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

Kenneth Thibodeau, Director
Electronic Records Archives Program
National Archives and Records Administration
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

- 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 3

Records Lifecycle Management

Request to Transfer Records
Disposition Agreement
FOIA Request
Request for Assistance

Workflow Management

Template Repository
Records Lifecycle Data
Description of Holdings

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

Accessioning Workbench

Read Digital Media
Accept Online Transfer
Verify Transfers
Describe Records
Transform to Archival Format

Agencies
Congress
President
Donors

Public
Business
Other Government
Federal Government
ERA Virtual Workspaces  Increment 5

**Records Lifecycle Management**

- Disposition Agreement
- FOIA Request
- Request to Transfer Records
- Request for Assistance
- Workflow Management

**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

**Accessioning Workbench**

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

**Template Repository**

**Records Lifecycle Data**

**Description of Holdings**

**Workflow Management**

- Permissions

**Agencies**

- Federal Agencies
- Congress
- President
- Donors
System Architecture

Legend:

1 - Ingest
2 - Archival Storage
3 - Data Management
4 - Access
5 - Preservation
6 - Common Services

OAIS Functions

- Ingest
- Archival Storage
- Records Management
- Dissemination
- Preservation
- Local Services & Control, ERA Management

ERA System Packages

- Ingest
- Archival Storage
- Records Management
- Dissemination
- Preservation
- Local Services & Control, ERA Management

Service Oriented Architecture

Business Application Services
Common Infrastructure 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

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

Electronic Records Archives (ERA)
ERA Development Plan

- **2004**
  - Jul: SDR Analysis and Design
  - Oct: Increment 1
  - Jan: Fully Instantiated Archives
  - Apr: IOC

- **2005**
  - Jul: Increment 2
  - Oct: Secure Facility/Instances and Redaction

- **2006**
  - Jan: Increment 3
  - Apr: Preservation and Capacity

- **2007**
  - Jul: Increment 4
  - Oct: Preservation and Capacity

- **2008**
  - Jan: Increment 5
  - Apr: FOC

- **2009**
  - Jul: Preservation and Capacity

- **2010**
  - Oct: Preservation and Capacity

- **2011**
  - Jan: FOC
For Additional Information:

www.archives.gov/era