

Taking Control:
Managing the Records Lifecycle
in an Automated Environment

Briefing for NARA Staff

Ken Thibodeau

March 19, 2003

NARA Needs to Manage Records

- Transferred to its physical custody
- Accepted in its legal custody
- Lifecycle management includes
 - Managing the records
 - Managing sets of records (files, series, etc.)
 - Managing the transactions in which records are involved.

Records

- All records are documents (= units of recorded information)
- Not all documents are records
- The difference between a document and a record is that the relationship between a record and its creator and the activity in which it was created is specified.

Electronic Records

- An electronic **record** is a **document** encoded in **digital form**, requiring a computer for processing
- There is no necessary or fixed relationship between or among the **record**, **document** or **digital** properties of an electronic record.

Dimensions of an Electronic Record

- Document
- Content
- Structure
- Presentation

AGENDA

Date	Time	Agenda Items
Thursday December 5th	9:30-12:30	<ul style="list-style-type: none"> Welcome Advisory Board introductions Agenda overview
	12:30-14:00	Lunch
	14:00-17:00	<ul style="list-style-type: none"> Continuation of intellectual framework discussion
Friday December 6th	9:30-12:30	<ul style="list-style-type: none"> Discussion of the latest version of the milestones document and its implications, relating it to the framework
	12:30-14:00	Lunch
	14:00-17:00	<ul style="list-style-type: none"> Discussion of IntraPARES 2 involving in prototyping of proposed preservation methods from sources outside of the project Review of modeling software analysis and report Discussion of data models
Saturday December 7th	9:30-12:30	<ul style="list-style-type: none"> Discussion and possible approval of new case study proposals Review of ongoing case studies
	12:30-14:00	Lunch
	14:00-17:00	<ul style="list-style-type: none"> Discussion of the role of the Advisory Board and discussion of its outcomes Acceptance of new members and review of team members Administrative issues

• Record

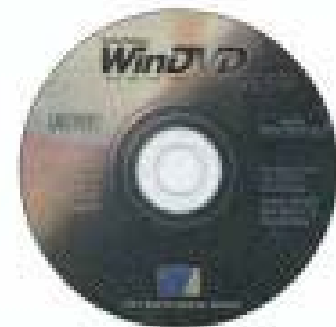
- Provenance
 - Relationship to Creator
 - Relationship to Creating Activity
- Relationship to Other Records

- Arrangement
- Archival Bond

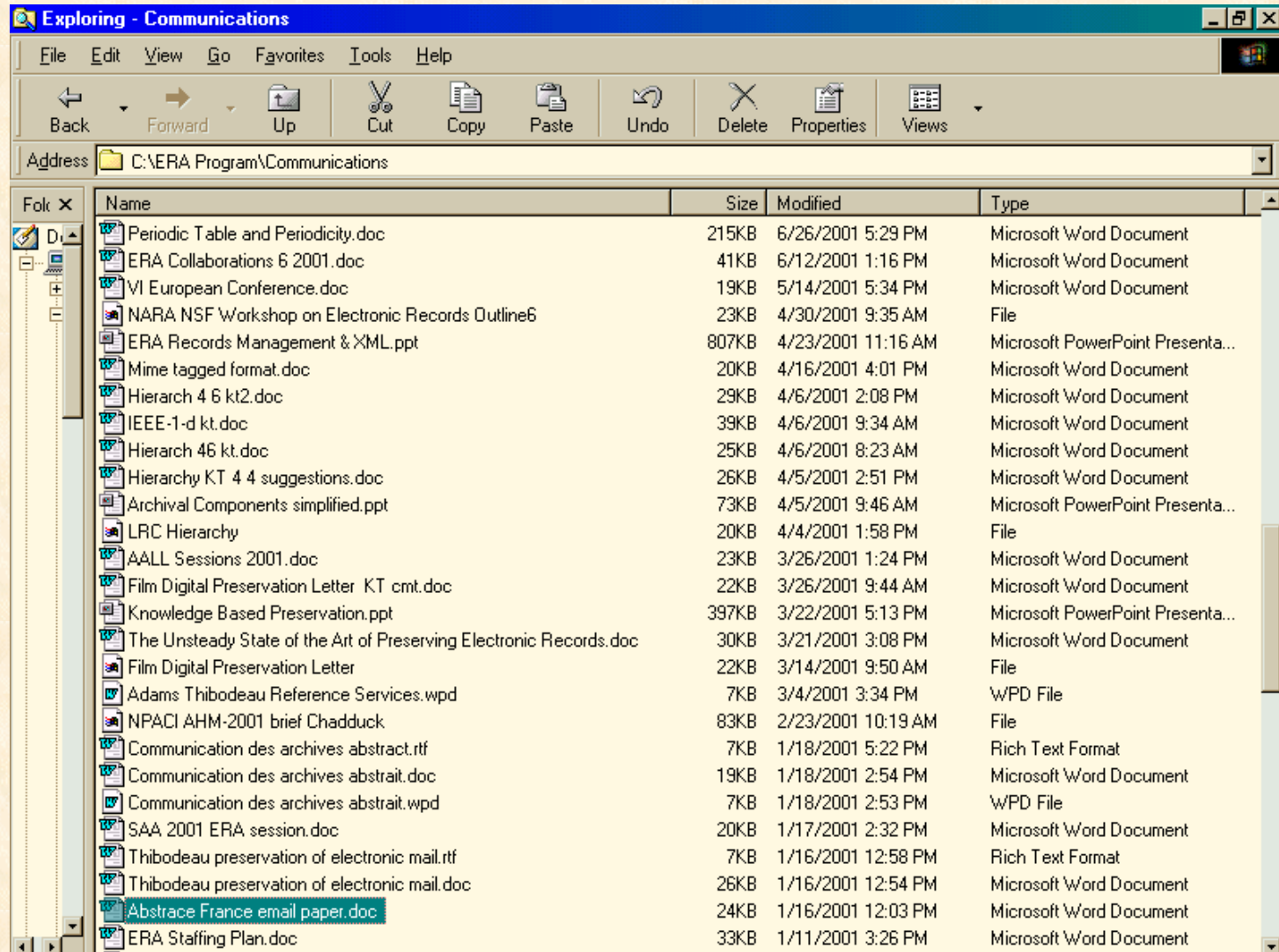
• Digital Object

- Representation or encoding of data in binary form
- Logical Structure of encoded data
- Physical Inscription of the encoding on a medium of storage or transmission

Inscription on Physical media



Inscription in a Physical File



Exploring - Communications

File Edit View Go Favorites Tools Help

Back Forward Up Cut Copy Paste Undo Delete Properties Views

Address C:\ERA Program\Communications

Folk	Name	Size	Modified	Type
	Periodic Table and Periodicity.doc	215KB	6/26/2001 5:29 PM	Microsoft Word Document
	ERA Collaborations 6 2001.doc	41KB	6/12/2001 1:16 PM	Microsoft Word Document
	VI European Conference.doc	19KB	5/14/2001 5:34 PM	Microsoft Word Document
	NARA NSF Workshop on Electronic Records Outline6	23KB	4/30/2001 9:35 AM	File
	ERA Records Management & XML.ppt	807KB	4/23/2001 11:16 AM	Microsoft PowerPoint Presenta...
	Mime tagged format.doc	20KB	4/16/2001 4:01 PM	Microsoft Word Document
	Hierarch 4 6 kt2.doc	29KB	4/6/2001 2:08 PM	Microsoft Word Document
	IEEE-1-d kt.doc	39KB	4/6/2001 9:34 AM	Microsoft Word Document
	Hierarch 46 kt.doc	25KB	4/6/2001 8:23 AM	Microsoft Word Document
	Hierarchy KT 4 4 suggestions.doc	26KB	4/5/2001 2:51 PM	Microsoft Word Document
	Archival Components simplified.ppt	73KB	4/5/2001 9:46 AM	Microsoft PowerPoint Presenta...
	LRC Hierarchy	20KB	4/4/2001 1:58 PM	File
	AALL Sessions 2001.doc	23KB	3/26/2001 1:24 PM	Microsoft Word Document
	Film Digital Preservation Letter KT cmt.doc	22KB	3/26/2001 9:44 AM	Microsoft Word Document
	Knowledge Based Preservation.ppt	397KB	3/22/2001 5:13 PM	Microsoft PowerPoint Presenta...
	The Unsteady State of the Art of Preserving Electronic Records.doc	30KB	3/21/2001 3:08 PM	Microsoft Word Document
	Film Digital Preservation Letter	22KB	3/14/2001 9:50 AM	File
	Adams Thibodeau Reference Services.wpd	7KB	3/4/2001 3:34 PM	WPD File
	NPACI AHM-2001 brief Chadduck	83KB	2/23/2001 10:19 AM	File
	Communication des archives abstract.rtf	7KB	1/18/2001 5:22 PM	Rich Text Format
	Communication des archives abstrait.doc	19KB	1/18/2001 2:54 PM	Microsoft Word Document
	Communication des archives abstrait.wpd	7KB	1/18/2001 2:53 PM	WPD File
	SAA 2001 ERA session.doc	20KB	1/17/2001 2:32 PM	Microsoft Word Document
	Thibodeau preservation of electronic mail.rtf	7KB	1/16/2001 12:58 PM	Rich Text Format
	Thibodeau preservation of electronic mail.doc	26KB	1/16/2001 12:54 PM	Microsoft Word Document
	Abstrace France email paper.doc	24KB	1/16/2001 12:03 PM	Microsoft Word Document
	ERA Staffing Plan.doc	33KB	1/11/2001 3:26 PM	Microsoft Word Document

Physical inscription of a Document

10

DEPARTMENT OF WATER RESOURCES - CALIFORNIA DATA COLLECTION CENTER
TELEMETERED SNOW WATER EQUIVALENTS - APRIL 1, 1990

BASED FROM STATION NAME	AGENCY	ELEV (FEET)	SNOW W DEPTH (INCH)	OVERLAY	PERCENT OF WATER EQUIVALENT		
					PRECIPITAT IN APRIL	24 HOUR AVERAGE	1 YEAR AVERAGE
ALBUQUERQUE	USBR	7000	20.0	1.84	74%	2.68	---
ALBUQUERQUE	USBR	7000	27.0	1.89	78%	2.60	---
ALBUQUERQUE	USBR	6900	34.0	2.3	78%	3.0	12.0
ALBUQUERQUE	USBR	6200	21.1	6.56	22%	7.32	---
ALBUQUERQUE	USBR	6800	48.0	7.8	19%	8.0	12.0
ALBUQUERQUE	USBR	6300	26.0	8.4	49%	9.0	10.0
ALBUQUERQUE	USBR	6300	31.0	10.4	13%	10.8	11.0
ALBUQUERQUE	USBR	6200	40.0	11.4	7%	12.1	---
ALBUQUERQUE	USBR	6300	44.0	15.0	9%	16.0	10.0
SACRAMENTO RIVER							
TRUSS POND	USBR	7000	10.1	1.00	61%	1.03	10.0
ALBUQUERQUE	USBR	6800	8.4	1.1	10%	1.4	---
ALBUQUERQUE	USBR	6200	14.3	14.3	34%	14.6	---
ALBUQUERQUE	USBR	6200	10.7	14.1	40%	14.3	---
ALBUQUERQUE	USBR	6100	10.4	7.8	66%	8.0	---
ALBUQUERQUE	USBR	6100	27.0	4.7	10%	7.0	9.0
ALBUQUERQUE	USBR	6000	30.0	7.7	10%	9.1	---
ALBUQUERQUE	USBR	6000	42.0	8.8	10%	10.1	11.1
SUTTER RIVER							
GRIZZLY	USBR	7000	21.0	11.0	49%	11.8	14.2
GRIZZLY	USBR	6800	28.7	12.0	40%	12.1	14.7
GRIZZLY	USBR	6800	32.0	8.8	17%	9.7	12.7
GRIZZLY	USBR	6700	36.0	10.0	40%	10.1	12.0
GRIZZLY	USBR	6600	16.1	16.1	10%	16.8	18.7
GRIZZLY	USBR	6500	14.0	1.7	27%	4.2	7.4
GRIZZLY	USBR	6400	14.7	14.0	47%	14.1	16.0
GRIZZLY	USBR	6300	16.0	10.0	61%	11.1	14.0
UTAH AMBASSADOR							

Figure 3: Illustration of a "Table Sorting" behavior. A table is highlighted in the image, and sorted by clicking on the "TODAY" header. Note that highlighting of components (in the case of matched search term regions) is preserved as the image is manipulated.

4 The Multivalent Document Architecture

We present a brief overview of the multivalent document architecture. A more detailed description can be found in [Phe98].

With layers and behaviors of arbitrary type coming together from multiple sources, a key problem is their coherent composition into a single conceptual document for the user. This integration is accomplished in the multivalent document architecture by several features:

1. A well-defined suite of protocols (implemented as method signatures in Java) to which behaviors should conform. The model's built-in logic promises to compose conforming behaviors.
2. A separation of structural document content from media-dependent elements.

- word processing file
- word processing file that contains a spreadsheet file
- word processing file containing a pointer to
 - a spreadsheet file, or
 - a digital picture of the table

Digital Encoding of a Document

AGENDA

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Thursday, December 5th	9:30-12:30	<ul style="list-style-type: none">• Welcome• Advisory Board introductions• Agenda summary
		<ul style="list-style-type: none">• Discussion of the project's intellectual framework, including<ul style="list-style-type: none">◦ Deadlines and level of detail for integrated cross-domain, cross-focus models for electronic records creation, management, appraisal, and long-term preservation and access
	12:30-14:00	Lunch
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- word processing file
- Adobe “.pdf” file
- spreadsheet
- database report
- HTML web page
- scanned image

Logical Structure of a Document

- Logical Structure is the way the computer organizes the data that comprises the document.

– Text

- alphanumeric characters, paragraphs, headings, pages, etc.

– Spreadsheet

- pages, rows, columns, cells, characters, formulas

– Image

- Rectangle of black, white & color points (pixels)

10

DEPARTMENT OF WATER POLLUTION CONTROL AND WASTE MANAGEMENT CENTER
TELEMETERED DOWN WATER EQUIVALENTS - APRIL 1, 1970

BASE NAME	ADDRESS	ELEV	AVG S	AVG D	PERCENT	PERCENT	PERCENT
BASE NAME	ADDRESS	ELEV	AVG S	AVG D	PERCENT	PERCENT	PERCENT
WATER TOWER	1000	100	21.8	1.84	76%	2.88	—
WATER TOWER	1000	200	27.0	1.89	76%	2.80	—
WATER TOWER	1000	300	34.0	2.2	76%	3.2	15.1
WATER TOWER	1000	400	37.1	2.09	72%	3.02	—
WATER TOWER	1000	400	40.2	2.2	76%	3.2	15.1
WATER TOWER	1000	500	36.9	2.4	69%	3.3	15.1
WATER TOWER	1000	600	31.9	2.04	72%	2.6	11.4
WATER TOWER	1000	700	40.9	1.8	72%	2.2	12.1
WATER TOWER	1000	800	44.9	2.0	72%	2.6	11.4
WATER TOWER	1000	900	48.9	2.2	72%	3.0	15.1
WATER TOWER	1000	1000	52.9	2.4	69%	3.4	15.1
WATER TOWER	1000	1100	56.9	2.6	69%	3.8	15.1
WATER TOWER	1000	1200	60.9	2.8	69%	4.2	15.1
WATER TOWER	1000	1300	64.9	3.0	69%	4.6	15.1
WATER TOWER	1000	1400	68.9	3.2	69%	5.0	15.1
WATER TOWER	1000	1500	72.9	3.4	69%	5.4	15.1
WATER TOWER	1000	1600	76.9	3.6	69%	5.8	15.1
WATER TOWER	1000	1700	80.9	3.8	69%	6.2	15.1
WATER TOWER	1000	1800	84.9	4.0	69%	6.6	15.1
WATER TOWER	1000	1900	88.9	4.2	69%	7.0	15.1
WATER TOWER	1000	2000	92.9	4.4	69%	7.4	15.1
WATER TOWER	1000	2100	96.9	4.6	69%	7.8	15.1
WATER TOWER	1000	2200	100.9	4.8	69%	8.2	15.1
WATER TOWER	1000	2300	104.9	5.0	69%	8.6	15.1
WATER TOWER	1000	2400	108.9	5.2	69%	9.0	15.1
WATER TOWER	1000	2500	112.9	5.4	69%	9.4	15.1
WATER TOWER	1000	2600	116.9	5.6	69%	9.8	15.1
WATER TOWER	1000	2700	120.9	5.8	69%	10.2	15.1
WATER TOWER	1000	2800	124.9	6.0	69%	10.6	15.1
WATER TOWER	1000	2900	128.9	6.2	69%	11.0	15.1
WATER TOWER	1000	3000	132.9	6.4	69%	11.4	15.1
WATER TOWER	1000	3100	136.9	6.6	69%	11.8	15.1
WATER TOWER	1000	3200	140.9	6.8	69%	12.2	15.1
WATER TOWER	1000	3300	144.9	7.0	69%	12.6	15.1
WATER TOWER	1000	3400	148.9	7.2	69%	13.0	15.1
WATER TOWER	1000	3500	152.9	7.4	69%	13.4	15.1
WATER TOWER	1000	3600	156.9	7.6	69%	13.8	15.1
WATER TOWER	1000	3700	160.9	7.8	69%	14.2	15.1
WATER TOWER	1000	3800	164.9	8.0	69%	14.6	15.1
WATER TOWER	1000	3900	168.9	8.2	69%	15.0	15.1
WATER TOWER	1000	4000	172.9	8.4	69%	15.4	15.1
WATER TOWER	1000	4100	176.9	8.6	69%	15.8	15.1
WATER TOWER	1000	4200	180.9	8.8	69%	16.2	15.1
WATER TOWER	1000	4300	184.9	9.0	69%	16.6	15.1
WATER TOWER	1000	4400	188.9	9.2	69%	17.0	15.1
WATER TOWER	1000	4500	192.9	9.4	69%	17.4	15.1
WATER TOWER	1000	4600	196.9	9.6	69%	17.8	15.1
WATER TOWER	1000	4700	200.9	9.8	69%	18.2	15.1
WATER TOWER	1000	4800	204.9	10.0	69%	18.6	15.1
WATER TOWER	1000	4900	208.9	10.2	69%	19.0	15.1
WATER TOWER	1000	5000	212.9	10.4	69%	19.4	15.1
WATER TOWER	1000	5100	216.9	10.6	69%	19.8	15.1
WATER TOWER	1000	5200	220.9	10.8	69%	20.2	15.1
WATER TOWER	1000	5300	224.9	11.0	69%	20.6	15.1
WATER TOWER	1000	5400	228.9	11.2	69%	21.0	15.1
WATER TOWER	1000	5500	232.9	11.4	69%	21.4	15.1
WATER TOWER	1000	5600	236.9	11.6	69%	21.8	15.1
WATER TOWER	1000	5700	240.9	11.8	69%	22.2	15.1
WATER TOWER	1000	5800	244.9	12.0	69%	22.6	15.1
WATER TOWER	1000	5900	248.9	12.2	69%	23.0	15.1
WATER TOWER	1000	6000	252.9	12.4	69%	23.4	15.1
WATER TOWER	1000	6100	256.9	12.6	69%	23.8	15.1
WATER TOWER	1000	6200	260.9	12.8	69%	24.2	15.1
WATER TOWER	1000	6300	264.9	13.0	69%	24.6	15.1
WATER TOWER	1000	6400	268.9	13.2	69%	25.0	15.1
WATER TOWER	1000	6500	272.9	13.4	69%	25.4	15.1
WATER TOWER	1000	6600	276.9	13.6	69%	25.8	15.1
WATER TOWER	1000	6700	280.9	13.8	69%	26.2	15.1
WATER TOWER	1000	6800	284.9	14.0	69%	26.6	15.1
WATER TOWER	1000	6900	288.9	14.2	69%	27.0	15.1
WATER TOWER	1000	7000	292.9	14.4	69%	27.4	15.1
WATER TOWER	1000	7100	296.9	14.6	69%	27.8	15.1
WATER TOWER	1000	7200	300.9	14.8	69%	28.2	15.1
WATER TOWER	1000	7300	304.9	15.0	69%	28.6	15.1
WATER TOWER	1000	7400	308.9	15.2	69%	29.0	15.1
WATER TOWER	1000	7500	312.9	15.4	69%	29.4	15.1
WATER TOWER	1000	7600	316.9	15.6	69%	29.8	15.1
WATER TOWER	1000	7700	320.9	15.8	69%	30.2	15.1
WATER TOWER	1000	7800	324.9	16.0	69%	30.6	15.1
WATER TOWER	1000	7900	328.9	16.2	69%	31.0	15.1
WATER TOWER	1000	8000	332.9	16.4	69%	31.4	15.1
WATER TOWER	1000	8100	336.9	16.6	69%	31.8	15.1
WATER TOWER	1000	8200	340.9	16.8	69%	32.2	15.1
WATER TOWER	1000	8300	344.9	17.0	69%	32.6	15.1
WATER TOWER	1000	8400	348.9	17.2	69%	33.0	15.1
WATER TOWER	1000	8500	352.9	17.4	69%	33.4	15.1
WATER TOWER	1000	8600	356.9	17.6	69%	33.8	15.1
WATER TOWER	1000	8700	360.9	17.8	69%	34.2	15.1
WATER TOWER	1000	8800	364.9	18.0	69%	34.6	15.1
WATER TOWER	1000	8900	368.9	18.2	69%	35.0	15.1
WATER TOWER	1000	9000	372.9	18.4	69%	35.4	15.1
WATER TOWER	1000	9100	376.9	18.6	69%	35.8	15.1
WATER TOWER	1000	9200	380.9	18.8	69%	36.2	15.1
WATER TOWER	1000	9300	384.9	19.0	69%	36.6	15.1
WATER TOWER	1000	9400	388.9	19.2	69%	37.0	15.1
WATER TOWER	1000	9500	392.9	19.4	69%	37.4	15.1
WATER TOWER	1000	9600	396.9	19.6	69%	37.8	15.1
WATER TOWER	1000	9700	400.9	19.8	69%	38.2	15.1
WATER TOWER	1000	9800	404.9	20.0	69%	38.6	15.1
WATER TOWER	1000	9900	408.9	20.2	69%	39.0	15.1
WATER TOWER	1000	10000	412.9	20.4	69%	39.4	15.1

Figure 3: Illustration of a "Table Sorting" behavior. A table is highlighted in the image, and sorted by clicking on the "TUDAN" header. Note that highlighting of components (in the case, of matched search term regions) is preserved as the image is manipulated.

4 The Multivalent Document Architecture

We present a brief overview of the multivalent document architecture. A more detailed description can be found in [Phc98].

With layers and behaviors of arbitrary type coming together from multiple sources, a key problem is their coherent composition into a single conceptual document for the user. This integration is accomplished in the multivalent document architecture by several features:

1. A well-defined suite of protocols (implemented as method signatures in Java) to which behaviors should conform. The model's built-in logic promises to compose conforming behaviors.
2. A separation of structural document content from media-dependent elements.

Logical v. Conceptual Structure

- **Logical Structure** is the way the computer organizes the data that comprises the document.
- **Conceptual Structure** is the the organization of a document as perceived by a person

Electronic Records

- An electronic **record** is a **document** encoded in **digital form**, requiring a computer for processing
- There is no necessary or fixed relationship between or among the **record**, **document** or **digital** properties of an electronic record.
- **It is possible, and may be desirable or necessary, to vary digital properties in order to preserve electronic records.**

To Manage Electronic Records Efficiently and Effectively

- Automate processing
- Incorporate laws, regulations, policies, and sound archival and records management principles in the system.
- Make electronic records *self-describing* and *self-validating* to facilitate processing and management

Self-presenting documents

The screenshot shows a Netscape browser window with the title "Circular No. A-119 -- Federal Participation in the Development and Use of Voluntary Consensus Standards - Netscape". The address bar shows the URL "http://www.whitehouse.gov/omb/circulars/a119/a119.html". The main content area displays a circular dated February 10, 1998, titled "CIRCULAR NO. A-119 Revised". The subject is "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities". The text of the circular explains that revised OMB Circular A-119 establishes policies on Federal use and development of voluntary consensus standards and on conformity assessment activities. It references the National Technology Transfer and Advancement Act of 1995 and states that OMB is issuing this revision to make the terminology consistent with that Act. The circular is signed by Franklin D. Raines.

February 10, 1998

CIRCULAR NO. A-119

Revised

MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities

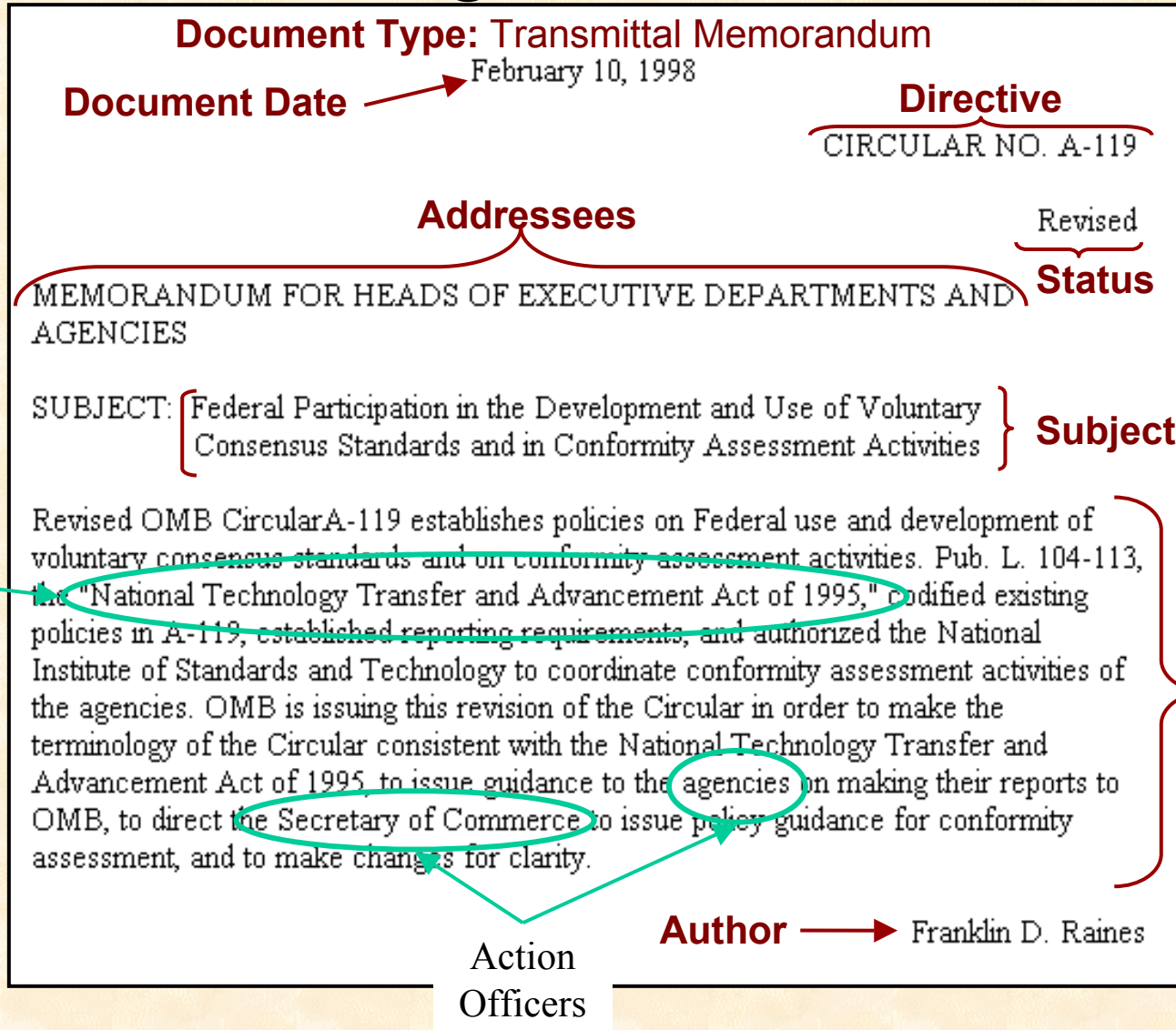
Revised OMB Circular A-119 establishes policies on Federal use and development of voluntary consensus standards and on conformity assessment activities. Pub. L. 104-113, the "National Technology Transfer and Advancement Act of 1995," codified existing policies in A-119, established reporting requirements, and authorized the National Institute of Standards and Technology to coordinate conformity assessment activities of the agencies. OMB is issuing this revision of the Circular in order to make the terminology of the Circular consistent with the National Technology Transfer and Advancement Act of 1995, to issue guidance to the agencies on making their reports to OMB, to direct the Secretary of Commerce to issue policy guidance for conformity assessment, and to make changes for clarity.

Franklin D. Raines

Plain text view of self presenting Document

```
Source of: wysiwyg://62/http://www.whitehouse.gov/omb/circulars/a119/a119.html - Netscape
<body bgcolor="#FFFFFF" text="#000000" link="#0000FF" vlink="#990000" alink="#666699" leftmargin=
<table width="723" border="0" cellpadding="0" cellspacing="0" height="1112">
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        <tr>
          <td width="113" height="108" valign="middle" align="center" bgcolor="#003399">
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            <div align="center">
          <td valign="middle" width="113" align="center" bgcolor="#003399" height="108">
            <div align="left"><a href="http://www.whitehouse.gov/index.html"></td>
        </tr>
        <tr>
          <td height="29" valign="middle" align="center" bgcolor="#003399" width="113">
            <div align="center"><font size="1" color="#FFFFFF" face="Verdana, Arial, Helvetica, s
          </td>
          <td valign="middle" align="center" bgcolor="#003399" width="113">
            <div align="center"><font size="1" color="#FFFFFF" face="Verdana, Arial, Helvetica, s
          </td>
          <td width="1"></td>
        </tr>
        <tr valign="middle">
          <td colspan="3" valign="middle" align="center">
            <table width="744" border="0" cellspacing="1" cellpadding="4" height="8" align="cente
              <tr bgcolor="#ff0000">
                <td height="8">
                  <table width="737" border="0" cellspacing="0" cellpadding="0" height="15">
                    <tr bgcolor="#FFFFFF">
                      <form name="seek" method="GET" action="/omb/query.html">
                        <td width="217" height="12" align="left" valign="bottom">
```

Self-describing Electronic Records



Sample Self-Describing Document

<Document type: transmittal memorandum>

<Document Date:> February 10, 1998</>

<Directive Transmitted:> Circular A-119</>

<Addressees:> Heads Of Executive Departments
And Agencies</> **<Subject:>** Federal

Participation in the Development and Use of
Voluntary Consensus Standards and Conformity
Activities </> **< Message Body:>** Revised OMB

Circular A-119 establishes policies on federal use

Self-validating Electronic Records

- A **self-describing document** has meaningful indicators of what the document is and/or contains
 - Ideally, the indicators (“tags”) are simple and clear enough to be correctly interpreted by any computer or by a person
- When the tags can be used to compare a self-describing document to a model (“template”) of what it should be, it can be a **self-validating document**

Template Example

Document Type: Transmittal Memorandum

Document Date → February 10, 1998

Directive
CIRCULAR NO. A-119

Address
AS

Revised Status
S

Subject
MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

Subject
SUBJECT: Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities

Message Body
Revised OMB Circular A-119 establishes policies on Federal use and development of voluntary consensus standards and on conformity assessment activities. Pub. L. 104-113, the "National Technology Transfer and Advancement Act of 1995" codified existing policies in A-119, established reporting requirements, and authorized the National Institute of Standards and Technology to coordinate conformity assessment activities of the agencies. OMB is issuing this revision of the Circular in order to make the terminology of the Circular consistent with the National Technology Transfer and Advancement Act of 1995, to issue guidance to the agencies on making their reports to OMB, to direct the Secretary of Commerce to issue policy guidance for conformity assessment, and to make changes for clarity.

Author → Franklin D. Raines

- A "Transmittal Memorandum" must contain
 - Reference to the directive which it transmits
 - A subject header
 - Indication of addressees
 - Identity of the transmitting official
 - Date transmitted by the official
 - A message body
- The message body may identify the legal basis and one or more action officers

If the template is in executable form, the computer can determine automatically if a record is what it should be.

Controls on Automated Lifecycle Management

- Methods to ensure that
 - What must or must not happen in any transaction or process does or does not happen, and
 - What must be true about any record or sets of records remains true.
- There can be different types of controls; e.g.,
 - Workflow Management
 - Business Rules
 - Templates
 - Preservation Strategies

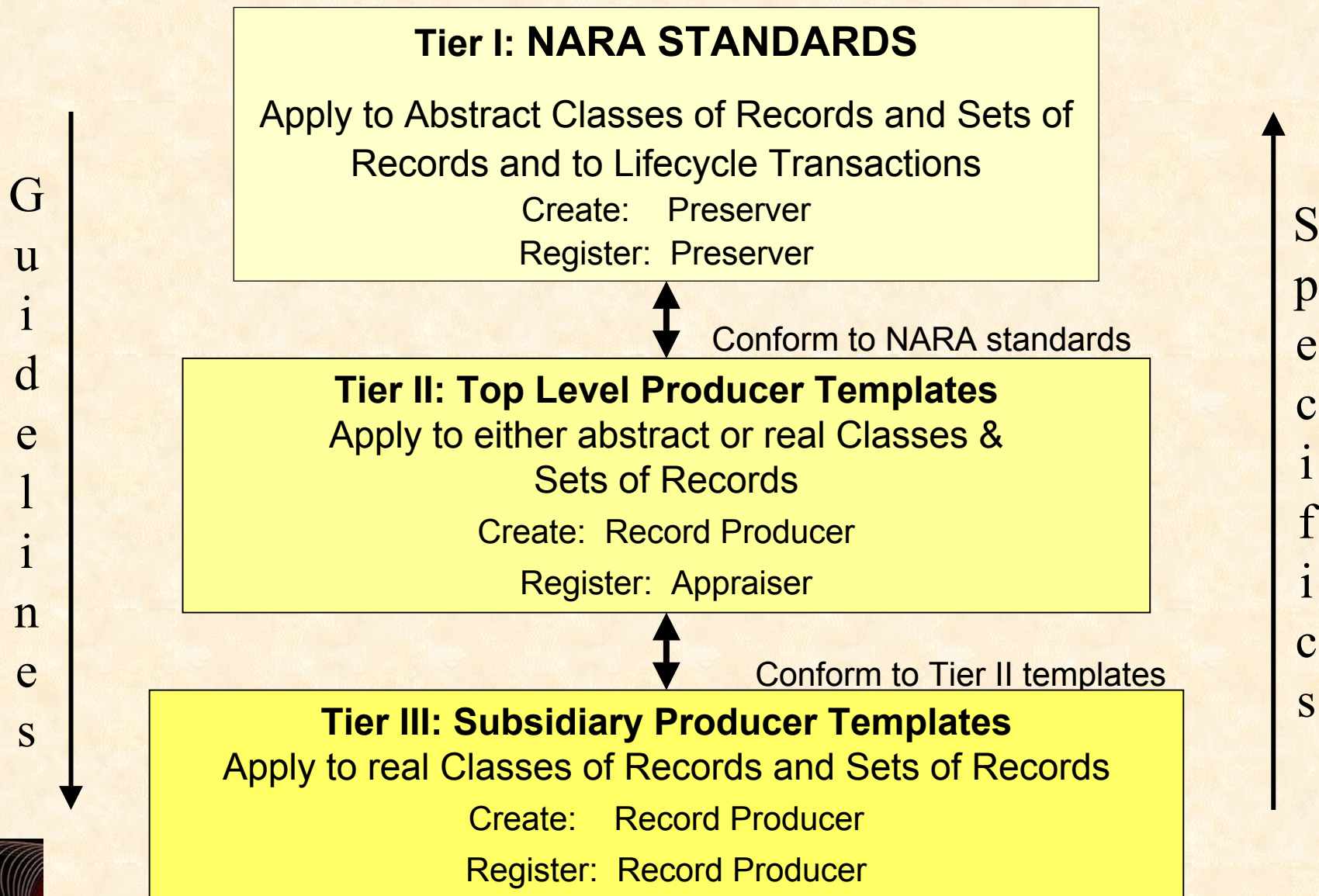
Automated Controls: Business Rules

- “Records should not be transferred to the National Archives unless they have been appraised as permanent in an authorized records schedule.”
- “The records that NARA preserves must be the same records, in all essential respects, as those transferred to it; i.e., NARA must preserve authentic records.”
 - “State Department diplomatic messages have the documentary form of a telegram.”

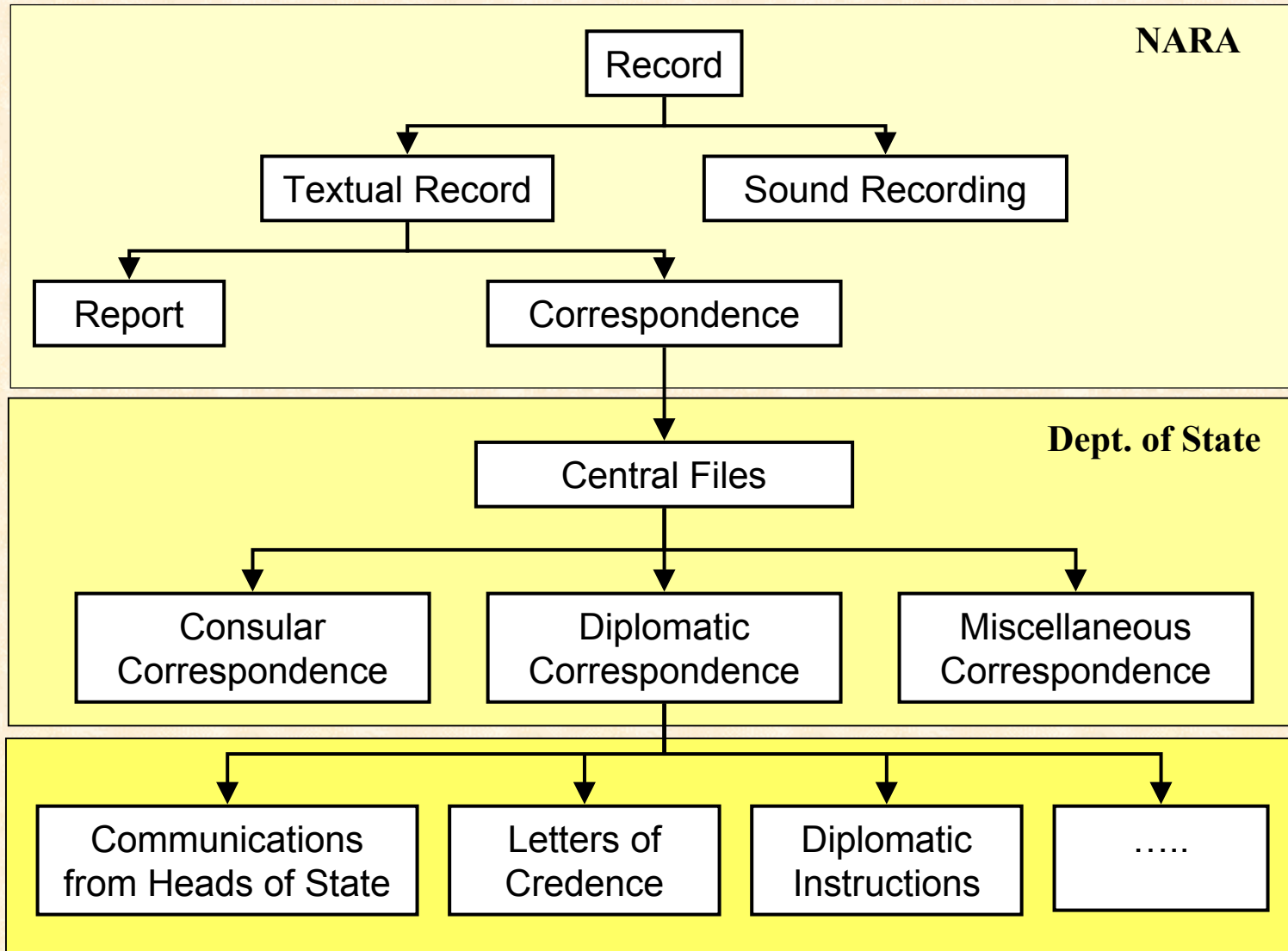
Automated Controls: “Template”

- An abstraction or articulation of the properties of a record, set of records, or a transaction involving records, which must be controlled.
 - The template for all records requires that the provenance, date, and archival bond be specified.
 - The template for State Dept. diplomatic messages requires that all content be plain text.
 - The template for all transfers of records to the National Archives is the S.F. 258

Hierarchy of Controls

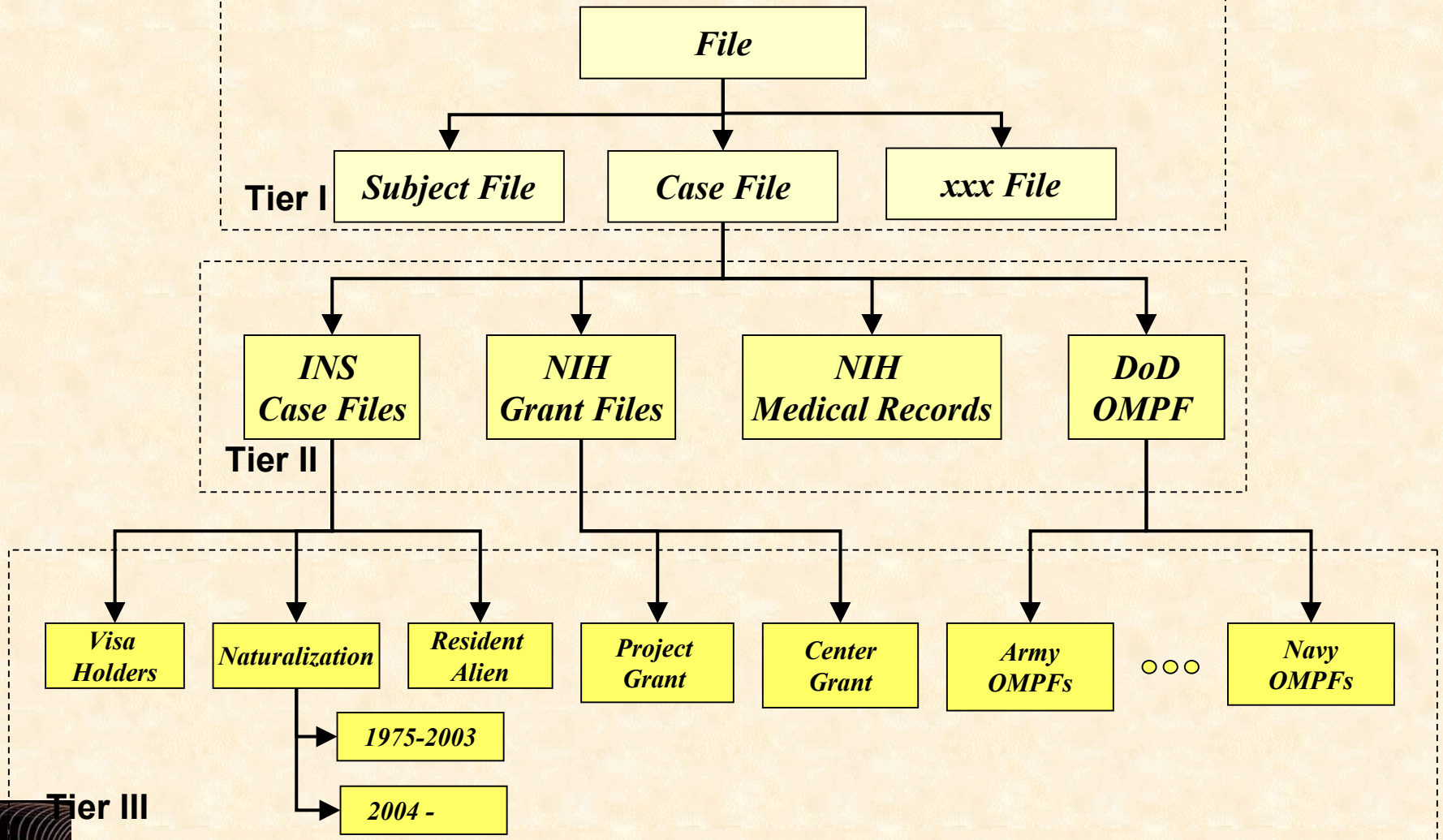


Records Template Hierarchy



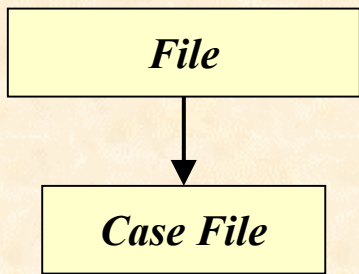
Files Template Hierarchy

NARA STANDARDS



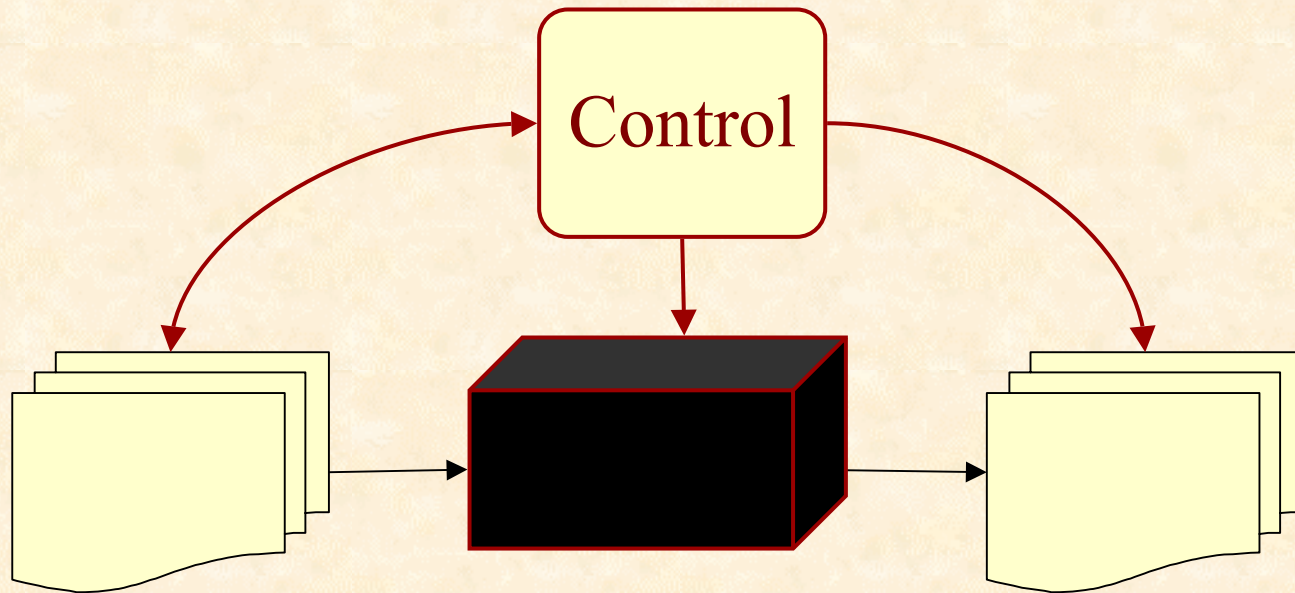
Top “FILE” Standard

- How is a file identified?
- Where is the file located in the filing system?
- What does the file cover?
 - E.g., a topic, a case
- What types of records must, may, or may not be included in the file?
- What are the opening and closing dates of the file?
- What is the file’s disposition?



Case File Standard

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> • File <ul style="list-style-type: none"> – Identifier – Location – Coverage – Required Records – Dates – Disposition Authority | <ul style="list-style-type: none"> • Required Elements <ul style="list-style-type: none"> – Case Identifier – Subseries of – Nature of case – Case Opening Record – Case Closing Record – Case Start Date – Case End Date – Disposition Authority | <ul style="list-style-type: none"> • Optional Elements <ul style="list-style-type: none"> – Producer Required Records – Producer Optional Records – Producer Prohibited Records – Cross Reference – Unspecified Records – |
|--|---|--|

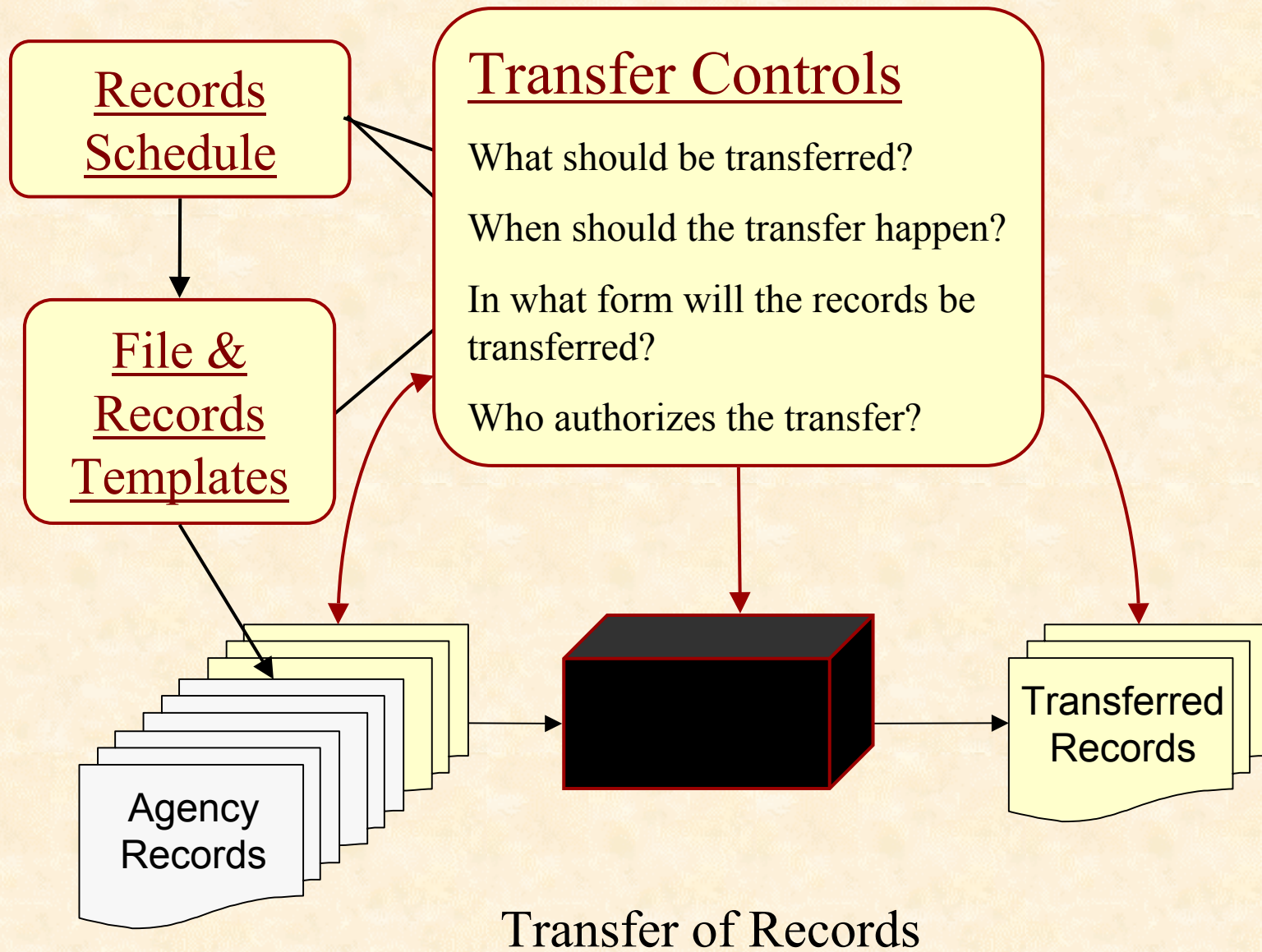


Transaction

Process

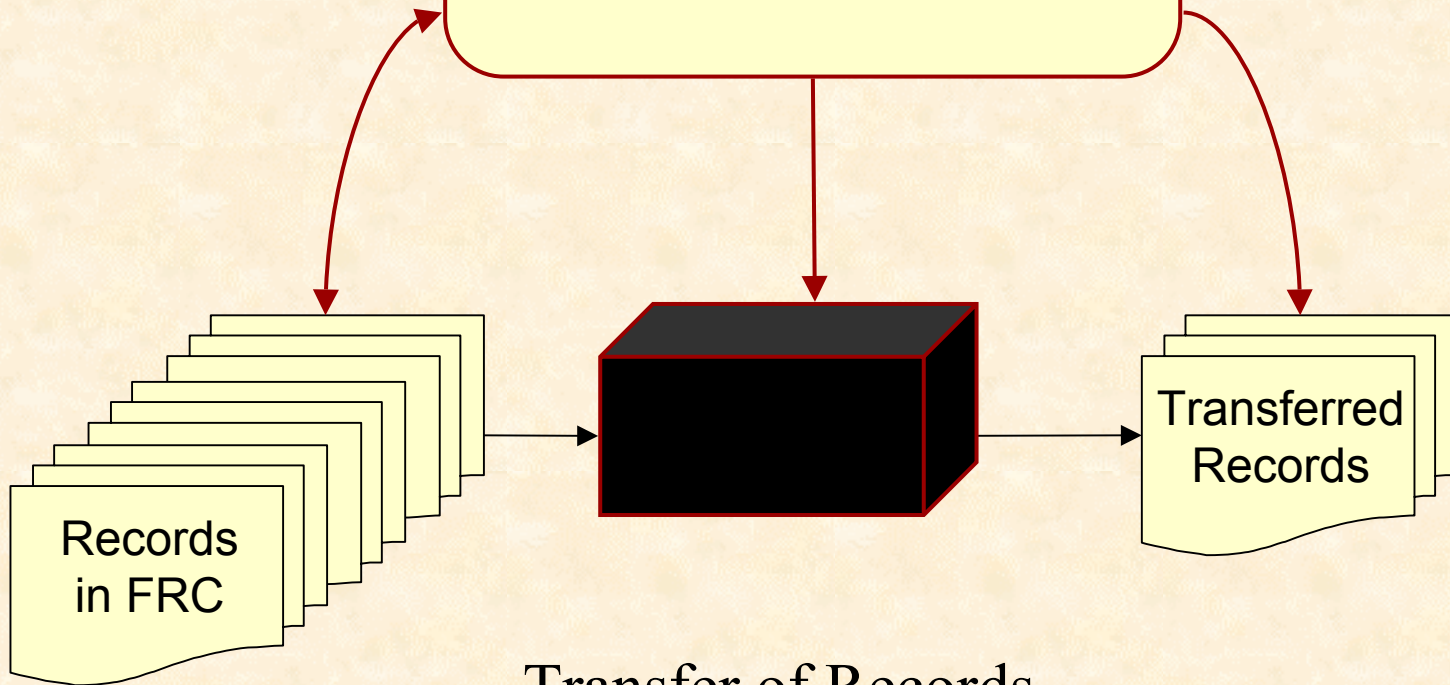
Time

ERA System

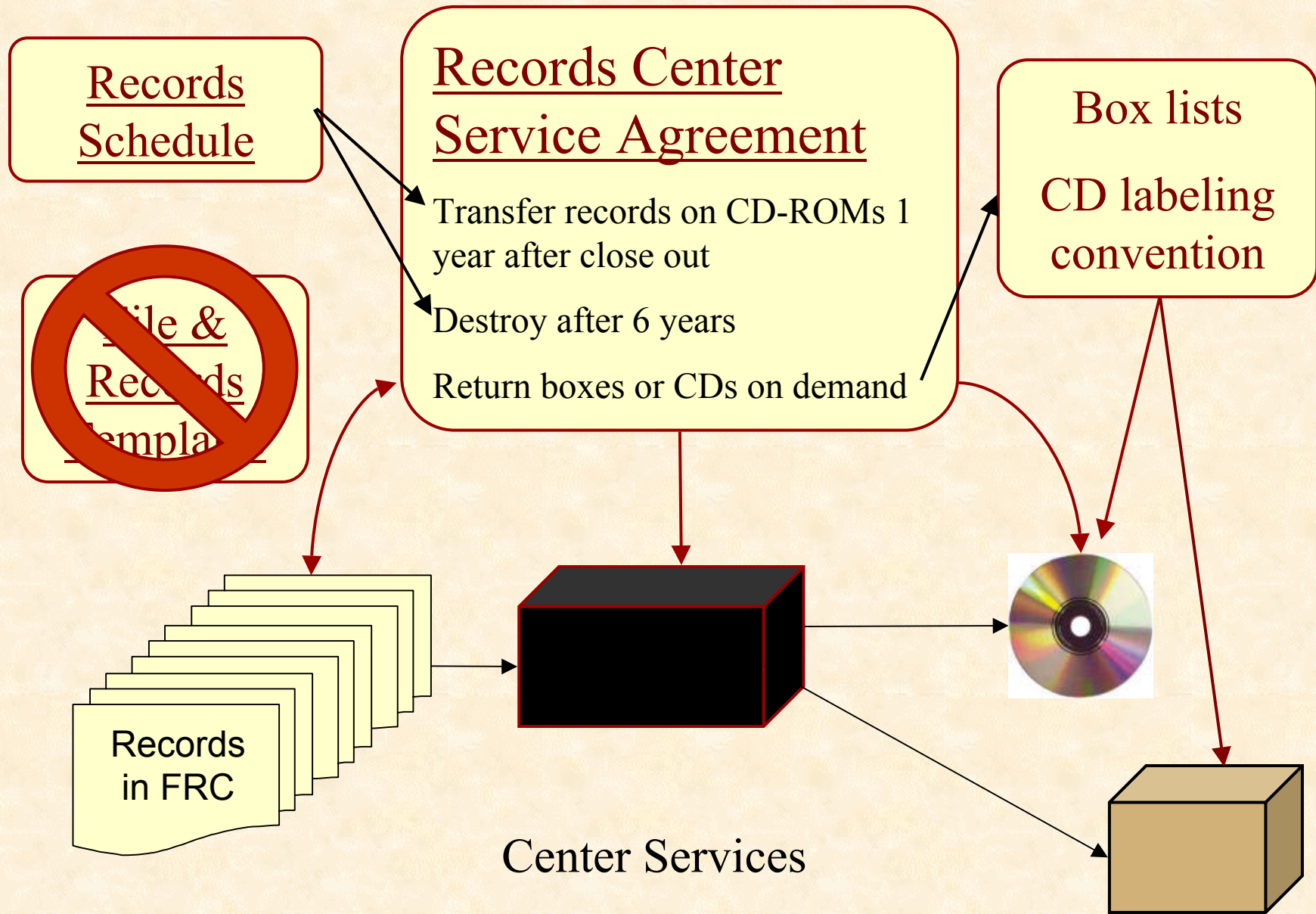


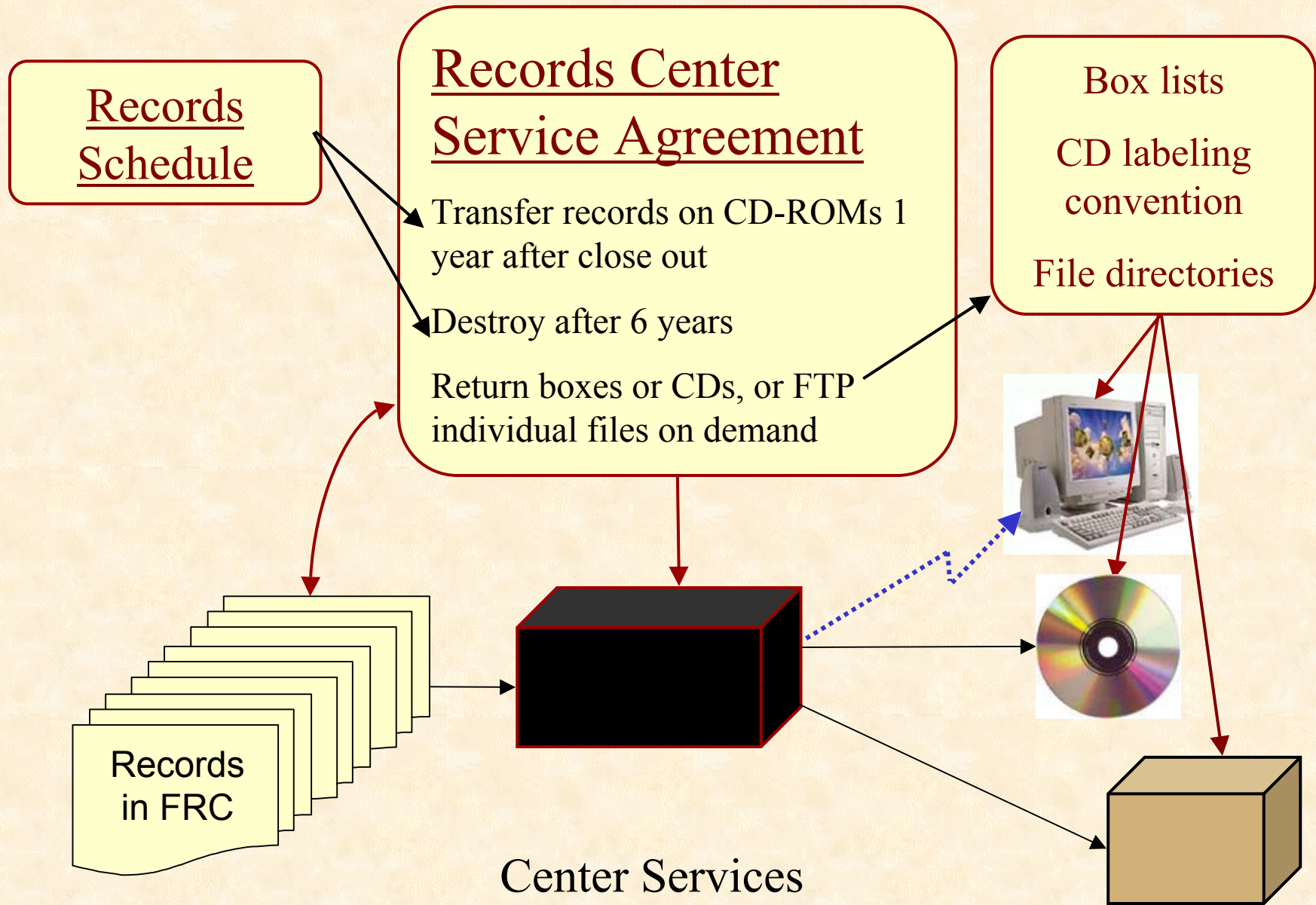
Records Center
Service Agreement

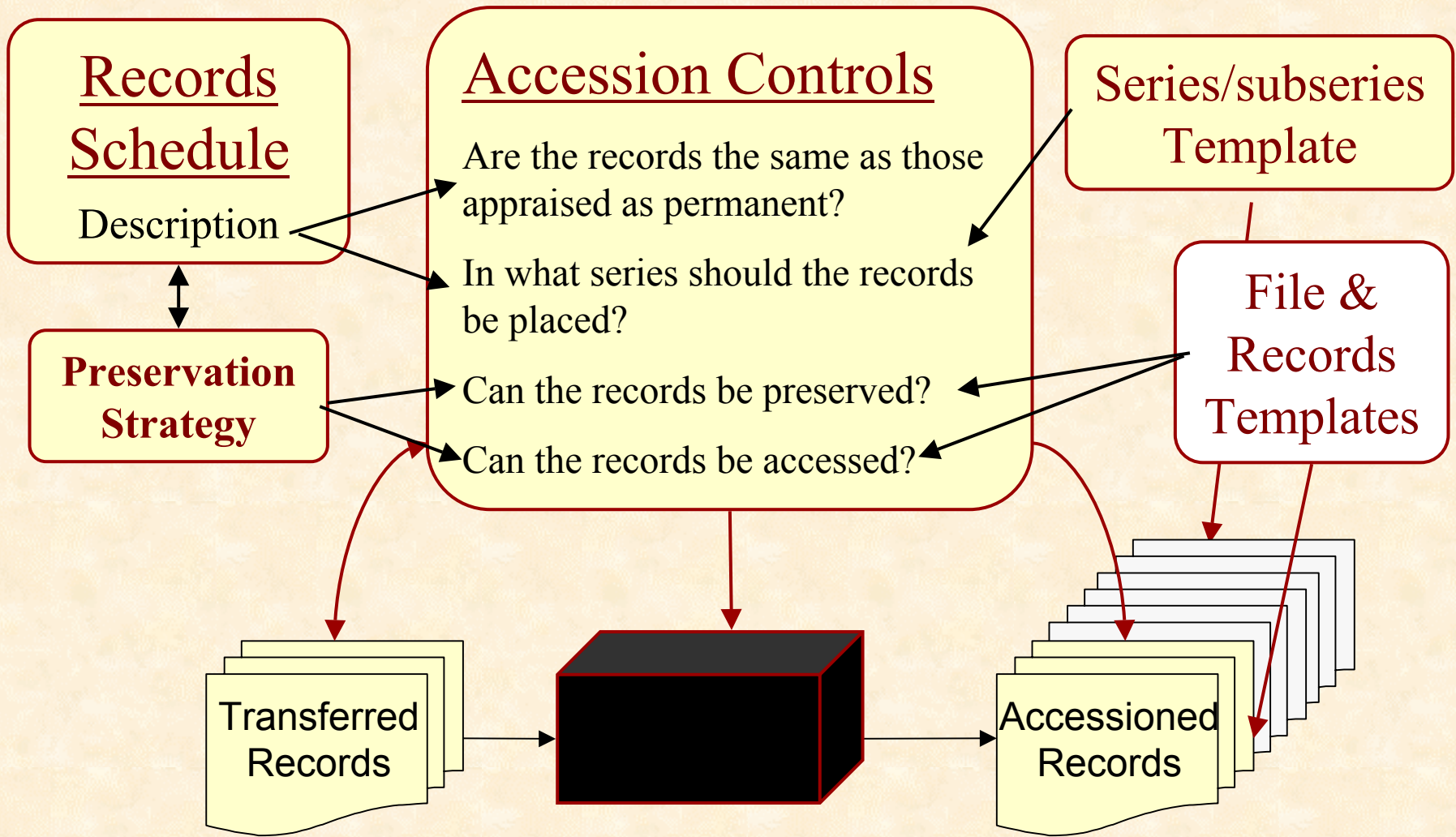
Terms & Conditions



Transfer of Records







Accession of Records

Case File: d-OMPF Example

File

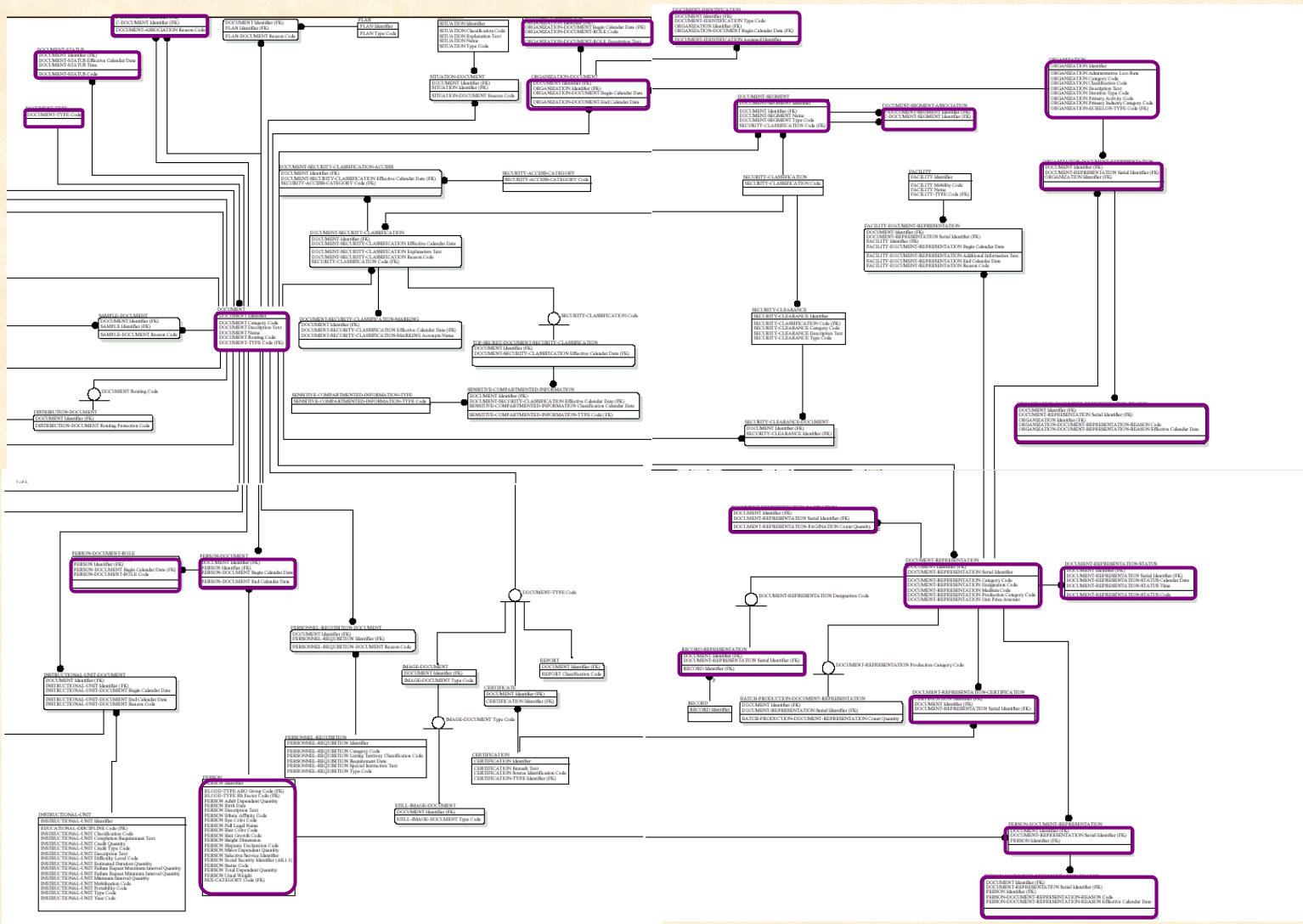
Record

NARA Standard	DoD Template
Case File	Official Military Personnel File
File Identifier	SSN
....
Closing Record	Certificate of Release or Discharge from Active Duty
Document Class: Form	
Form Number	DD 214
Form Owner	DoD
Form Version	nn
Version Issue Date	198x
Version End Date	199x
Digital Component	Form specification
Component Name	Header label
Data type	ASCII
	Page image
	TIF IV

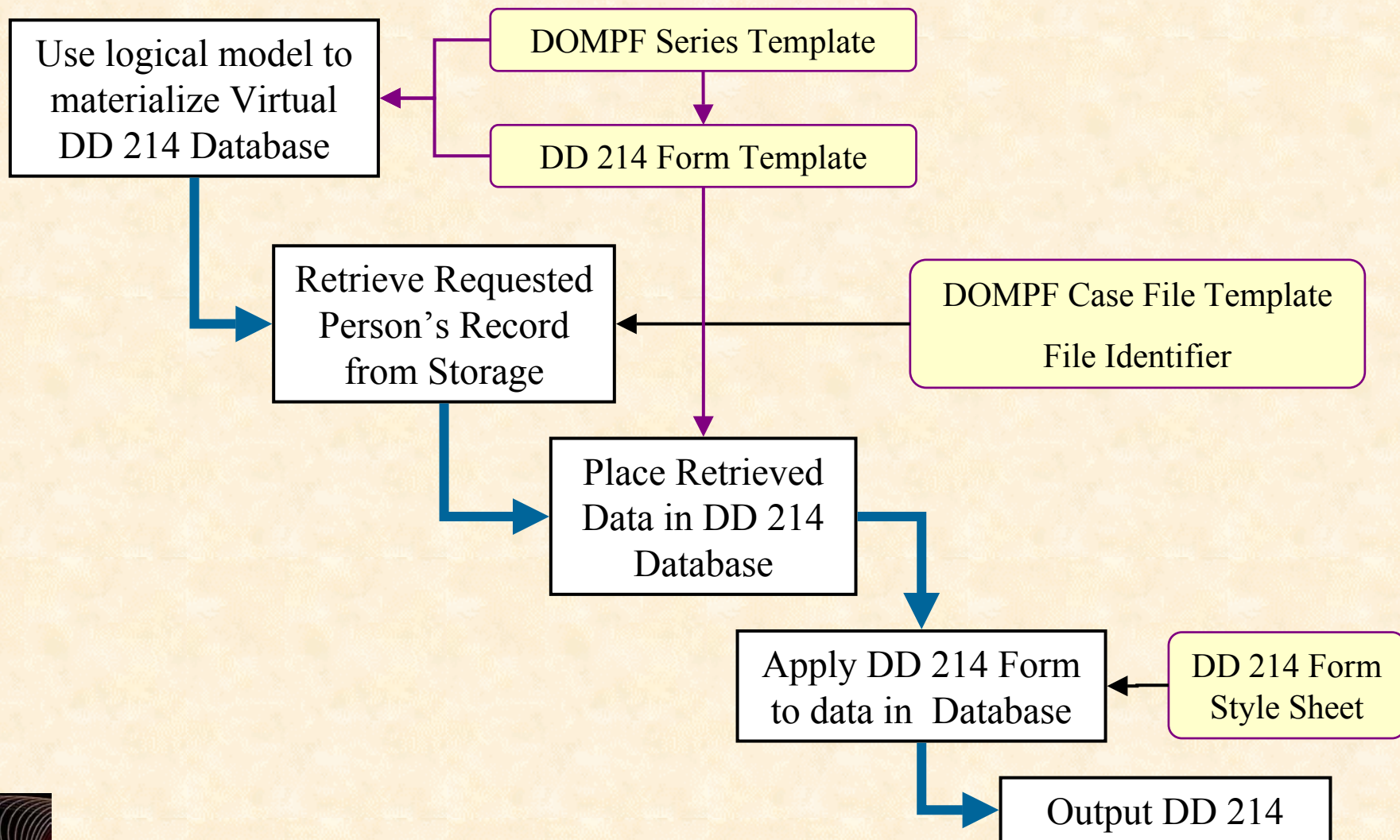
Instance

Header: SSN=xxx-xx-xxxx
 Doc Class=DD 214
 Record Date=dd/mm/yyyy

DoD DIHRMS Personnel Data Model



Retrieve DD 214 from Database



Automated Controls: Preservation Strategies

- Methods applied to specified sets of records to achieve NARA's overall goal of preserving electronic records free from dependence on specific hardware or software
 - “Character based text files will be preserved in XML format, with associated eXtensible Style Sheets used to preserve appearance”
 - “Character based text files will be preserved in XML format, with an associated image file to preserve appearance”

Preservation Strategy

- A plan for ensuring the continuing authenticity and accessibility of records for as long as they need to be preserved
 - Applies to an archival aggregate of records
 - Preserves the essential properties of the records and the aggregates of records
 - Takes into account the digital properties and how they relate to record properties.
- May be determined hierarchically

Hypothetical Preservation Strategies: Case File Standard

- If *documents* are received as *separate files*, transfer must include *data* identifying all *records* in the file, the order of each *record*, and the start and end dates of the *case file*.
- If *documents* are stored within a *database*, the *logical model* of the database must identify how a *case file*, all *records* that belong in a case file, and their *order* within the file are mapped to the *logical database model*.

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Record Object



Document



Digital Component

Hypothetical Preservation Strategies: Case Opening Record Standard

- If *document* is stored as *digital image*, *metadata* must indicate **record name**, **date**, and **status** as opening record.
- If *document* is stored as *character based file*, **record name**, **date**, and **status** as opening record must be tagged in the record.
-



Record Object



Document



Digital Component

Hypothetical Preservation Strategies: High Reference Use Standard

- If *textual documents* are **not** stored as *self-describing documents*, convert to character encoding and tag significant elements of content (e.g. **author, title, date, document summary, filing code**) for preservation.
- Transform from preservation format to target format that can be readily accessed online by researchers.
-



Record Object



Document



Digital Component

Controls on Automated Lifecycle Management

- Must be implemented in ERA
 - to manage records
 - to manage ordered aggregates of records
 - to manage transactions involving records

Controls on Records

- Define and identify the essential characteristics of each record
 - Content, structure, appearance, provenance, position in original order
- Determine Preservation Strategies
- Enhance possibilities for search & retrieval
- Facilitate review, redaction, and enforcement of access rights and restrictions

Sets of Records

- Persistent Sets
 - Files, subseries, series
- Lifecycle Management Sets
 - Record Groups, Digital Databases, Archival Microfilm Copies
- Transaction Sets
 - The records involved in a single transaction, such as a transfer, an accession, a response to a reference request, or mandatory review

Controls on Sets of Records

- Identify Sets, their members, and the order of members in the Sets
- Enable respect for original order
- Enable reconstruction of sets on successive generations of IT
- Set limits and criteria for transactions

Transactions Involving Records

- Transfer of physical custody
- Accessioning
- Conservation actions
- Access
- Review/Redaction
- Publication
- Destruction

Controls on Transactions Involving Records

- Ensure they are carried out in accordance with policies and sound archival and records management principles
- Enable automation of execution
- Determine success, failure and identify exceptions