

InterPARES Trust

Using Metadata to Support the Presumption of Authenticity

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Today's Agenda

- Records in the Cloud
- Supporting Authenticity
- InterPARES Trust
- Preservation as a Service for Trust (PAST)
- Next Steps



Role of the Archives

The **physical and moral defence** of documentary evidence of activity (Jenkinson)

Involves not only the object itself, but:

- **Naturalness** (produced as a by-product of activity)
- **Interrelatedness** (gain meaning from each other)
- **Impartiality** (free of external influence)
- **Authenticity** (uncorrupted)
- **Uniqueness** (derived from context)



Archival Transition

From:

- a semi-passive, response reaction

To:

- one of driving preservation, compliance and assurance

Requires:

- Proactively influence system design, technology acquisition and implementation
- **PRESERVATION BEGINS AT CREATION**



Further Complicated by 'the Cloud'

- Increasingly gov't, public trust organizations shifting to Cloud
- Ownership, jurisdiction, privacy key issues with internet-based record repositories
- Question of Trust –
 - In the **records**,
 - In the **process**, and,
 - In the **custodians**



Trustworthy Trustees

- Based on:
 - **Reputation**, based on past actions
 - **Performance**, executing responsibilities
 - **Confidence**, ability for future action
 - **Competence**, expertise to complete task
- Requires knowledge of, experience with Trustees...

...But what if we don't know?

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Trustworthy...Cloud Trustees?

- “The service offerings are **provided ‘As Is.’** We and our affiliates and Licensors **make no representations or warranties of any kind**, whether express, implied, statutory or otherwise regarding the service offerings or the third party content, **including any warranty** that the service offerings or third party **content will be uninterrupted, error free or free of harmful components**, or that any content, including your content or the third party content, **will be secure or not otherwise lost or damaged.**”
- “We guarantee that **at least 99.9% of the time we will successfully process correctly formatted requests** that we receive to add, update, read and delete data”



SUPPORTING AUTHENTICITY

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Authenticity in the Digital Age

Maintaining **integrity does not necessary mean authenticity**, while it is an important part there is something more...

Authenticity requires understanding the identity:

- Determine one version from another
- Sender from receiver, draft from final

For a record to be “what it purports to be” requires **understanding of intent and context** of creation, collection and handling (**chain and process of custody**)



Authenticity of a Digital Record

Preservation will **require repeated conversion and migration** -- trustworthiness cannot be established on the records themselves

Authenticity is an **inference that one draws** from the **data maintained** about the creation, handling and maintenance of the record:

Done through Identity Metadata and Integrity Metadata

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Identity and Integrity

Identity	Integrity
Name of person creating	Name of person handling
Date of Creation	Name of custodian
Matter or Action	Indication of annotation
Relationship to other records	Technical changes
Documentary form	Presence of digital signature
Digital Signature/Time Stamp	Location of duplicates/derivatives
Name of person responsible	Fixity

Based on InterPARES findings: www.interpares.org

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Trust and Digital Records in an Increasingly Networked Society

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Goal of InterPARES Trust (ITrust)

“To generate the theoretical and methodological framework that will **support the development** of integrated and consistent **networks of policies, procedures, regulations, standards and legislation** that can be applied to **digital records that are created, stored and accessed using the Internet.**”

www.interparestrust.org

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Preservation As a Service for Trust

...provide insight and **guidance to both those who entrust records to the Internet and those who provide Internet services** for the records. The project will address relevant requirements, insights and concerns developed in other ITrust projects to enrich and strengthen its models.

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Five Preservation Services

- **Preservation Receive Service** -- complete and intact, and is in compliance with any agreements that are in force
- **Record Characterization Service** -- capture, report and make available those key attributes that characterize the records being transferred
- **Authenticity Assessment Service** -- capture and make available those authenticity attributes for comparison to other records
- **Preservation Storage Service** -- capture, report and make available those attributes concerning the storage of the records
- **Preservation Transformation Service** -- capture, report and make available those attributes related to the migration, conversion or transformation



Service Construct

- Functional requirements
- Pre-conditions
- Main work flow
- Alternate flows
- UML Class Diagram
- Other supporting documentation



Flow Diagram

Specification

Class Diagram

SNEAK PEAK

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NEXT STEPS

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Road to Ratification

- InterPARES joined Object Management Group
 - UML, SysML, MDA
- Government Domain Task Force
 - Initial approval to proceed
 - Submit for RFP
 - Review Responses
 - Submit for vote
- On to ISO JTC1 for final vote



Conclusion

- Organizations increasingly turning to the Cloud Services
- Question of Risk, Trust unanswered
 - Jurisdiction, control, management, privacy
- Focus on relationship between records creator and records 'preserver'
- Identify, capture and/or create metadata that supports authenticity



Questions?

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