

Preservation and Access for Electronic College & University Records

How Should we Care for this Stuff?

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What Is The Stuff?

- What are records?
 - Records are evidence of business transactions that document organizational functions and provide accountability (David Bearman)
 - Paper records? Electronic records?
- What is evidence?
 - Discovery vs. evidence
 - ARBPHU
 - Authentic, Relevant, Best original, Privileged, Hearsay, (NOT) Unduly Prejudicial
 - Paper evidence? Electronic evidence?

Dinkum #1*

**Content
Context
Structure**

* from "Fair Dinkum" meaning the real thing, absolutely true, or genuine.

Dinkum #2

- **Records and Evidence are what we need**
 - Business records are created as part of business processes. Retention plans should be litigation neutral, driven by business needs
 - Record-keeping systems are how we accomplish this
 - Time-bound, context stamped, inefficient technically, inviolable and unchangeable, redundant
 - Old data content retained with associated context and structure
- **Information and Data are what we have**
 - Timely, efficient, manipulable, non-redundant, updated

Where is your evidence?

- Where is your institution's documentary evidence?
- In what forms?
- In what technologies?
 - Enterprise Resource Planning systems' databases (SAP R3, Peoplesoft, Banner, etc.)
 - Web sites
 - static -- HTML, XML, etc.
 - Active -- Active Server Pages, Java, Javascript, database-based
 - Electronic mail
 - Desktop documents

Record-keeping System Work Flow

- Document of some business transaction
- Input - placed in database
- Sent/Entered
- Retrieved - meaning is given
- When retrieved - mediated by software
- Migrated - needs to retain content, context and structure

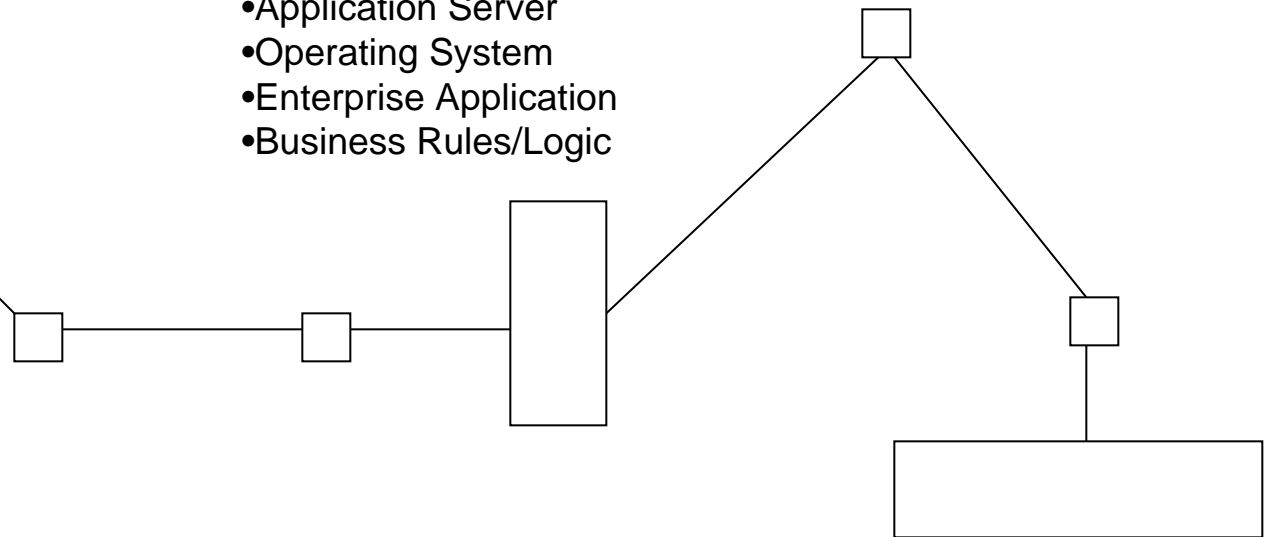
A simple record-keeping system's work flow

You are here!



- Personal Computer
- Operating System
- WWW Browser
- Networking

- Application Server
- Operating System
- Enterprise Application
- Business Rules/Logic



- Database Server
- Operating System
- Database Management System
- Databases -- Tables, Fields, etc.

Major issues

- Migration
 - Preserving evidence by moving records to a different environment, preserving the content, context and structure
- Preservation
 - Preserving the artifacts and/or the environment in which records and evidence were created, or accessible. Such as a museum might preserve old machinery, or old phonographs, or old photographs
- Identity Management
 - Preserving knowledge of who was who throughout long periods of time

Major issues, continued

- Encryption related issues
 - Certificates (Public Key Infrastructure)
 - Private and public keys
 - Private key management
 - Algorithm/code management

Research -- University of Pittsburgh

- David Bearman and Richard Cox
- Functional Requirements for Evidence in Record-keeping
 - Organization -- Conscientious
 - Record-keeping System -- Accountable
 - Records
 - Captured
 - Maintained
 - Usable (Accessible)

Functional Requirements

- **Captured**
 - Comprehensive
 - Identifiable
 - Authorized
 - Complete
 - Accurate
 - Understandable
 - Meaningful
- **Maintained**
 - Preserved
 - Inviolable
 - Coherent
 - Auditable
- **Removable Usable**
 - Exportable
 - Accessible
 - Redactable

Tactics and Strategies

- **Policy**
 - **Ownership**
 - work for hire, stewards
 - **Archival/Records management**
 - Institutional evidence policy
 - **Procedural**
 - access to email in emergencies
- **Design**
 - Build requirements, retention etc. into systems
 - Translate RKS requirements into business/technical requirements
 - Include requirements in Requests for Proposals (RFP)
 - Concentrate on influencing up-front systems planning

Tactics, continued

- **Implementation**
 - Education
 - Migration plans
 - Collaboration
- **Technology Strategies**
 - Some local, institutional standards
 - Very few cross-institution or industry standards
 - Emerging standards for some kinds of records in some technologies
 - New, unproven -- particularly in terms of archival values
 - Use & experiments needed to improve the state of the art