

Archival Interoperability: at the Intersection of Stability and Change



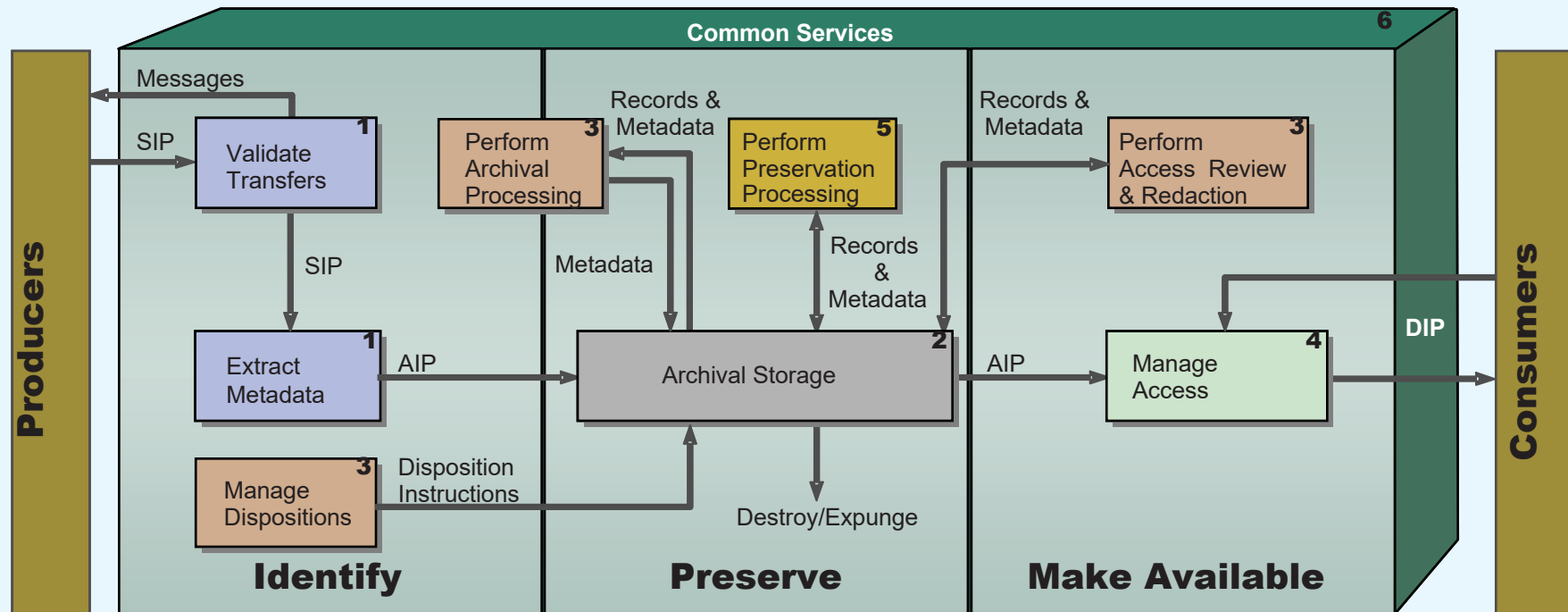
Kenneth Thibodeau, Director
Electronic Records Archives Program
National Archives and Records Administration

NIST Interoperability Week Keynote Address
April 24 2007

The Electronic Records Archives (ERA)

- The National Archives and Records Administration's strategic initiative
 - To introduce business modernization into its activities for the **lifecycle management of all records** of the U.S. Government
 - To overcome obsolescence and take advantage of improvements in technology in order to **preserve and provide sustained access to electronic records** which must be kept for long periods of time.

System Architecture

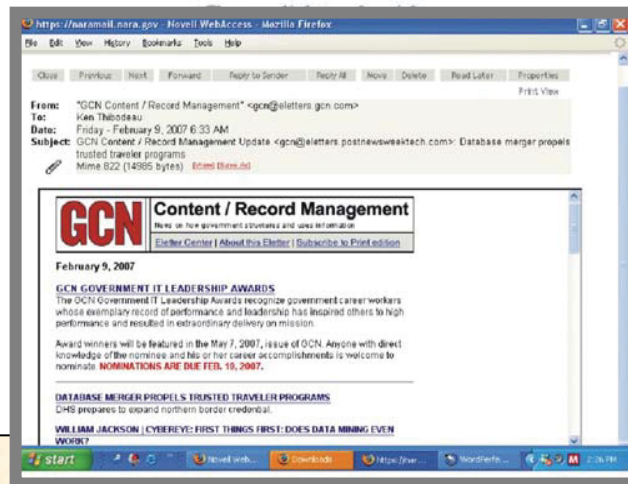
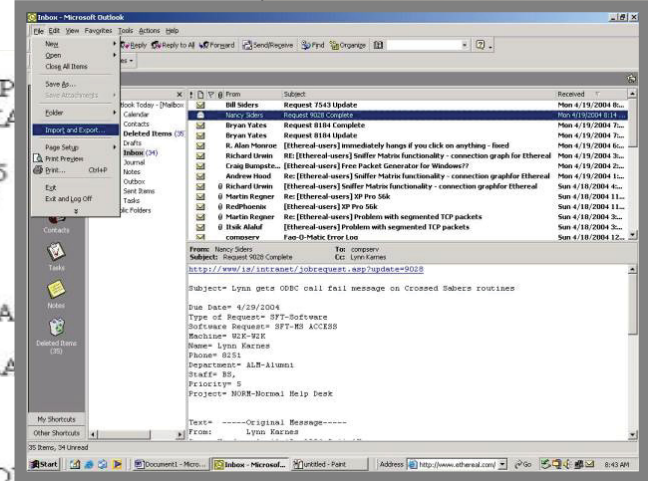
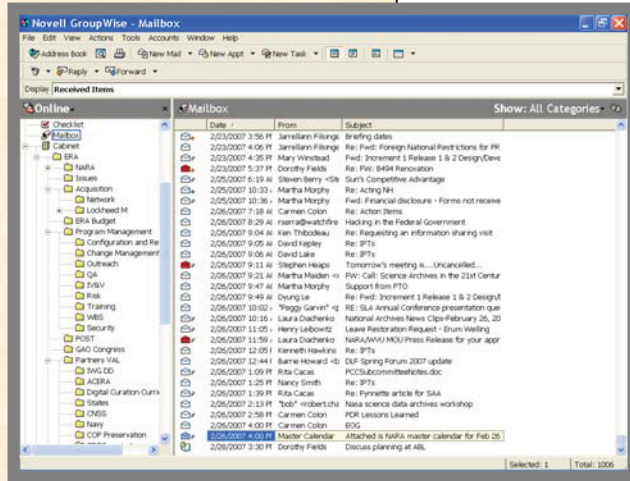


Legend:	OAIS Functions	ERA System -Level Packages	Service Oriented Architecture
	1 - Ingest	Ingest	Business Application Services
	2 - Archival Storage	Archival Storage	
	3 - Data Management	Records Management	
	4 - Access	Dissemination	
	5 - Preservation	Preservation	
	6 - Common Services	Local Services & Control, ERA Management	Common Infrastructure Services

Supply Side Interoperability

- The ERA system needs to interact with producer systems in all federal agencies, the Congress, the White House, and the Supreme Court
- For transactions related to scheduling records, requesting transfers, retrieval, and disposition
- For ingest of electronic records from producer systems.

White House Email



Veteran's records

FORM NO. 104-100 (Rev. 5-22-64) THIS IS AN UNCLASSIFIED AND UNCONTROLLED DOCUMENT	
CERTIFICATE OF RELEASE OR DISCHARGE FROM ACTIVE DUTY	
1. NAME (Last, first, middle initial) JOHN EDWARD HANCOCK	
2. SERVICE NUMBER OR GRADE OR RATE ADJUTANT GENERAL	
3. DATE OF BIRTH (month, day, year) 19441121	
4. MONTH, DAY, AND YEAR OF ENTRY INTO ACTIVE DUTY 19620101	
5. DATE OF RELEASE OR DISCHARGE FROM ACTIVE DUTY 19650301	
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NARA | e-Vetrecs - Microsoft Internet Explorer

NARA
We're People
America

...ready access to essential evidence.

September 11, 2001

1
You are on Step

2

3

4

4 What was the veteran's branch of service?
(If the veteran served in more than one branch of service,
a separate request form is required for each.)

Army

5 What was the veteran's service component?

Active

6 Was the veteran an Officer or Enlisted?

Enlisted

Please select the most appropriate category for your request, even if more than one applies:

Military Awards/Decorations

Please Select...

Benefits

Employment

Medical

Retirement

Military Awards/Decorations

Correction of Records

Personal Military History

Genealogy

Decline to Disclose

Previous

Awards

Submit requests for Navy, Marine Corps and Coast Guard awards by mail to:
Bureau of Naval Personnel
Retired Records Section
Room 5409
Attn: PERS-313E
9700 Page Avenue
Saint Louis, MO 63132-5100

Exit

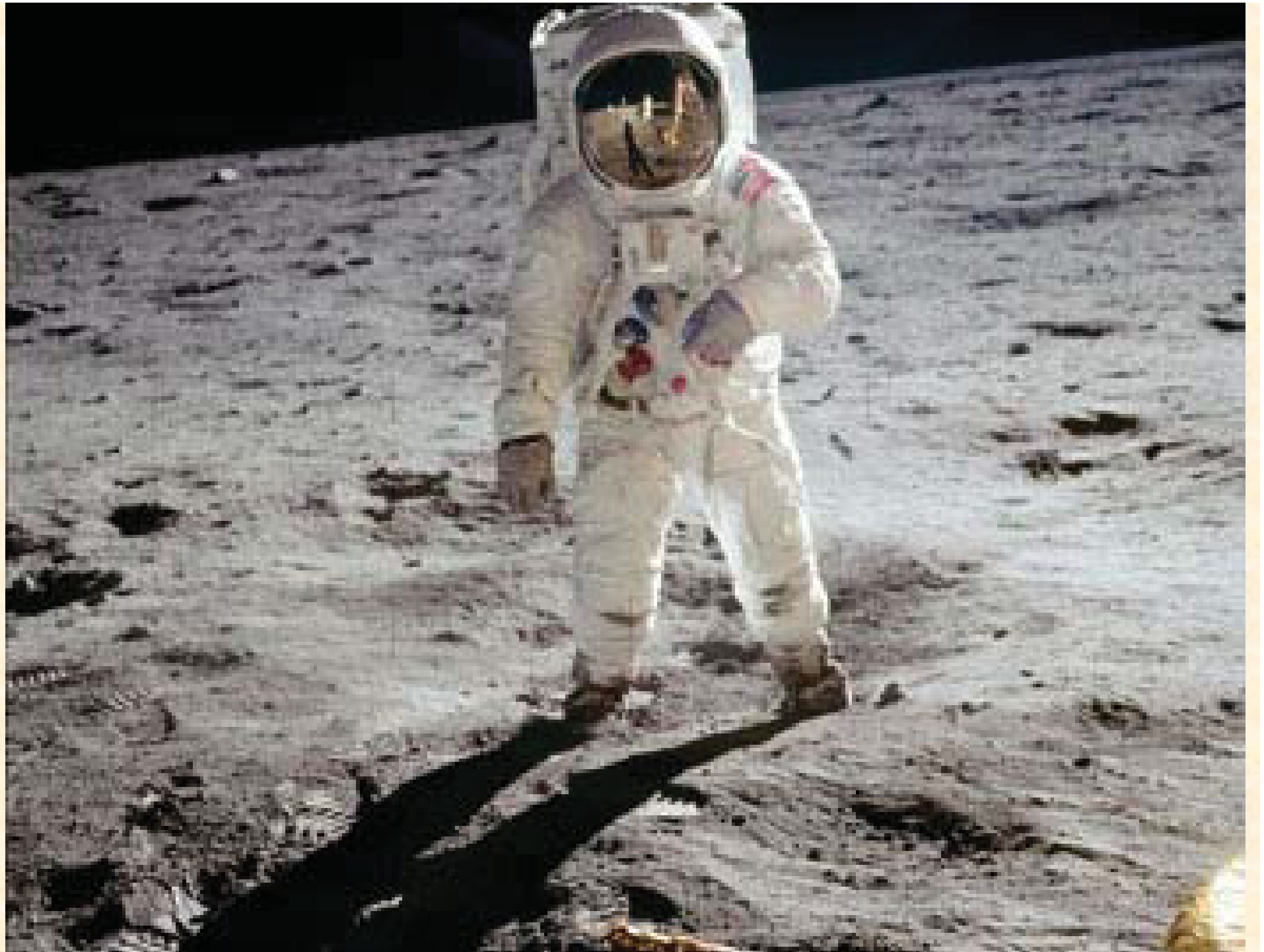
Submit requests for replacement of Army or Air Force awards by clicking on the 'Continue' button below. Indicate in the 'Comments' section of Step 3 the specific awards to which the veteran is entitled that you wish to replace.

Continue

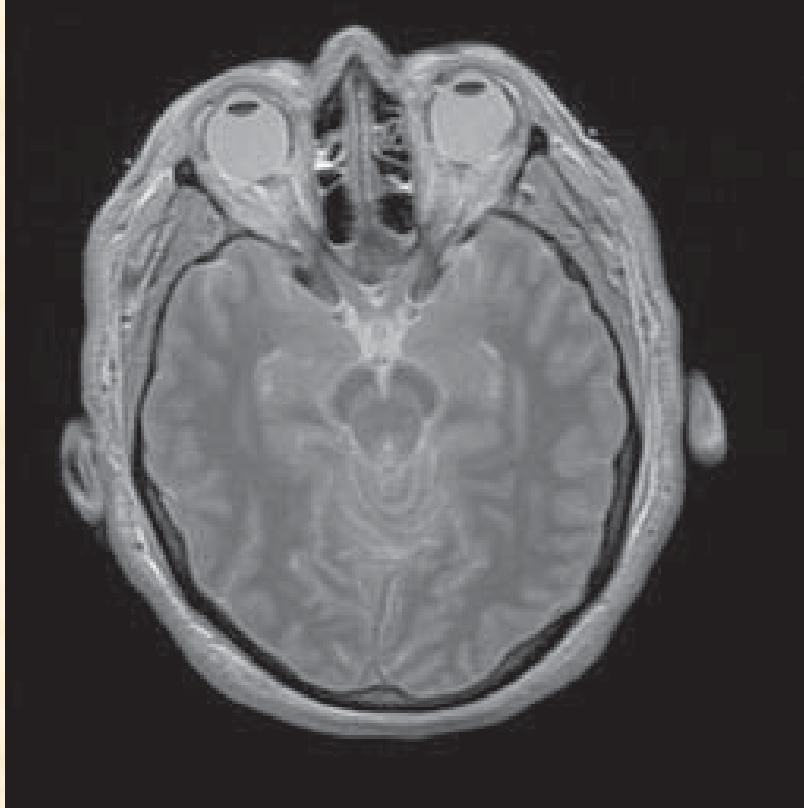
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U.S. National Archives & Records Administration
700 Pennsylvania Avenue NW, Washington, DC 20408 • 1-86-NARA-NARA • 1-866-272-6272

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Medical Records



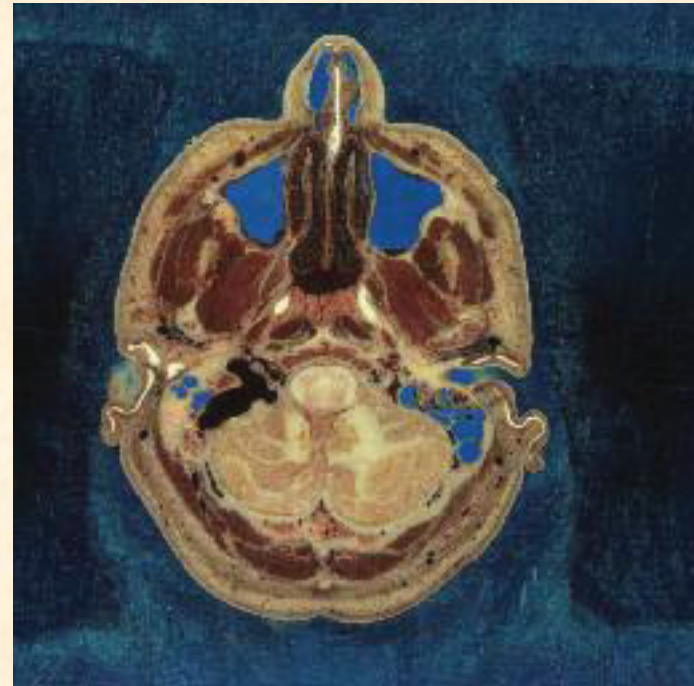
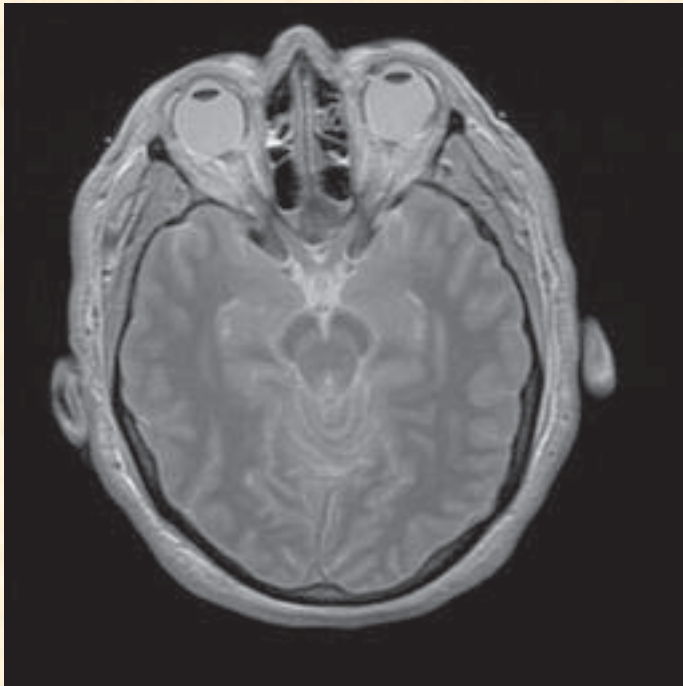


Internal Interoperability

- The meaning of records is determined by their provenance and their relationship to other records, as well as by their content
- The system must enable users to identify, retrieve and navigate large, heterogeneous sets of records

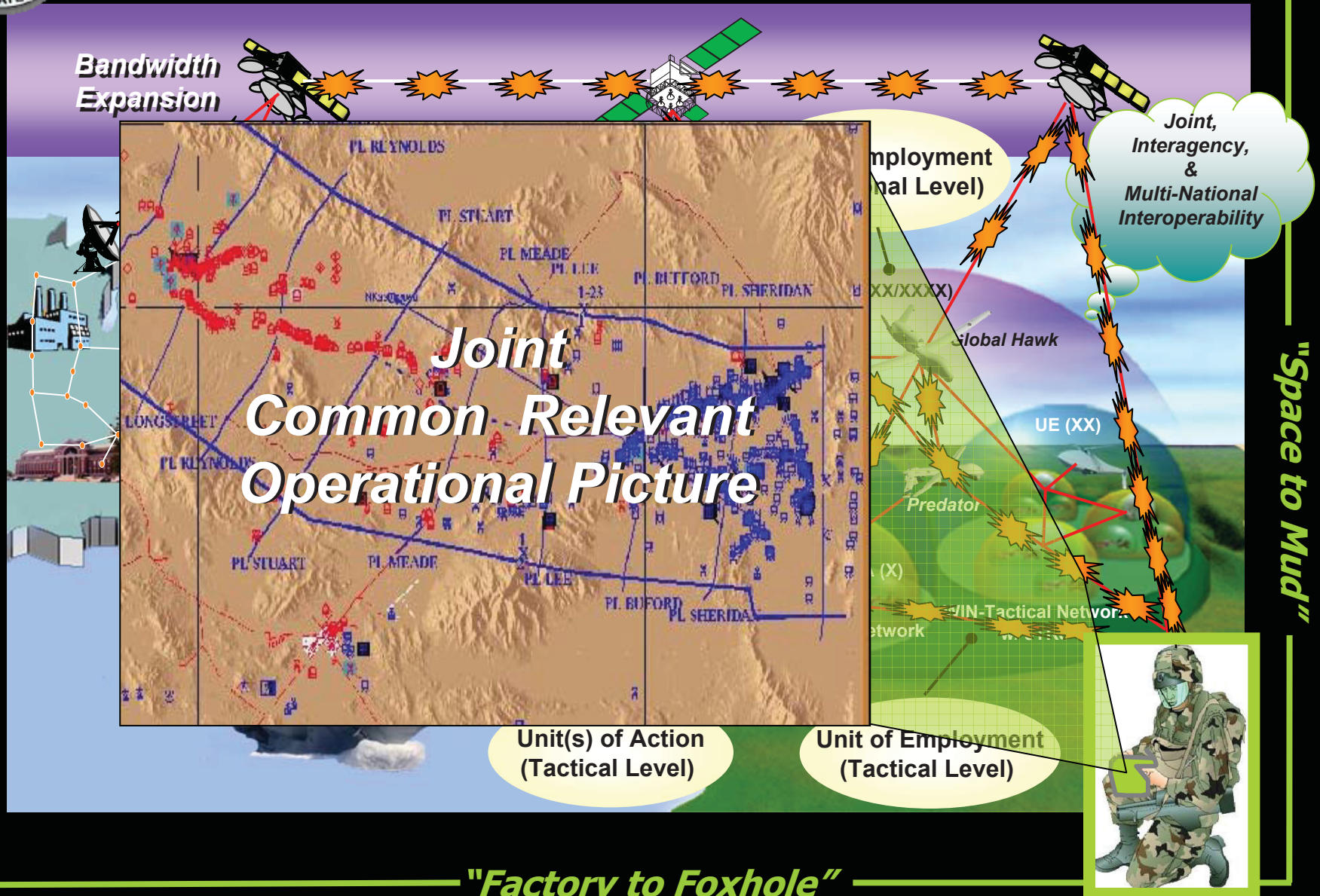


Medical Records



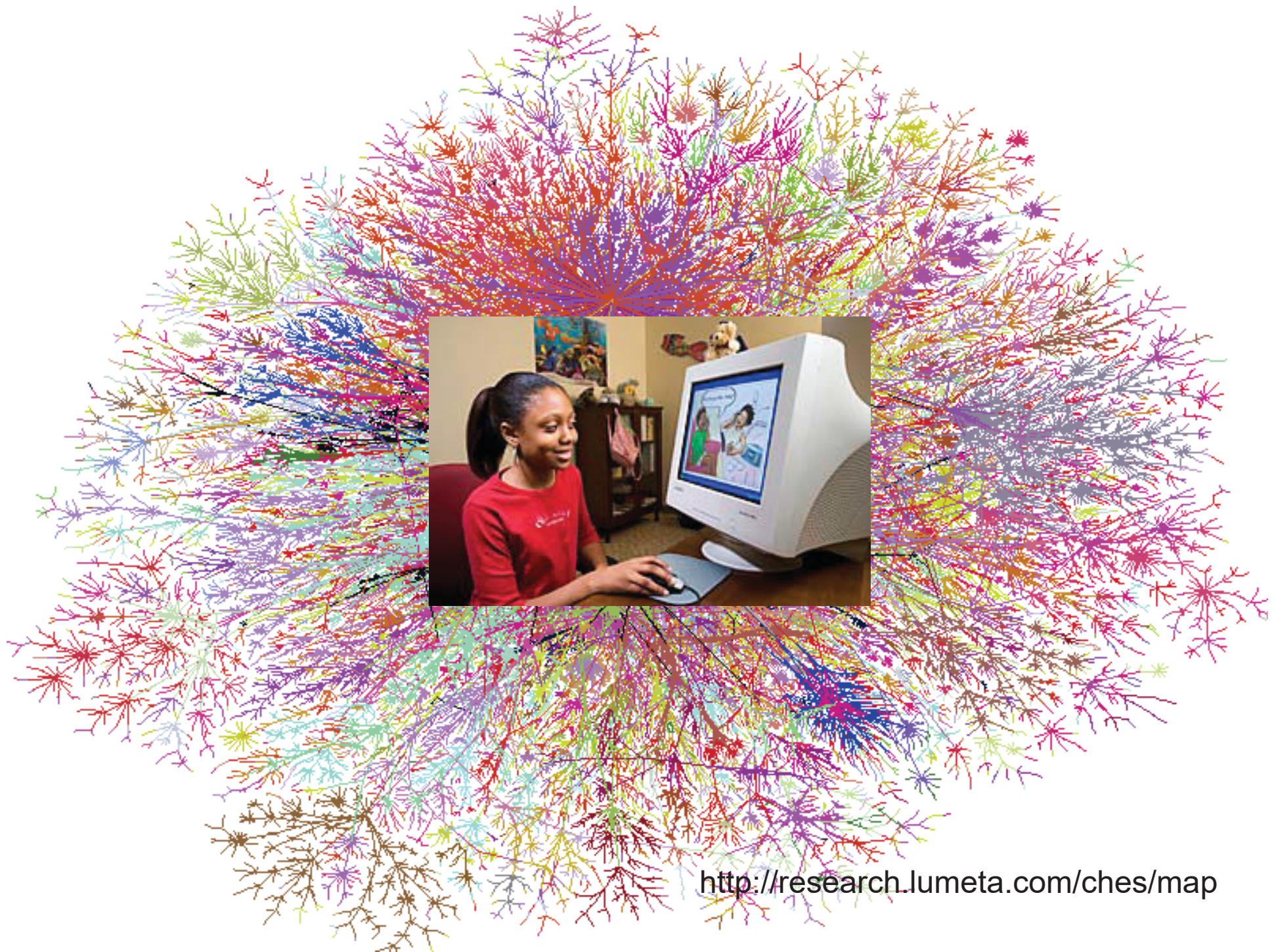


Exploiting the Enterprise



Demand Side Interoperability

- The ERA system must be able to deliver authentic electronic records to unknown systems at any time in the future.
- The system must enable future users to use search and delivery technologies that will not be invented for decades.

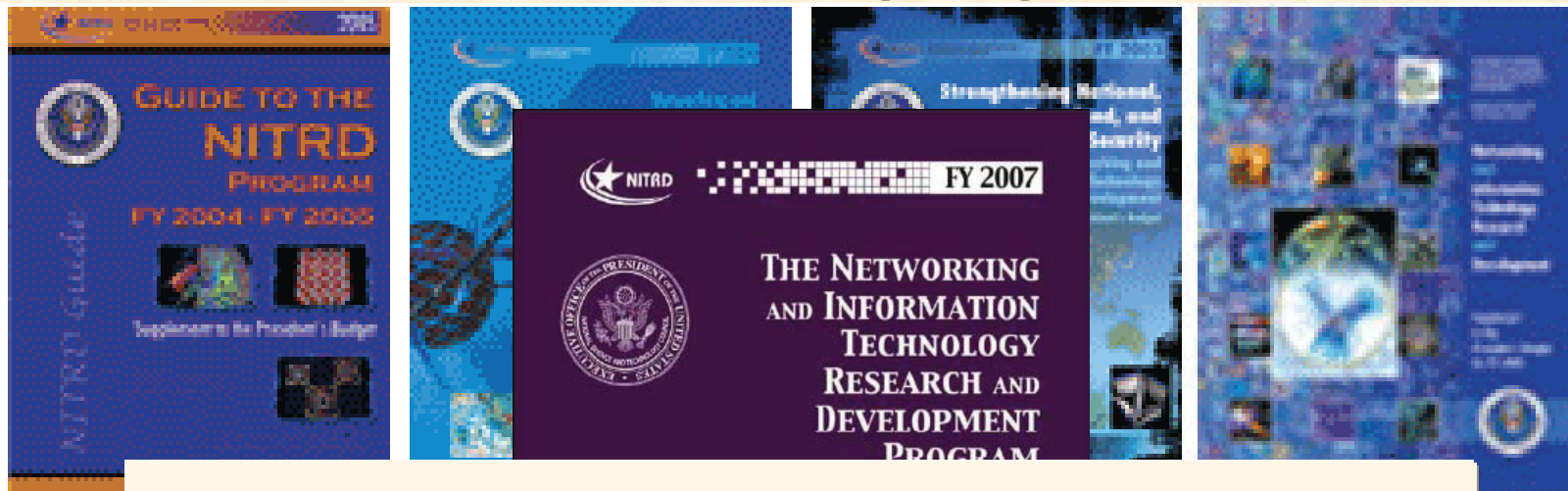


<http://research.lumeta.com/ches/map>

The Electronic Records Archives Program

- **Research**
 - **Business
modernization**
 - **System Acquisition**
-

ERA Research Program: *Leveraging*



“Strategies to assure long-term preservation of digital records constitute another particularly pressing issue for research....”



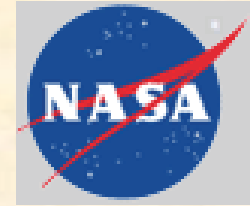
FY 2001

FY 1999

FY 1998



Research *Partnerships*



National
Science
Foundation



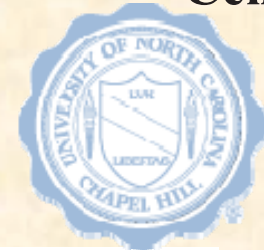
San Diego
Supercomputer
Center



National Computational
Science Alliance



Global
Grid
Forum



The Library of Congress



*Army Research
Laboratory*



DIGITAL LIBRARY
FEDERATION



InterPARES Project
International Research on Permanent Authentic Records in Electronic Systems

Some Current R&D Projects

- Prototype Distributed Digital Archives
 - San Diego Supercomputer Center, MIT, UMD, Stanford Linear Accelerator, UNC
- integrated Rules Oriented Data System (iRODS)
 - San Diego Supercomputer Center
- Preservation of digital engineering records
 - U.S. Navy, Defense Logistics Agency, WVU
- Automatic document characterization
 - Army Research Laboratory, Georgia Tech Research Institute
- Programmable gate array architecture for scalable ingest
 - National Center for Supercomputing Applications
- Architecture for digital document preservation
 - UC-Berkeley, University of Liverpool
- International Research on Preservation of Authentic Records in Electronic Systems
 - University of British Columbia et al.
- Global Registry of Digital Formats
 - Harvard et al.

Governmentwide Records Management Modernization

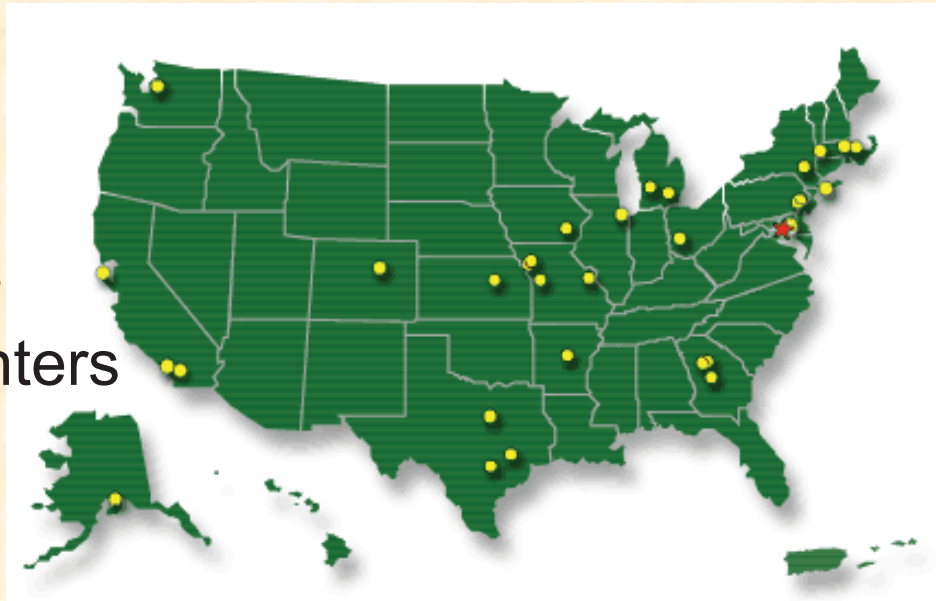
Core Mission Needs for Electronic Records

- 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 to anyone with an interest and legal right of access
 - ✓ Ensure adherence to 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**

NARA Business Modernization

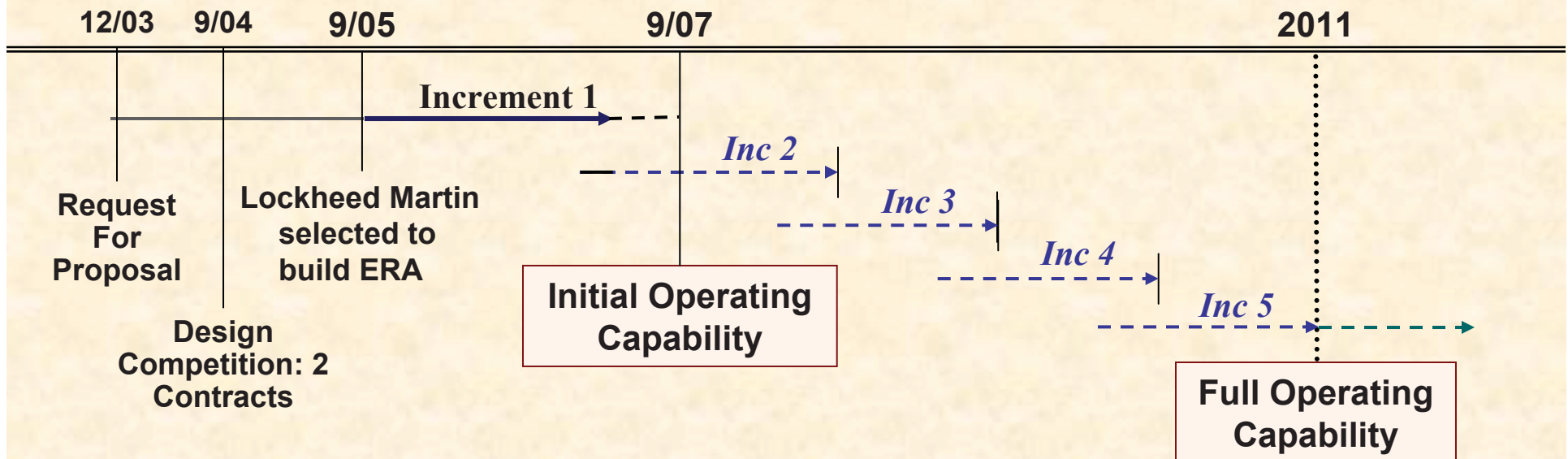
- ERA will be NARA's nationwide system to support the lifecycle management of all records and donated materials in

- National Archives
- Presidential Libraries
- Federal Records Centers



System Acquisition

System Acquisition

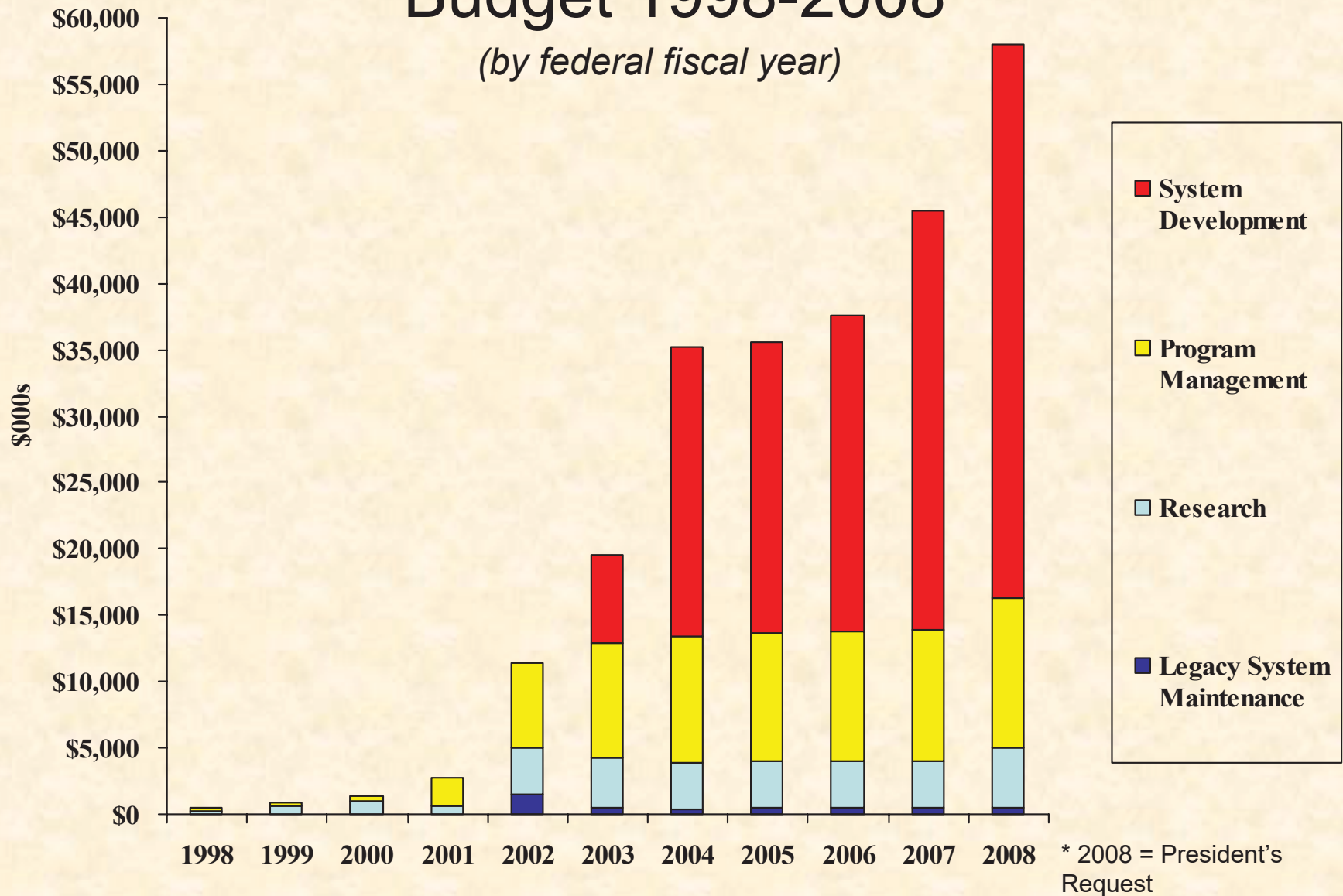


❖ Incremental Approach:

- ☐ Design competition
- ☐ System developed in 5 increments each producing useful functionality
 - Increment 1: 2 year development, Inc. 2-5: 18 - 24 months each
 - Development of next Increment starts when current Increment goes into testing
 - Increment deployment coincides with end of contract option
- ☐ Contract provides one year of operational support after completion of development

Electronic Records Archives Budget 1998-2008

(by federal fiscal year)



Some Benefits of ERA

- ✓ Ease of access to NARA services and holdings
- ✓ A one-stop-shopping, e-government-based approach
- ✓ Comprehensive, uniform lifecycle management of paper and electronic records
- ✓ Preservation of electronic records
- ✓ Aids for
 - Finding and accessing NARA holdings,
 - Managing the lifecycle of U.S. Government records
 - Maximizing access while protecting confidentiality
- ✓ Communication & collaboration forum

For Additional Information



www.archives.gov/era