services interface with the public.

Action Item (?): Robert Kahn requested that Lockheed Martin develop a slide view of the ERA public interfaces.

Question: What about the record migration processes?
Answer: It is it a background task to migrate records per the preservation strategy.

Question: What about the process for born digital vs. converted records?
Answer: ERA is agnostic to how a record is created before it comes into the system but it is outside the scope of the ERA system to convert records (from paper format to digital format) within the ERA project.

Question: Is the extraction of metadata done automatically?
Answer: Via templates.

There was a brief Committee discussion on the categorization of metadata, its use for search and the potential for developing performance measures for the data being extracted. NARA is engaged in research with the Army Research Laboratories on this issue.

Slide: Top Level Functional Architecture View
Steve Hansen: The ERA system is using a hybrid approach of combined services. Within these services, object oriented methods stand on their own. Instance Data Storage is a method in which a set of parallel servers are working at the same time. Incoming data is held in the Instance Data Storage for no more than 48 hours, because safe store offers back up capability. Instance Data Storage is like a De-Militarized Zone that enables us to check for viruses and other problems, check classification levels, and perform other assessments of the incoming records.

Slide: Federation of Instances
Steve Hansen: Currently, Increment 1 includes the deployment of two (2) instances of ERA. We are able to add more as funding becomes available. There is an air gap between instances of different classifications.

Everything will be stored on tape, which is currently the most effective (tape libraries and robots). The type of storage chosen will support media change. We will also deploy a performance cache space (disk drive) for popular records.

Observation: Robert Kahn: Eventually, users will want to interface with ERA via their own laptops.

Steve Hansen: The development team evaluated the potential for ERA to have priorities. The decision was to allow priorities to depend on user request. There is nothing limiting detailed referencing. In the Persistent Archives, the system tracks metadata linkages; a collection of related data that is essential to its archival value.

Robert Kahn: Human interpretation will need ontology. There will be a need for specialists for these ontologies to be interpreted internationally. Greenstein pointed out that they are difficult to maintain unless automated

Steve Hansen: Archivists determine the essential characteristic of a record. A template is used to authenticate a record.

Steve Hansen defined the differences between a Record Type Template and a Data Type Template

Steve Hansen: The Preservation Plan defines the essential characteristics.   The Archivist assigns value and weight to each characteristic. Lifecycle data on each migration process is automatically created. Lockheed Martin is developing a Framework that will wrap around records and mark them for executed functionality (like search engines).

Action Item(?): Robert Kahn recommended that Lockheed Martin develop a short version of the ERA architecture for presentation to Archivists.

Action Item(?): A request was made for a longer, more detailed Lockheed Martin demonstration. A discussion about the appropriate timing of the longer demonstration resulted in a shared agreement that it would be conducted in conjunction with the next ACERA committee meeting. A request was made that the presentation include an architectual view that shows what service ERA will have, whether or not the services are proprietary, and if they are opened by an API or not.

Robert Kahn: Committee can formulate a higher level extraction that is modular and Lockheed Martin's development may snap into it. We need a subcommittee to explore what we can do on our own.

Pearce-Moses – As an archivist, seeing how Lockheed Martin uses their design helps me understand. A Lockheed Martin prototype demonstration will give me a better sense of what they're doing to see how it scales. Carmichael commented that Committee members have either technical or archival backgrounds, and the challenge is for everyone to get on the same page.

During this discussion, Committee members participated in a blind draw of term lengths from a bowl held by Lewis Bellardo.

COMMITTEE MEMBER TERM LENGTHS

Name	Term
Dr. Daniel Atkins	2 years
Laura E. Campbell	3 years
David Carmicheal	3 years
Sharon Dawes	3 years
Luciana Duranti	3 years
Dr. Richard Fennell	2 years
Daniel Greenstein	3 years
Jerry Handfield	2 years
Robert Horton	3 years
Dr. Robert E. Kahn	3 years
Andy Maltz	3 years
Richard Pearce-Moses	2 years
John T. Phillips	2 years
Jonathan M. Redgrave	2 years
Dr. Dan Reed	2 years
David Rencher	3 years
Mr. Richard L. Testa	2 years
Dr. Kelly Woestman	2 years

Robert Kahn polled the committee for when the Lockheed Martin demonstration should happen. Ken Thibodeau stated that the PDR is in February and the ERA team may not be available to participate. Lewis Bellardo suggested the next meeting should be held in the March/April timeframe and Robert Kahn agreed.

Kahn took a poll for who would like to be on the subcommittee and the following members raised their hands:

SUBCOMMITTEE MEMBERS

Name
Laura E. Campbell**
Dr. Richard Fennell
Daniel Greenstein
Jerry Handfield
Dr. Robert E. Kahn
Andy Maltz
John T. Phillips
David Rencher
Mr. Richard L. Testa

**At the end of the meeting, Laura Campbell came up to the scribe and asked to be added to the subcommittee membership list.

11. Issues Identification and Prioritization: Committee members

A motion was made to hold an open session next and to suspend Robert's Rules of Order for this portion of the meeting. The motion was seconded and approved.

Lisa Allen conducted a Round Robin Brainstorming session whereby each member in turn stated an interest using a maximum of five (5) words. Once the time limit of 10 minutes was up, the Committee Members prioritized the list using a multivoting technique. The members were allocated 6 votes each to vote on the most important issues in the top 20 items, and an additional 6 votes each for voting on the most important of the items numbered 21-40. The votes were tallied by support staff and the top ten (10) were reported back to the Committee before the end of the meeting.

COMMITTEE ISSUES IDENTIFICATION AND PRIORITIZATION:

	Top Ten Identified Issues	Votes
1.	High level open architecture framework	**12**
2.	Usefulness and usability for different communities	**12**
3.	Incentives for collaboration and implementation	**11**
4.	ERA applicability beyond NARA	**10**
5.	Consistency of terminology	**10**
6.	Centralization vs. decentralization	**9**
7.	Leverage, other stakeholders, and initiative	**8**
8.	Outreach	**8**
9.	Authenticity defined as identity and integrity of records	**7**
10.	Managing cryptographic objects	**7**

COMMITTEE ISSUES IDENTIFICATION AND PRIORITIZATION:

	Total List of Identified Issues	Votes
1.	Centralization vs. decentralization	9
2.	Labor associated with ingest	5
3.	Assure complex record types are defined	3
4.	Integration with legal framework	6
5.	GOTS and proprietary vs. COTS	4
6.	Allow multiple standards for metadata	5
7.	Scalability of manpower to the number of documents	4
8.	Relation to federal enterprise architect	5
9.	Leverage, other stakeholders, and initiative	8
10.	ERA applicability beyond NARA	10
11.	Organizational impact within NARA	1
12.	Authenticity defined as identity and integrity of records	7
13.	Digital library and archives convergence	4
14.	Document chain of custody	3
15.	Hardware lifecycle and migration	1
16.	High level open architecture framework	12
17.	Analysis/viability of persistent preservation	4
18.	Record-type template creation	5
19.	Out-of-scope vs. in-scope	2
20.	Plan integration with existing RMAs	4
21.	Conceptual search alternatives	3
22.	Virtual storage using centralized librarian	1
23.	Proprietary source availability	1

	Total List of Identified Issues	Votes
24.	Curatorial best practices	3
25.	Incentives for collaboration and implementation	11
26.	Is legal/policy regime appropriate	5
27.	Migration issues for encrypted records	4
28.	Usefulness and usability for different communities	12
29.	Privacy	6
30.	More opportunities for NSF, LC, and NARA cooperation	4
31.	Ability to track archivist's access	1
32.	Consistency of terminology	10
33.	Mechanisms that allow applications involving multiple archives	6
34.	Outreach	8
35.	Interagency work processes	2
36.	Threats analysis	5
37.	Secure the information, not the medium	2
38.	Extracting data for the new archives	2
39.	End-user culture change and training	6
40.	Managing cryptographic objects	7

Closing Motions and Action Items– Robert Kahn

Robert Kahn read the list of Action Items that he had kept throughout the meeting. He asked if other members had any items to add. (See Action Items for Next Meeting below.)

Question: To what extent does NARA have authority for standards?
Answer: For permanent records, NARA has the authority. For temporary records, the agencies have more leeway. The goal is "you send it, we'll preserve it."

Pearce-Moses: I'd like to see how NARA will interface with agencies.
Lewis Bellardo: There are differences.

Discussion followed about Presidential Records Act

Greenstein: ERA needs to be responsive to many different types of agencies. We'd like to know the assumptions that were made in making the prototype so we can better understand the design.

Question: In three (3) years, this system will be turned over to NARA. Who can change the code?
Answer: There will always be a contractor supporting ERA. NARA will not become a software house. The constraint is that one (1) complete set of all preserved records will be stored in a facility owned by the Government. This is so there is no conern that the Government has lost the code or that the authenticity of the records has been compromised.

Lewis Bellardo thanked everyone for coming and told the committee members that information would be coming.

Meeting adjourned at approximately 4:30 pm. The committee members were offered a tour of the Rotunda and a tour of the Research Laboratory directly following the meeting.

12. Action Items for Next Meeting: Committee members

Action No.	Description of Action or Request	Assigned to:	Status:
1.	Robert Kahn announced that non-disclosure forms will be distributed electronically to the committee members but they need to be faxed back.	Adrienne Reagins to contact NGC	Closed
2.	Daniel Greenstein requested the Electronic Records Management (ERM) material to review.	Adrienne Reagins to send out the url	Closed
3.	Robert Kahn requested to know who else bid on the ERA proposal.	Adrienne Reagins to contact Tom Campbell	Closed
4.	Robert Kahn requested the ERA Lockheed Martin Architecture and Design material to review.		
5.	Robert Kahn requested that LM develop a slide view of the public interfaces.		
6.	A request was made for a longer, more detailed Lockheed Martin demonstration.		Closed
7.	Robert Kahn recommended that Lockheed Martin develop a short approach of the ERA architecture to present to Archivists. Daniel Greenstein added a request that the presentation include an architectual view that shows what service ERA will have, whether or not the services are proprietary, and if they are opened by an API or not.	Adrienne Reagins to post a description of services.	Closed
10.	Draft agenda for next meeting – Robert Kahn would like committee members to have a dialogue on the web to get ideas. Send any topic ideas to add to the next meeting's agenda to Kahn via email.		Closed
11.	Next committee meeting date – Lew took a vote on the best days. Tuesday and Wednesday in March/April timeframe was selected. Ken stated that March would be a tough time to get SME access.		Closed
12.	Subcommittee meeting dates – Robert Kahn declared the subcommittee should plan to meet in March to review an open architecture draft, if available		Closed

Action No.	Description of Action or Request	Assigned to:	Status:
13.	Robert Kahn requested that an email account be set up for the group and someone to monitor it.		Closed
14.	For the topics we've identified, can NARA let us know what they've done so far?		
15.	Divide issues into: 1. Systems – user interfaces 2. Programmatic – education and training 3. Professional		

13. ADJOURNMENT

The meeting adjourned at 4:30 p.m.

I herby certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

Adrienne M. Reagins
Secretariat
Advisory Committee on the Electronic Records Archives

Robert Kahn, Ph.D.
Chairman
Advisory Committee on the Electronic Records Archives

These minutes have been formally considered and accepted by the Committee at its April 4-5, 2006 meeting, and any corrections or notations have been incorporated.