



At the Spy  
Museum

Black Tie  
Optional!

**NCC-AIIM  
June Social**

**Friday, June 20, 2008**

Joint meeting with ARMA



[www.spymuseum.org](http://www.spymuseum.org)

***THE CLOCK IS TICKING: NARA ERA GOING LIVE!***

Ken Thibodeau, Director

Electronic Records Archives Program

National Archives and Records Administration

# *The Clock is Ticking.*

*Will we have a future?*

Will our future be crippled or impoverished by the inability to reach back and retrieve important information?




404 page not found - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites




Address <http://www.mamselle.ca/error.html> Go Links

Google harney and sons Bookmarks 15 blocked Check AutoLink AutoFill Send to harney sons Settings

 The page cannot be displayed because you need some fresh air

The page you are looking for is currently unavailable. Your ISP has told us that you're on-line several hours every day, and that just ain't right.

Please, for the love of god, try the following:

- Don't click the  Refresh button. Go outside now.
- If you are about to spend another \$100 at Amazon, then please contact Amazon Anonymous.
- To go outside, first click the **Cyber Hypnosis** menu, and then click **Cold Water in the Face**. On the **Numb Ass** tab, click **Sedentary Back Pain**. The **Get Out of Your Chair** settings should match those provided by your local area network (LAN) administrator.
- If your Evil Computer Addict Persona has enabled it, we can examine your network and quickly discover a way to wake you up from your computer-induced stupor.
- If you would like Windows to try and discover them, click  [Detect Computer-Induced Stupor](#)
- There are a host of things awaiting you in the outside world: fishing, skiing, skeet shooting, triatholons, PTA meetings, and dentist appointments, for example.
- If you are unable to get up, [click here](#) and your power strip will emit a large enough shock to scare you back to your senses. If that doesn't work, then we give up. You are officially in need of serious help. Dial 1-800-GET-HELP on your computer's keypad to reach a mental hospital near you.
- Click the  [Back](#) button to melt your computer.

Cannot find reality files  
Internet Explorer

Done Internet

# *What will happen if we can't retrieve documents we need?*

```

%PDF-1.2%
12 0 obj<< /Linearized 1 /O 14 /H [ 686 167 ] /L 10181 /E 4546 /N 4 /T 9823 >> endobj
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0000000853 00000 n
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0000001874 00000 n
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trailer<< /Size 23 /Info 10 0 R /Root 13 0 R /Prev 9813 /ID[ <fa5e210e971595862300cc9a355dc339:
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0000000714 00000 n
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00000009293 00000 n
00000009528 00000 n

```

*What will happen if*

*our computers can't properly display documents we need?*

Figure 5.2 *The Business Architecture*

*What will happen if  
we loose essential  
parts of documents  
we need?*

E-government offers the opportunity to streamline activities, improving productivity by enabling agencies to focus on their core competencies and mission requirements. E-government initiatives eliminate unnecessary redundancy, while improving service quality by simplifying processes and unifying agency islands of automation. Key

An astronaut in a white spacesuit stands on the moon's surface, which is covered in craters and rocks. The astronaut's shadow is cast on the ground. The background shows the dark sky of space and the horizon of the moon.

*What will happen if  
we can't access key records of  
important events in the 20<sup>th</sup> &  
21<sup>st</sup> centuries?*

*What will happen if*



*we loose the ability to  
analyze past mistakes?*



*What will happen if*



Source: CLindberg [http://commons.wikimedia.org/wiki/Image:135\\_Bridge\\_Collapse\\_4crop.jpg](http://commons.wikimedia.org/wiki/Image:135_Bridge_Collapse_4crop.jpg)

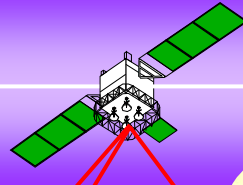
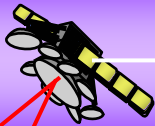
*we loose the ability to maintain  
critical infrastructure?*





# What will happen if

Bandwidth  
Expansion



Joint,  
Interagency,  
&  
Multi-National  
Interoperability

**Our military cannot  
access records essential  
to our national defense?**

Unit of Employment  
(Level)

Global Hawk

UE (XX)

Predator

WIN-Tactical Network  
w/ JTRS

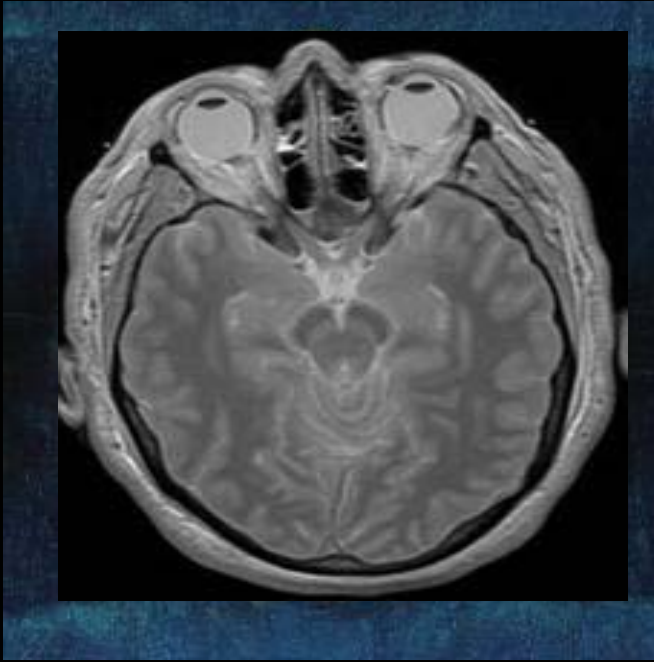
Employment  
(Tactical Level)



"Space to Mud"

"Factory to Foxhole"

# *What will happen if*



*Doctors cannot access complete patient's medical records over the life of the patient?*



All of these things will happen unless we develop a rich, robust, and adaptable set of reliable tools for sustained access to authentic electronic records.

# What are the Chances?







# Reasons for Pessimism

- The volume of data is increasing exponentially.
- The variety and complexity of digital data are increasing.
- No one knows how to preserve and provide sustained access to authentic electronic records for most digital formats.
- No one knows what information technology will be in the future .
  - People will want to use the best available technologies to discover and access records from the past
  - The best technologies will not be those that were used originally to create, process, and store the records.
- Resources needed to address the challenges are very large



# Reasons for Optimism



Increasing interdisciplinary collaborations are addressing the problem



More and more resources are being devoted to solving the problem



Recognition of the importance of the challenge is growing



No technological barrier has been identified that would prevent successful solutions from being developed



# Reasons for optimism

**President's 2009 Request**  
***Strategic Priorities Underlying This Request***

**“Information infrastructure: New approaches, technologies, and tools for long-term preservation, curation, sustainability, accessibility, and survivability of significant electronic data and information collections....”**

FEBRUARY 2005

FEBRUARY 2006

AUGUST 2007

February 2008

**The Networking and Information Technology  
Research & Development Program**

# Reasons for optimism



National Archives and Records Administration  
Electronic Records Archives Program







**Where in the World is ERA?**

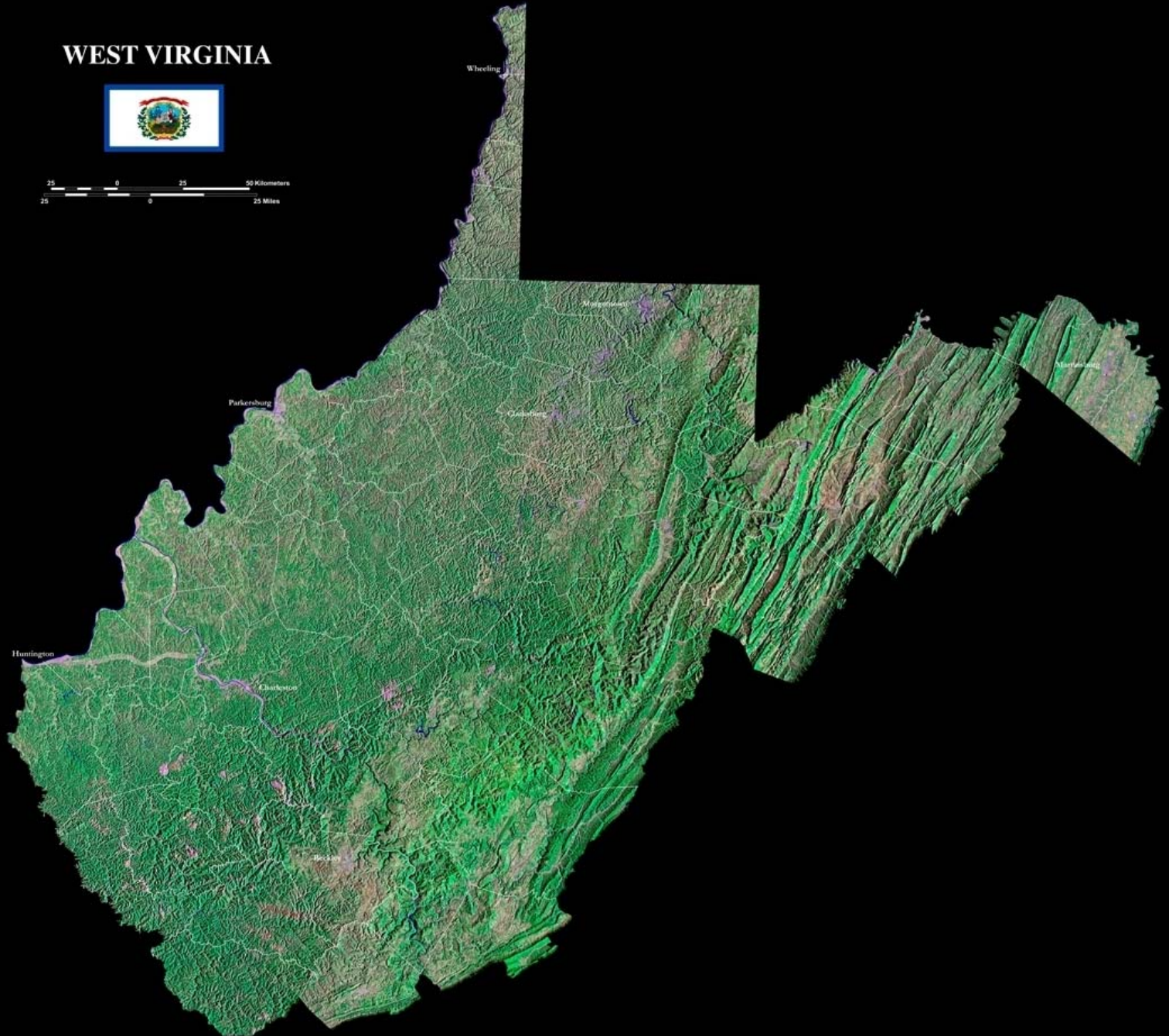








# WEST VIRGINIA



# Rocket Center, WV







ERMA ORA BYRD  
CONFERENCE AND  
LEARNING CENTER

434

SALT

RCBI  
PARKING  
ONLY







# *Status of ERA Development:*

## Requirements

- No indecision about what is required.
- NARA's requirements were
  - Defined in an iterative process involving the entire agency, from top to bottom, and including input from the IT industry and the general public
  - Definitized in the ERA Requirements Document in December 2003
  - Stable ever since.



# *Status of ERA Development:*

## Costs

- The ERA development has suffered both cost underruns and cost overruns.
- Underrun:
  - the cost of the Initial Operating Capability, as originally defined by NARA, turned out to be twice the level of funding that became available in the two year period: \$134 M v. \$ 63 M.
    - NARA and Lockheed Martin renegotiated the contract to define a smaller, but still worthwhile IOC system within available funding.
- Overrun:
  - The delay in reaching IOC is expected to increase its price by an estimated \$16 M.



# *Status of ERA Development:*

## **Deliverables**

- Unlike some other major system developments in the Federal Government, NARA is getting the system it contracted for.
- The delivery of the first operational system has been delayed from the original target of September 2007.
  - Since reaching agreement with NARA on a revised schedule, the contractor has not missed a single deadline.
- The IOC system will be worthwhile. It will be used immediately by NARA and four other agencies





# GAO Observations on the Current State of the ERA Program

- “NARA Is Working to Overcome ERA Schedule Delays through Parallel Development Projects, but Uncertainties Remain”
  - “ERA Base System Is Generally on Schedule to Achieve IOC, but Testing Delays Are a Risk”
  - “EOP System Is Being Developed, but Completing the Development in Time for the Presidential Transition Is Uncertain”
    - Testimony to U.S. Senate, Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security, May 14, 2008



Will NARA overcome the Risks  
to Initial Operating Capability?



When Will ERA Reach Initial  
Operating Capability (IOC)?

**June 27, 2008**

A satellite image of Earth from space, showing the Western Hemisphere. The image is centered on the Americas, with North America at the top and South America at the bottom. The date 'June 27, 2008' is overlaid in large, bold, orange text with a white outline, positioned across the center of the image.









# What will the System Do at IOC?

- **Focus:**
  - Federal Records
  - National Archives and nationwide records management
- **Functions:**
  - Creation, review and approval of records schedules
  - Manage transactions for transfer of physical and legal custody of all types of records
  - Actual transfer, inspection, and archival storage of electronic records



# IOC Records Management

- Create, submit, review and approve
  - Records Schedule
  - Transfer Plan
  - Transfer Request
  - Legal Transfer Instrument
- Link to Records Schedule Item
  - Transfer Plan
  - Transfer Request
  - Legal Transfer Instrument
- Enforce Policies

# Records Schedule: Current

Request for Records Disposition Authority <small>(See instructions on reverse)</small>		Leave Blank (NARA Use Only)	
To: National Archives and Records Administration (NIR) Washington, DC 20408		Job Number	
1. From: (Agency or establishment)		Date Received	
2. Major Subdivision		<b>Notification to Agency</b> In accordance with the provisions of 44 U.S.C. 3303a, the disposition request, including amendments, is approved except for items that may be marked "disposition not approved" or "withdrawn" in column 10.	
3. Minor Subdivision			
4. Name of Person with whom to confer	5. Telephone (include area code)	Date	Archival of the United States
<b>6. Agency Certification</b> I hereby certify that I am authorized to act for this agency in matters pertaining to the disposition of its records and that the records proposed for disposal on the attached _____ page(s) are not now needed for the business of this agency or will not be needed after the retention periods specified; and that written concurrence from the General Accounting Office, under the provisions of Title 8 of the GAO Manual for Guidance of Federal Agencies: <input type="checkbox"/> is not required <input type="checkbox"/> is attached <input type="checkbox"/> has been requested			
Signature of Agency Representative		Title	Date (mm/dd/yyyy)
7. Item Number	8. Description of Item and Proposed Disposition	9. GRS or Superseded Job Citation	10. Action taken (NARA Use Only)





# E-Records Schedule

- Basic requirements have NOT been changed
  - What is required now will still be required
  - What is optional now will still be mostly optional
- What's different?
  - Some new required information
  - Structured fields for data capture
  - **Controlled values**
  - **System validation**
  - **Declared & enforced dependencies**
  - **Schedule Items**
  - **Deterministic disposition instructions**



# New: Controlled Values

## Records Schedule

\* Required fields

General Info

General

\*Records Schedule ID: [ ]

Schedule Subject: [ ]

\*Agency or Establishment: State - Department Of

\*Legacy Data: [ ]

Default Schedule:

Status: [ ]

\*Internal agency concurrences will be provided: [ ]

\*Record Group: 59

Records Schedule applies to:

Major Subdivision Schedule  Agency-wide  General Records

\*Major Subdivision: Major Agency Division

Minor Subdivision: Minor Agency Division

Background

Background Information: [ ]

GAO Concurrence

Not Required  Requested  Received

Items: [ ]

Records Scheduler

\*First Name: Jane

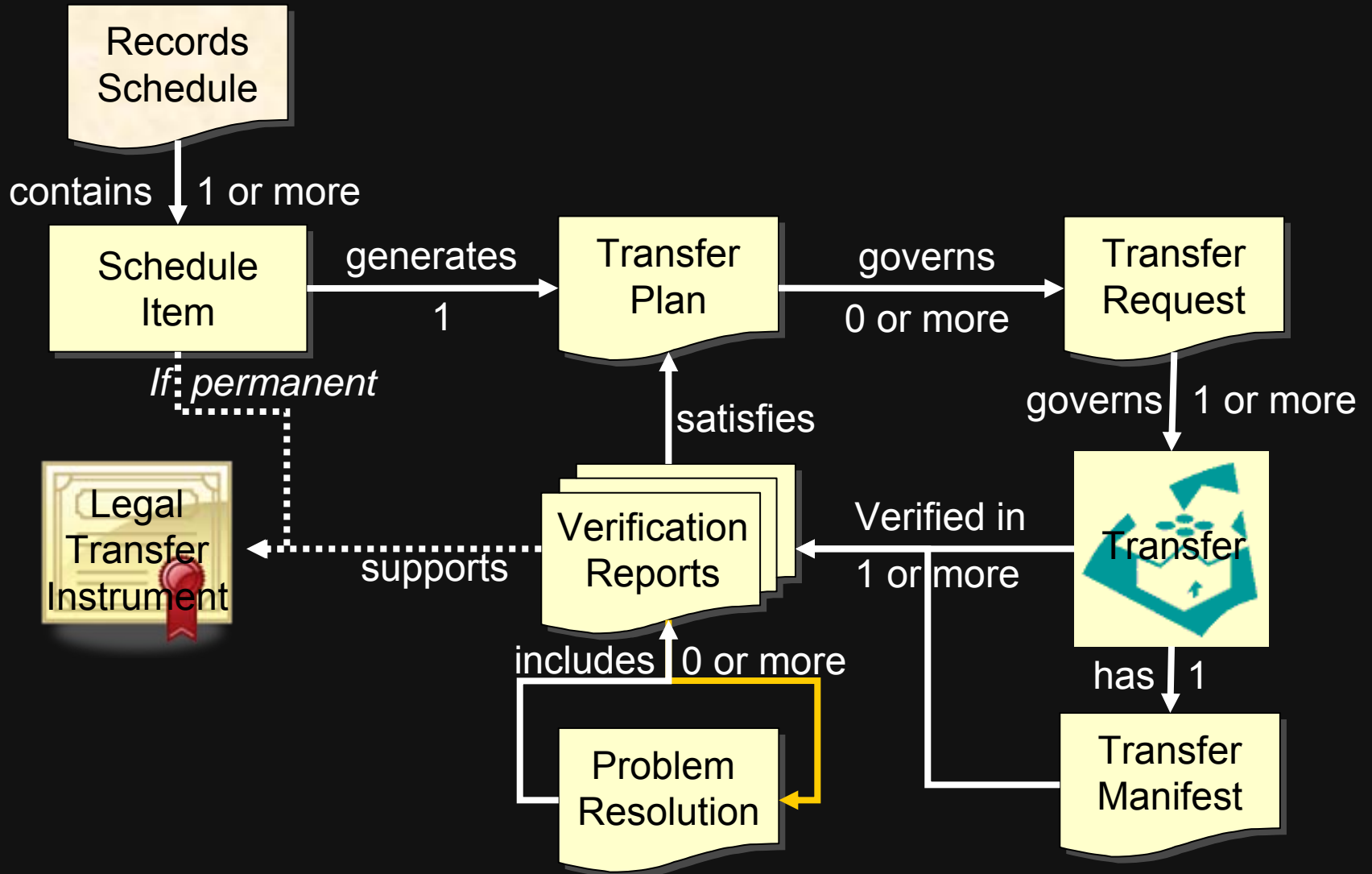
\*Last Name: Doe

\*Title: Records Manag

Fields prepopulated based on user profile



# New: Lifecycle Management Dependencies





# New: E-Records Schedule Items

- An item is an item is an item
  - = Title + description of a set of records and a disposition instruction for them
    - No sub-items
- “Overview”
  - = Title + description associating two or more items.
  - ✓ Open optional hierarchies of Overviews





# New: Deterministic Disposition Instruction

## Temporary Records

**General**

Item ID:  \*Title:

\*Description:

Does agency have an associated manual?  Yes  No

Records Schedule ID: DAI-PENDING-2008-0051  
Legacy Data: No

\*Manual ID:   
\*Manual Version:   
\*Manual Item ID:

\*GAO Concurrence Required:

Is this a change to an approved schedule?  Yes  No

Is this item media neutral?  Yes  No

Do any of the records covered by this item currently exist in electronic format(s) other than e-mail and word processing?  Yes  No

**Final Disposition**

\*Final Disposition:  Permanent  Temporary

**Temporary Disposition Instructions**

\*Cutoff Instructions:

**Transfer Instructions**

Records to which these transfer instructions apply:

\*Transfer to:

\*Time after cutoff when transfer occurs:

\*Estimated First Transfer:

**Retention Period**

Destroy immediately on cut-off

Destroy  after cut-off

Destroy between  years and  years after cut-off

Retain at least  years after cut-off, but longer is authorized

Retain no more than  years after cut-off

Destroy when no longer needed

Destroy  years after cut-off or when  occurs, whichever is sooner

Destroy  years after cut-off or when  occurs, whichever is later

Destroy  years after cut-off or  years after  occurs, whichever is sooner

Destroy  years after cut-off or  years after  occurs, whichever is later

Other

## Permanent Records

**General**

\*Title:  Item ID:

\*Description:

Does agency have an associated manual?  Yes  No

Records Schedule ID: DAI-PENDING-2008-0044  
Legacy Data: No

\*Manual ID: Records Management Handbook  
\*Manual Version: Version 1.0  
\*Manual Item ID: A240314

\*GAO Concurrence Required:

Is this a change to an approved schedule?  Yes  No

Is this item media neutral?  Yes  No

Do any of the records covered by this item currently exist in electronic format(s) other than e-mail and word processing?  Yes  No

**Final Disposition**

\*Final Disposition:  Permanent  Temporary

**Permanent Disposition Instructions**

\*Cutoff Instructions:

**Transfer Instructions**

Records to which these transfer instructions apply:

\*Transfer to:

\*Time after cutoff when transfer occurs:

\*Estimated First Transfer:

**Accession Instructions**

Accession immediately on cut-off

Accession  after cut-off

Accession between  years and  years after cut-off

Accession in  year blocks  years after cutoff of most recent records in the block

Other

\*Estimated First Transfer:

\*If records are not transferred to NARA physical custody when legal custody is transferred, specify institution that will maintain physical records:

**Additional Information**

**\*Estimated Current Volume**

Electronic/Digital:

Paper:  cubic feet

Microform:  microfiche  microfilm

Traditional Special Media: Units:

Unknown:

**Annual Accumulation**

Electronic/Digital:

Paper:  cubic feet

Microform:  microfiche  microfilm

Traditional Special Media: Units:

Unknown:

**Date Span**

\*First year of records accumulation:

\*End year of records accumulation:

Records ceased accumulation in

Records are still being accumulated

# Transfer of Records

- *Records are transferred to NARA*
  - *For storage in a Federal Records Center, under agency's legal control*
  - *For preservation in the National Archives, with legal custody transferred to NARA*
- Current processes primarily paper-based
  - Standard Form 135 tracks the physical transfer of records to an FRC
  - SF 258 tracks the physical transfer and legal accessioning into the National Archives
- Means of transfer predominantly by physical media, even for electronic records



# Transfer of Records via ERA

## What's different?

- Separate processes for physical and legal transfer
- One form and workflow for all physical transfers
  - Temporary and permanent records
  - Hard copy and electronic records
  - Federal Records Centers and National Archives
  - New e-Form, “Transfer Request” will be used for all physical transfers
- Transfer of electronic records can be online in the system or on digital media.

# Permanent Electronic Records: As Is

- Paper Standard Form 258 basis for managing transfers
- Separate systems
  - track individual accessioning and preservation steps
  - create preservation copies of transferred files
  - verify if structured and semi-structured data conform to specifications
  - provide online access to some accessions of structured and semi-structured data
- Storage on magnetic tapes on shelves

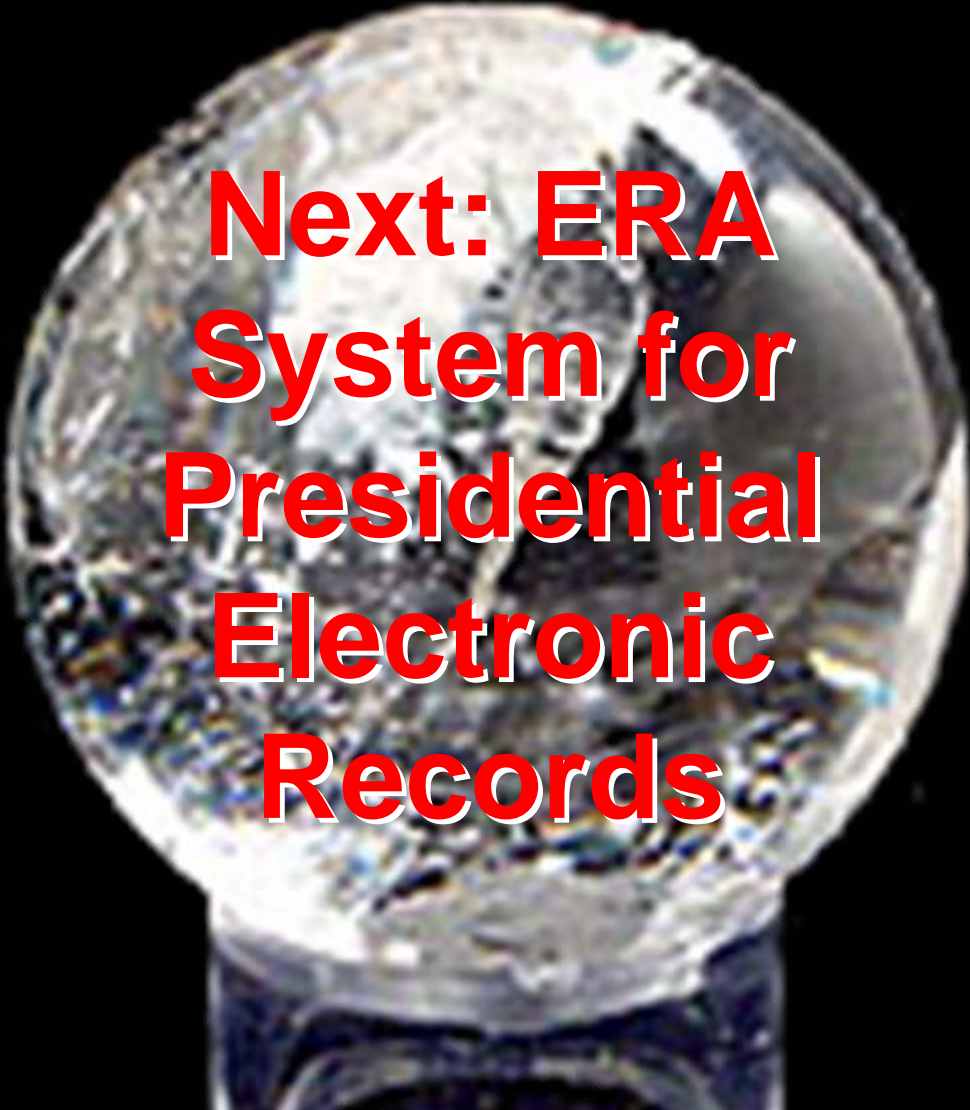




# Electronic Records Processing in ERA

- **All processing, storage and access within one system**
- Tool to extract and transmit electronic records from agency systems
- Controlled by Records Schedule, Transfer Plan and Transfer Request
- Automatic scan and purge transferred files of malware
- Automatic scan for presence of sensitive content with appropriate isolation & controls
- Automatic verification of transferred files
- Visual inspection of transferred files
- Automatic metadata extraction and management
- Identify, communicate and resolve transfer problems

# What Happens After Initial Operating Capability?



**Next: ERA  
System for  
Presidential  
Electronic  
Records**

Will NARA overcome the Risks  
to the EOP ERA System?



When Will the EOP ERA System  
be Ready?







# What will the EOP System Do?

- **Focus:**
  - **Electronic records** of the Executive Office of the President, G W. Bush
    - Includes the **Records Management Application** for paper records.
  - **Presidential Libraries**
- **Functions: (at scale)**
  - Rapid ingest & indexing
    - Transformation to more accessible form.
  - Archival storage
  - Full content search
  - Basic case management for special requests

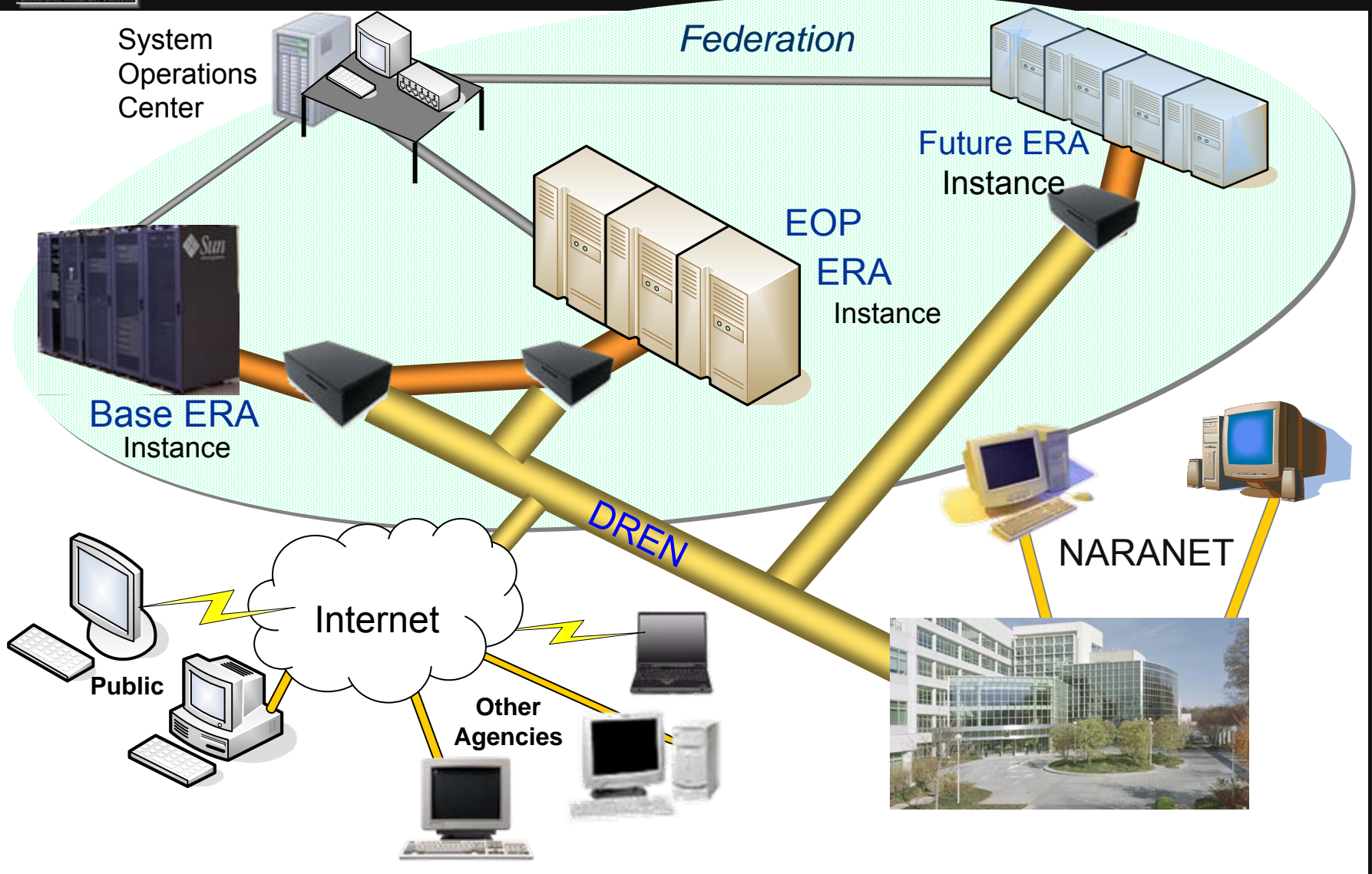


# What's in Store for the Future?

- Governmentwide expansion
- Public access
- Full Lifecycle Management Plans
- Preservation Framework
  - Introduction and use of a variety of tools for different preservation needs
- Search Framework
  - Introduction and use of a variety of search tools
- Archival Description
- Appraisal case management and workflow
- FOIA and other access case management
- Review and redaction of sensitive content



# How Will the System Grow and Evolve?





# What is the Development Timeline?

9/05

9/06

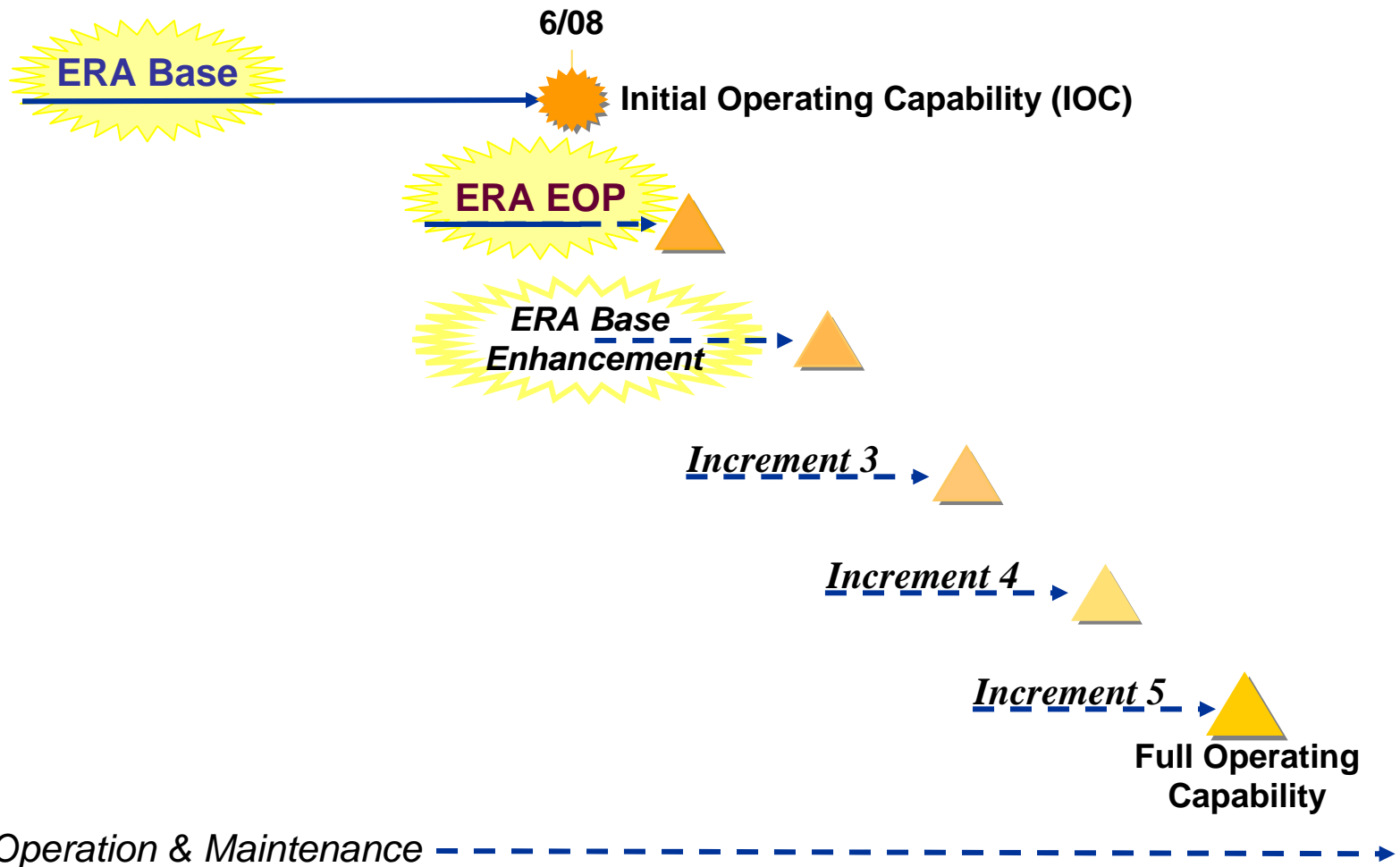
9/07

9/08

9/09

9/10

9/11







What are the major challenges to reaching Full Operating Capability?





# Major Challenges to Reaching Full Operating Capability?

- Acquiring sustainable, extensible techniques for long-term preservation and access to authentic records.
- Meeting customer expectations
- Fostering partnerships for preservation, access and customer support.
- Funding.



# Lessons Learned



# Lessons Learned

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- ✓ Capability-Maturity is not an inherited condition
  - ✓ But it can be bought
    - to a degree
- ✓ Mature development methods suffer typical aging problems:
  - Hardness of hearing
  - Loss of agility



# Lessons Learned

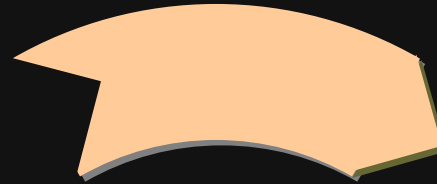
- ✓ Requirements may creep, but rules entangle
  - ✓ Rules have exceptions
  - ✓ Rules change

**DON'T AUTOMATE  
THE SPIDER WEB!**



# Lessons Learned

- ✓ Specifying and satisfying requirements is a feedback loop



Requirements

Technical  
Solutions



# ERA Goes Live June 27, 2008

For more information:  
[www.archives.gov/era](http://www.archives.gov/era)

