

# Hawai'i Digital Archives

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# Agenda

- Importance of Records
- Results of Statewide Survey
- Archiving— What Is It and Why Is It Important?
- Trusted Digital Repositories
- The Proposed Hawaii Digital Archives Plan

# IMPORTANCE OF RECORDS

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# Knowledge is Power

- Sir Francis Bacon, *Meditationes Sacrae*  
(1597)

# Records and Information or, Why we do what we do

If – Knowledge is power...

And - Records are the storage of knowledge

Then – Records must be preserved for future generations

Why?

Future generations must learn from our success and our failures

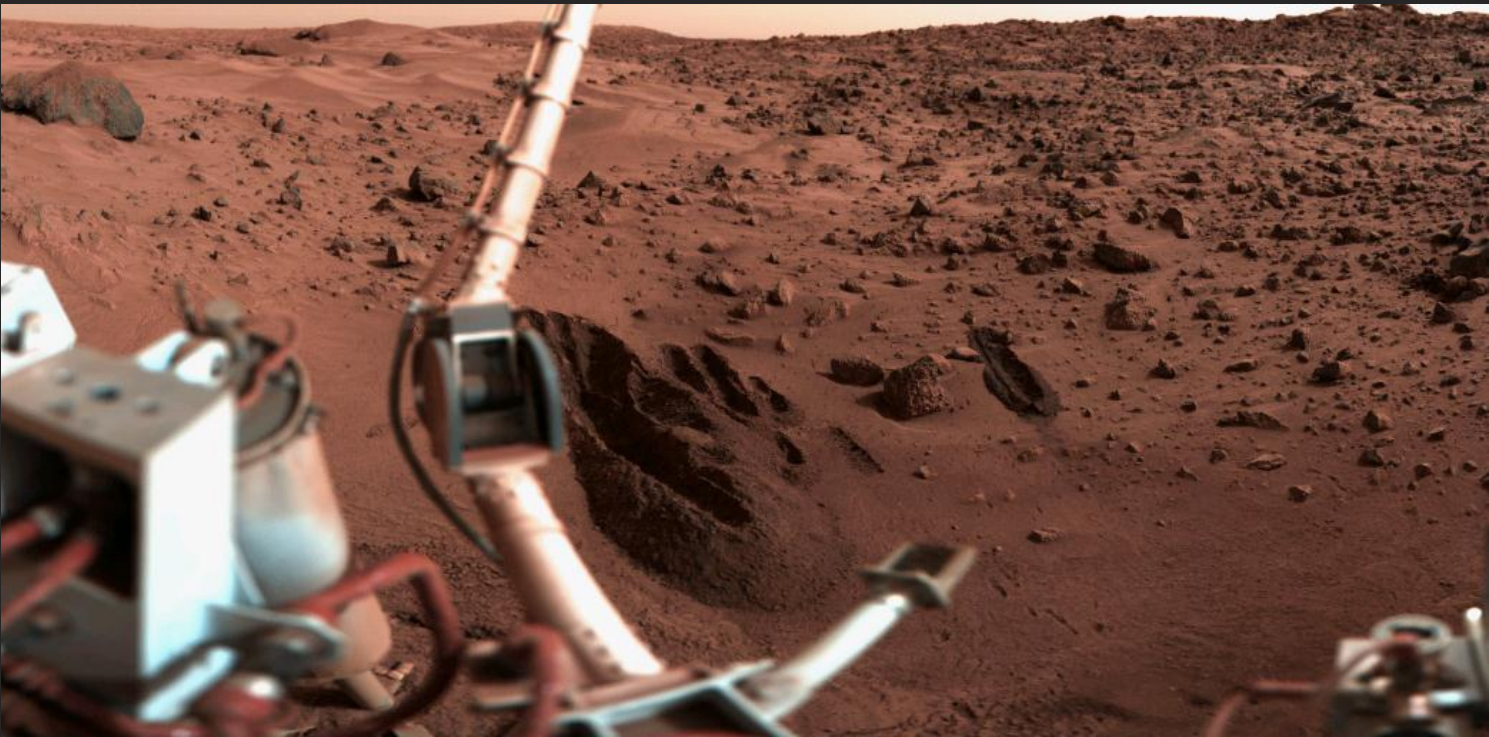


*13<sup>th</sup> Century BCE Hittite – Egyptian Peace Treaty*

**Museum of Anatolian Civilizations**

**Ankara, Turkey**

# 1976 Viking Lander Mission



**“All the programmers had died or left NASA. It was hopeless to try to go back to the original tapes.” – Joe Miller, USC Neurobiologist**

# 1986 BBC Domesday Project



*Page from the British Library*

**“We must not make the mistake of thinking that recording on a long-lived medium gives us meaningful preservation” – Paul Wheatley, CAMILEON**





# Legal Responsibilities

- §94-3 HRS to maintain **all records** created or received in course of business **according to approved retention schedule**
- Comptroller Circular No. 2001-02 states that **all public officials** are **responsible** for the protection and accessibility of **government records under their purview**
- §94-1 HRS directs the State Archives to **collect all public archives**; arrange, classify, and inventory the same; **provide for their safekeeping**; and compile and furnish information concerning them

# Survey Protocol

- Conducted in Nov 2010, expanded on 2005 survey
- Sent to records creators, records managers, and IT from three branches, higher ed and local gov't
- Web-based, email, or print responses
- Twenty-Three agencies responded
- 77 responses tabulated, analyzed
- Series of recommendations resulted

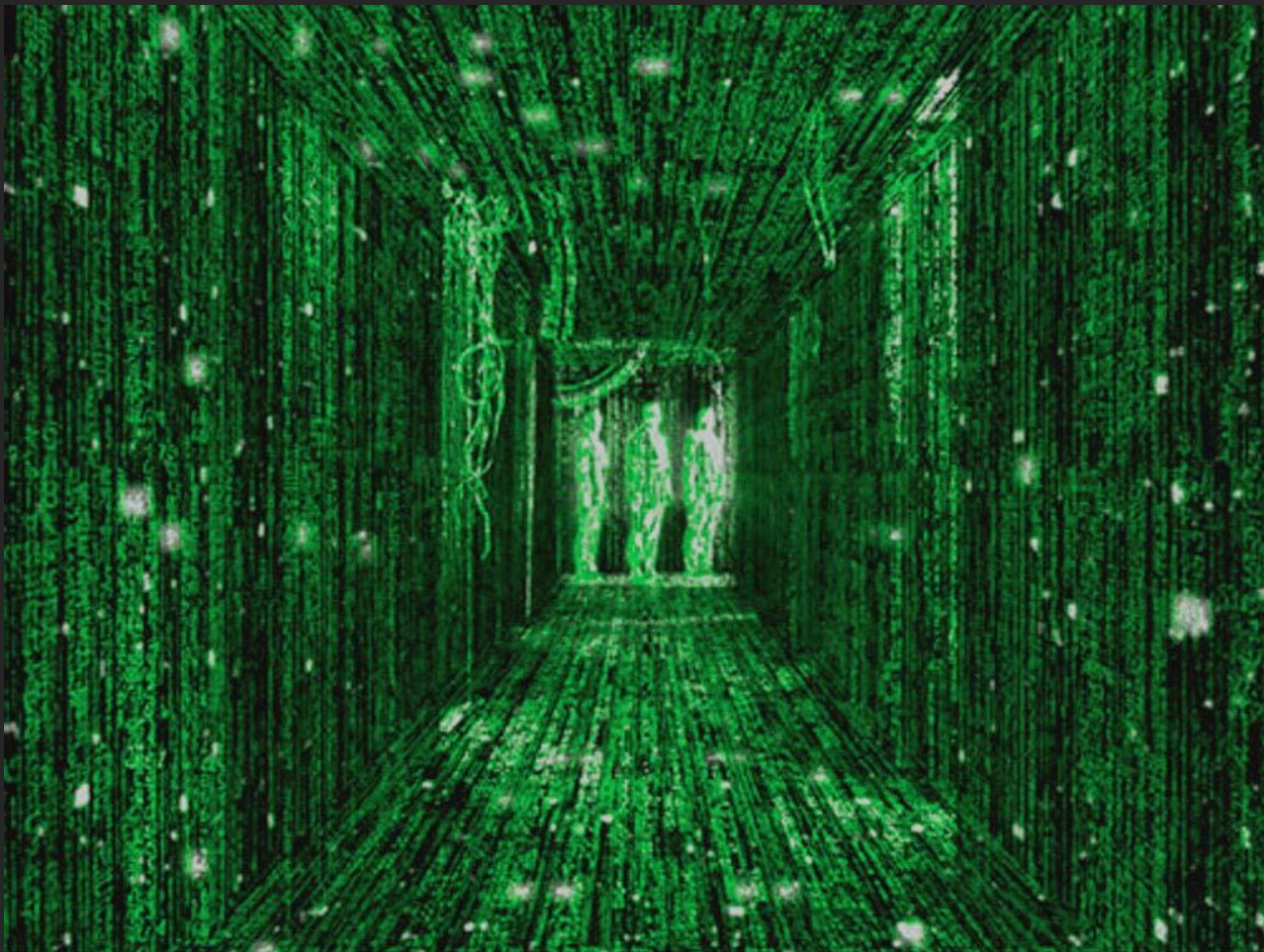
*Without proper training and archival repository, today's records will be lost to future generations*

# Survey Findings

- 61% store records on CDs
- 60% don't manage email
- 40% don't follow retention schedules
- 53% have no migration plan
- 73% convert paper to digital
- 40% destroy the paper
- 66% don't know what a record is



*Digital Archives is **NEEDED** and **OVERDUE!***



Everything we do is digital

**Enter the Matrix**



What is it and Why is it Important?

# DIGITAL ARCHIVING

# Why a Digital Archives?

## Comply with statutory & regulatory mandates

- The law requires preservation of certain public records
- it doesn't specify whether those records are paper or electronic. All records must be given the same care.

## Avoid loss of legal & historical records

- As technology changes, the older media (5 ¼" floppy disks, for instance) become harder to read.

## Preserve rare and 'at-risk' paper records



# Why a Digital Archives?

## Centralize Records

- Centralization means uniformity in maintenance
- ‘Trained professionals’ serve as caretakers

## Improved access for citizens

- By centralizing historical digital records in one location, ‘one-stop shopping’ will provide the information quicker and easier



# Mission of the Digital Archives

- Collect digital records of enduring legal, historical or fiscal value
- Maintain these records in perpetuity in a useable state for the good of the public
- Make records that are discloseable accessible to the public



# What the Digital Archives is not

- Not mass storage for active business applications & data
- Not remote back-up for state & local government networks & data

# What is 'Archiving' in the Electronic Age?

Protecting machine readable records of enduring legal, historical or fiscal value from loss, alteration, deterioration and technological obsolescence in a environment independent from that which produced the record.

# What is a 'Record' in the Electronic Age?

Information in a fixed form that has **content, context, and structure**, is created or received in the **course of individual or institutional activity** and **set aside as evidence** of that activity for future reference.

# The Digital Archives will:

- Preserve digital records with long-term legal, historical and/or fiscal significance in a useable state for the good of the public
- Assure platform-neutral retrieval 50, 100, or more years from now
- Provide security back-up of certain permanent digital legal records (courts, vital records, land records, etc.)
- Disclose those records that are accessible to the public, exclude those that are not



# Accountability and Transparency

- Maintenance of actions taken, history
- No 'gate keepers'
- Visibility
- Reduce duplication and unnecessary storage
- Noticeable compliance (or lack of)

*Foundation of Democracy is Government  
Accountability to the People*

# Centralization of records

- One stop shopping
  - Citizens don't need to know creator
- Can access records from multiple agencies
- Fast and Efficient
- 24x7 access from *any island*



# Societal Continuity

- Beyond just business continuity
- Continuance in the event of a regional disaster
- Protect citizens rights
- Reestablish government quickly, efficiently
- Limited 'Hot Site' backup



# TRUSTED DIGITAL REPOSITORIES

# What is a TDR?

- From RLG-OCLC report *Trusted Digital Repositories: Attributes and Responsibilities:*

“A trusted digital repository is one whose mission is to provide reliable, long-term access to managed digital resources to its designated community, now and in the future.”



- As defined in RLG-OCLC report:
  - **accept responsibility for the long-term maintenance** of digital resources on behalf of its depositors and for the benefit of current and future users;
  - have an organizational system that **supports not only long-term viability of the repository**, but also the digital information for which it has responsibility;
  - **demonstrate fiscal responsibility and sustainability**;
  - design its system(s) in accordance with **commonly accepted conventions and standards** to ensure the ongoing management, access, and security of materials deposited within it;
  - establish methodologies for system evaluation that **meet community expectations of trustworthiness**;
  - be depended upon to carry out its **long-term responsibilities to depositors** and users openly and explicitly;
  - have **policies, practices, and performance that can be audited and measured**;

# Centers on Trust

- Many software packages capable, pivots on implementation:
  - Nurture the trust of users
  - Develop relationship, procedures of donors
  - Faith in third party providers through testing
  - Trustworthiness of content sent to repository

# Trust of Users

- Historically, trust in archives very high
- New medium can challenge perception
  - Careful planning
  - Continuing/renewed education

# Work with the Donors

- Records only as reliable as when sent
- Balance between undue burden and sufficient information
- Formalize and document the process
- Written MOU (Memorandum Of Understanding)

# Trustworthiness of Content

- Archival Diplomatics
- InterPARES
- Set a high bar to reach, mark those that are of lesser or unknown quality
- Establish minimum standards, create or locate tools to generate
- Many authentication methods
  - Easier intra-network, directory services
  - Inter-network leads to PKI, authentication tools
  - Many legacy digital documents will fall far short
- But... what have we done in the past with paper records?



# Open Source

- Became popular with Linux as an alternative to Windows Server Platform
- Based on free source code, readily available
- Anyone modify, change, radically alter it
  - Often with proviso that new code given back
- Often with original providers offering integration services as a cost (\$\$\$)

# Pro-Open Source Arguments

- **Lower cost** – volunteers design the software, no centralized ‘company’ to collect revenue or pay employees
- **Customizable** – implementers can develop the system to do whatever is necessary
- **Nimble** – Adaptations implemented faster than typical commercial development cycle (months to years)
- **Openness** – Easy to look under the hood
- **Faster update cycle** – bugs and security holes can be patched in-house



# The Plan

- Made possible through a grant from the National Historical Publications and Records Committee (NHPRC)
- External Consultant to leverage knowledge, experience
- Detail the current state of archiving
- Recommendations to preserve digital records
  - Hardware
  - Software
  - Staff
  - Supporting rules, policies, procedures
  - Identify potential partners, opportunities

# Digital Preservation Software

- Leverage off of existing software
- Use lessons learned from other digital archives, extensive research of scholarly literature
- Modified to meet needs of Hawai'i government agencies and the public captured as functional requirements
- Improve and grow with each iteration and phase
- Early and active participation from partners, agencies and public consultation

*If it doesn't work for them, it doesn't work*

# Phased Implementation

Divide project into three iterative phases while working closely with partner agencies , public

- **Prototype Phase** -- Test functionality and capability
  - Work with one to three partner agencies
  - Expected Time Frame: 12 months
- **Pilot Phase** – Expand feature set, functional requirements
  - Work with three additional partner agencies
  - Expected Time Frame: 12-18 Months
- **Production Phase** – Provide robust features for statewide rollout
  - Expected Time Frame: Six Months

# Proposed Partners

- Legislative Clerks
- Governor's Office
- Supreme Court Law Library
- Bureau of Conveyances, Department of Land and Natural Resources
- Hawai'i State Public Library
- Information and Communication Services Division
- Office of Information Management and Technology
- Office of Hawai'ian Affairs
- University of Hawai'i
- Hawai'i Pacific University

# Enabling the State Archives

- Need to expand the technical skill set of staff
- Increase the infrastructure of the State Archives to execute on its mandate with regards to digital records
- In partnership with CIO, ICSD and SPO

*Provide the State Archives with the needed and vital tools to preserve the cultural and intellectual heritage of the State of Hawai'i for future generations*



## 17<sup>th</sup> Century

“So long as men can breath, and eyes can  
see,  
So long lives this, and this gives life to thee.”

- William Shakespeare, *Sonnet XVIII* (1609)

## 21<sup>st</sup> Century

As long as the media is still readable, a drive  
available, the software can be loaded, the  
hardware still runs and file can be found!



Made possible through a grant from



