A Dynamic Solution for Electronic Records:
The National Archives & Records Administration’s Electronic Records Archives

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NARA Mission Needs for Electronic Records

- Preserve any type of electronic record,
  - Created using any type of application,
  - On any computing platform
  - From any entity in the Federal Government,
  - Provide discovery and delivery
  - Obey laws and regulations restricting access
  - Now and for the life of the Republic

- Guide all other agencies in lifecycle management of their e-government records
The ERA System Will Support:

• Workflow and collaboration tools for lifecycle management of all types of records, temporary and permanent
  – within NARA
  – between NARA and other agencies
• Ingestion, preservation, management, and access to electronic records
  – In the National Archives,
  – Federal Records Centers, and
  – Presidential Libraries
Facets of the Challenge of Preserving Electronic Records

- **Obsolescence** – constantly changing technology
- **Variety** – different types of records
- **Complexity** – records in complex formats and with demanding behaviors
- **Volume** – enormous numbers of records
- **Scope** – the entire U.S. Federal Government, plus
- **Time Frame** – from x years to forever
- **Authenticity** – assuring the record remains as reliable as when first created
- **Accessibility** – the public has a right of access to the records of its government
The Challenge: Growing Volumes

• State Department: 25,000,000 electronic diplomatic messages, 1972 – 2000.
• Clinton EOP: 32,000,000 email messages
• Bush EOP: 150,000,000 – 200,000,000 email messages
• 2000 Decennial Census: 600 to 800,000,000 image files
• Department of Defense: 1,000,000,000 images of Official Military Personnel Files
The Challenge: Complexity & Reliability
NARA’s Strategy

1. Attack the critical preservation problem
2. Define the requirements in terms of the lifecycle management of records
3. Align with overall direction of Information Technology in the U.S. Government
4. Find solutions in commercially viable, mainstream technologies being developed to support e-commerce, e-government and the next generation national information infrastructure
ERA Virtual Workspaces Increment 1

**Records Lifecycle Management**
- Disposition Agreement
- Request to Transfer Records
- FOIA Request
- Request for Assistance

**Workflow Management**
- Template Repository
- Records Lifecycle Data
- Description of Holdings

**Accessioning Workbench**
- Read Digital Media
- Accept Online Transfer
- Verify Transfers
- Describe Records
- Transform to Archival Format

**Repository**
- Data about Collections
- Original Format Electronic Records
- Persistent Format Electronic Records

**Reference Workbench**
- Find Records
- Present Records
- Produce Special Versions
- Identify Sensitive Content
- Redact Sensitive Records

**Agencies**
- Congress
- President
- Donors

**Public**
- Business
- Other
- Government
- Federal
## System Architecture

### OAIS Functions

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<th>ERA System Packages -Level Architecture</th>
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<td>1. Ingest</td>
<td>Ingest, Archival Storage</td>
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<td>2. Archival Storage</td>
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### Business Application Services

- Common Infrastructure Services
- Business Application Services
Lifecycle Management Planning

• From the time a decision is made to transfer records to NARA, plan
  – How they will be transferred
  – How they will be preserved
  – How expected demand for access will be satisfied
    • How any legal restrictions on access will be enforced

• Execution of the Lifecycle Management Plan should be automated where possible
Preserving Authentic Electronic Records

- Binary Sequence
- Encoding
- Data Format
- Processing
- Data Type Template
- Documentation
- Archival Context
- Record Context
- Record Type Template

Electronic Records Archives
ERA Development Plan

- **2004-2011**
  - Jul Oct Jan Apr
  - Analysis and Design

**Increment 1**
- Fully Instantiated Archives

**Increment 2**
- Secure Facility/Instances and Redaction

**Increment 3**
- Preservation and Capacity

**Increment 4**
- Preservation and Capacity

**Increment 5**
- Preservation and Capacity

**FOC**
For Additional Information:

www.archives.gov/era