HiMSS

WILL THE REAL ELECTRONIC DOCUMENT MANAGEMENT SYSTEM PLEASE BE INSTALLED!

About Deborah Kohn, Speaker

- **Worked with Electronic Document Management Systems (EDMSs) since 1987**

- **Assisted in the design and installation of the first EDMS for patient record documents in a US healthcare provider organization**

- **Recently architected the integration of a large, university-based, healthcare delivery network's clinical documentation system and EDMS**

- **Founded the national Patient Medical Record and Patient Financial Record EDMS User Groups**

Learning Objectives

1. **Differentiate between EDMSs and other, similar types of information systems, such as content management systems, record management systems, and electronic patient record systems**

2. **Explain why EDMSs and their component technologies play critical, middleware roles in enterprise-wide IT infrastructures**

3. **Use EDMS component technologies as springboards for healthcare organization web strategies**

4. **Develop an enterprise strategy for electronic document management that best suites the organization**

What is a Document?

any Analog or Digital,
Formatted, and Preserved
CONTAINER
of Data or Information
that is Interpreted in
an Audible, Readable, or Visual
Manner

Data Contained in a Document

Structured?

or

Unstructured?

Healthcare Documents - Analog

- **Hand-written / type-set, paper-based**

  - forms
  - notes
  - letters
  - reports

- **Photographic film-based**

  - diagnostic images
  - photographs

Healthcare Documents - Digital

- **Computer-generated**

  - **forms**
  - **notes**
  - **letters**
  - **reports**

- **Computer-generated**

  - **diagnostic images**
  - **photographs**

Healthcare Documents - Digital

- **Graphics**

- **Audio clips**

- **Video clips**

- **Microsoft Office files**

Healthcare Documents - Digital

- Email Message exchanges

- Instant Message exchanges

- Vmail Message exchanges

- Web pages!

What is an EDMS?

**ANY Electronic System
that Manages
DOCUMENTS
to Realize Significant Improvements
in Business Work Processes**

What is an EDMS?

ANY Electronic System consisting of Technology Components that support DOCUMENT MANAGEMENT

EDMS Component Technologies

- **Analog Document Capture**

(i.e., Document Imaging Technology)

   - **Scanning / Faxing**

EDMS Component Technologies

- **Digital Document Indexing**

  - **Metadata**

- **Digital Document Retrieval**

  - **Printing to Paper, Film and / or Screen**

EDMS Component Technologies

- **Character Recognition or Automatic Identification**

  - Intelligent Character Recognition

  - Optical Character Recognition

  - Optical Mark Recognition (Mark Sense)

  - Bar Coding

EDMS Component Technologies

- **Document Management**

  - **Document Assembly**

  - **Version Control**

  - **Document Tracking (Check In/Check Out)**

- **Document Content Management**

EDMS Component Technologies

- **Records Management**

  - **Mass Storage**

  - **Retention**

  - **Archiving**

  - **Purging**

EDMS Component Technologies

- **Workflow**

- **Enterprise Report Management (ERM)**

- **Automated Forms Processing**

- **Digital Signature Management**

Today's Terms for an EDMS

INCORRECT

- **Imaging System**

- **Document Imaging System**

- **Optical Imaging System**

- **Electronic Patient Record System**

Examining the Perceptions

- **"An EDMS is an Imaging System, Document Imaging System, Optical Imaging System, ..."**

- **"An Imaging System, Document Imaging System, Optical Imaging System, ... is an EDMS."**

- **"Document imaging is synonymous with document management."**

The Consequences

- **Most of today's existing, healthcare organization EDMSs are just document imaging technology systems.**

Examining the Perceptions

- "There is no need for an EDMS because the healthcare enterprise is implementing all-digital information systems, such as clinical data repositories, clinical documentation systems, financial information systems, etc."

The Consequences

- **Paper AND Electronic Interim**

- **Paper TO Electronic Transition**

Examining the Perceptions

- "The healthcare organization will become 'paperless' when all-digital information systems are implemented."

The Consequences

- What if other healthcare organizations are NOT fully digitized when all-digital information systems are implemented in your organization?

Examining the Perceptions

- "The healthcare organization will become 'paperless' when it acquires and implements an EDMS."

The Consequences

- **Little demand**

- **Systems that have been dominated by dedicated, high-volume applications located in one healthcare organization department**

Examining What's Real

- **Many IT decision-makers do not understand documents.**

  - **They understand structured data.**

  - **And, unstructured data and documents are processed differently.**

Examining What's Real

Many executive decision-makers do not understand document management until they are confronted with or responsible for managing document-related issues:

- **archival issues**

- **output management issues**

- **storage issues.**

Examining What's Real

- It's VERY difficult convincing healthcare decision-makers that electronic document management is a strategic requirement, especially when they don't know what it really is.
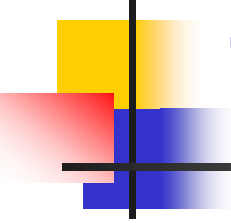
Where Are We?

As yet, **no fully-functional**,
REAL
EDMSs
have been installed.

Where Are We?

Ironically, today, healthcare organizations' existing and future data and information processing, transaction-based systems require a number of EDMS component technologies to complement those systems.

The Not-So-Good News

- **Almost EVERYONE in a healthcare organization still faxes documents!**

- **Almost EVERYONE in a healthcare organization still prints digital documents to paper and film for storage and distribution purposes!**

The Good News

- Almost EVERYONE in a healthcare organization requires automated workflow!

- Almost EVERYONE in a healthcare organization benefits from document management, especially version and access control!
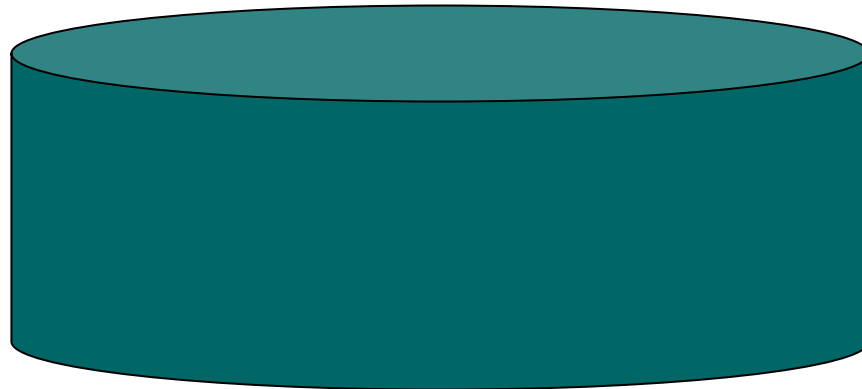
The Good News

Almost EVERYONE in a healthcare organization requires digital signature management!

Almost EVERYONE in a healthcare organization benefits from content management, especially when developing and maintaining documents published on public and private websites!
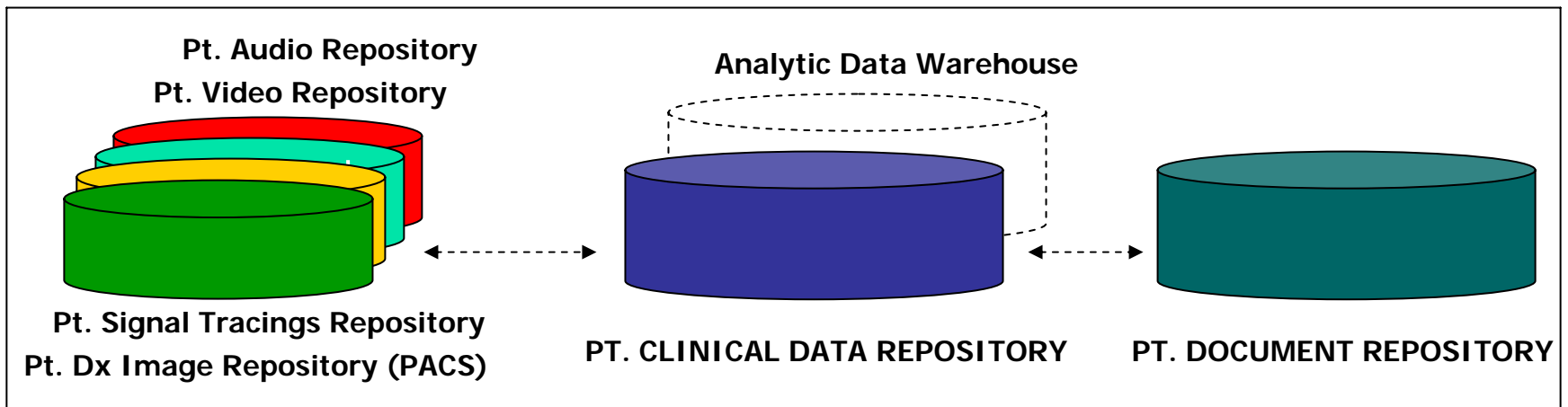
A Different Strategy

The Document Repository

A Different Strategy

Physical
data and document repositories,
logically linked

Pt. Audio Repository
Pt. Video Repository

Analytic Data Warehouse

Pt. Signal Tracings Repository
Pt. Dx Image Repository (PACS)

PT. CLINICAL DATA REPOSITORY

PT. DOCUMENT REPOSITORY

A Different Strategy

- Most of the EDMS component technologies should be viewed as enterprise-wide, middleware services.

A Different Strategy

- **This means including the following EDMS component technologies in the middle layers of IT infrastructure:**

  - Analog document capture (i.e., Document Imaging)
  - Character Recognition / Automatic Identification
  - ERM
  - Document Management
  - Content Management
  - Automated Forms Processing
  - Digital Signature Management
  - Records Management

A Different Strategy

- This means that application software systems across the enterprise can take advantage of the EDMS component technologies as needed.
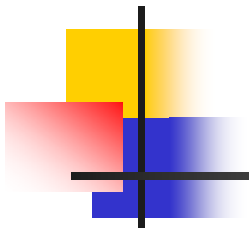
A Different Strategy

NOT ON AN APPLICATION-BY-APPLICATION BASIS!

A Different Strategy

This means including those EDMS component technologies with enterprise integration applications, such as:

- Interface engines/gateways
- APIs
- Industry-standard messaging protocols
    - HL7
    - DICOM

END-USER INTERFACE LAYER

END-USER APPLICATION SYSTEMS LAYER
(Existing and Future)

MIDDLEWARE LAYERS

ENTERPRISE APPLICATION INTEGRATION LAYER

Document Imaging	**Printing Output Management**	**Mass Storage Retention Archival**	**Document Management**
Content Management	**Workflow**	**Digital Signature Management**	**Character Recognition**
	Automated Forms Processing		

NETWORK LAYER

Take-Home Proposal

- **Since EDMSs are cost-effective and feasible for enterprise wide solutions…**

  - **On the hardware side**
  - **On the software side**
  - **On the maintenance side**

Take-Home Proposal

- **Since enterprise-wide EDMS platforms exist that provide integrated suites of the component technologies …**

Take-Home Proposal

- **Develop enterprise-wide EDMS strategies that correctly define electronic document management…**

Take-Home Proposal

- **and that pay attention to strategic IT infrastructure requirements, including...**

Take-Home Proposal

- **Integrating the EDMS with existing and planned transaction processing systems**

- **Aligning the EDMS with intranets**

- **Analyzing the EDMS' effects on existing and future infrastructure budget and resource constraints**

Strategy Benefits

- allows users to pay-as-they-go

- helps to reduce capital spending and align costs with demand

Strategy Benefits

- moves IT into a more "managed service provider" (MSP) model where the management and performance of non-core, technical functions can be outsourced to an expert third party or remain in house

Questions & Answers

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