Mutatis Mutandis

Evidence of Authenticity through "Metadata" and its Sources in Records Preservation

Joseph T. Tennis

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20 YEARS!

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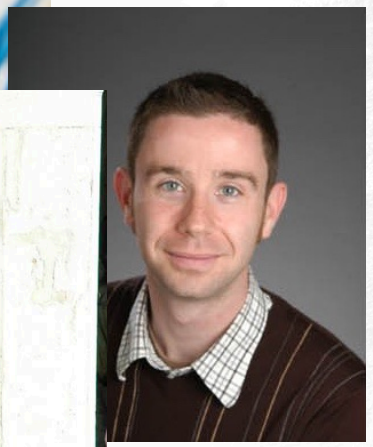

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NA16 Metadata: Mutatis mutandis – Design Requirements for Authenticity in the Cloud and Across Contexts

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Lyse Rowledge, October 2015-August 2016

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In the context of InterPARES, metadata are assertions about documents, records and groups of records that we make for the sake of authenticity, preservation and retrieval (Terminology Database).

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Data about data (common).

Attributes inextricably linked to records

(IP2 sort of – words taken from the Baseline and Benchmark Requirements of IP1).

Machine and human readable assertions about resources (Tennis, passim.).

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"the sum total of what one can say about any information object at any level of aggregation," (Gilliland, 2016).

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Metadata

Assertions about…

Data about..

Attributes of…

Sum total of what can be said about..

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Making necessary changes while not affecting the substance of the matter.

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That is, what metadata do we need to presume authentic records in digital systems, whether under local control or in the cloud?

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Context:

IP2 Benchmark and Baseline Requirements

IP2 Chain of Preservation Model

IP3 IP Metadata Application Profile

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IP1 Benchmark and Baseline Requirements

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IP1 Benchmark and Baseline Requirements

Identity and Integrity of Archival Documents (Records)

Involves recording or being able to inspect the persons, action or matter, the archival bond, and the status of the digital system over time.

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IP1 Benchmark and Baseline Requirements

And while this is prescriptive, it only hints at what metadata we need, it does not as far as to enumerate metadata attributes I detail.

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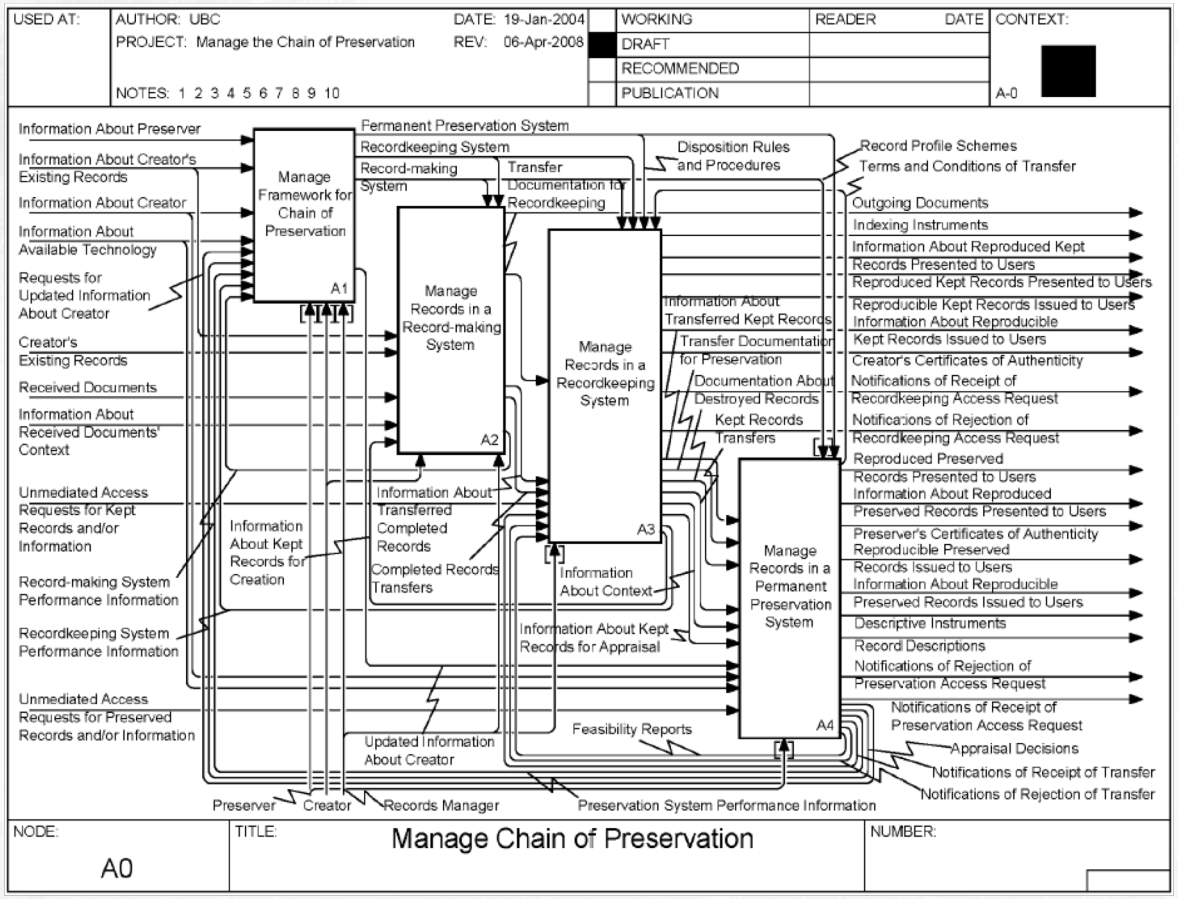
IP2 Chain of Preservation Model



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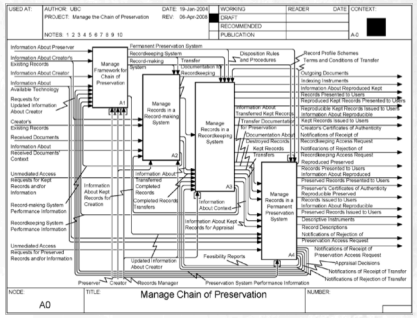

IP2 Chain of Preservation Model

Builds on the Benchmark and Baseline Requirements and enumerates all of the activities, actors, constraints of archival document creation, keeping, and preservation.

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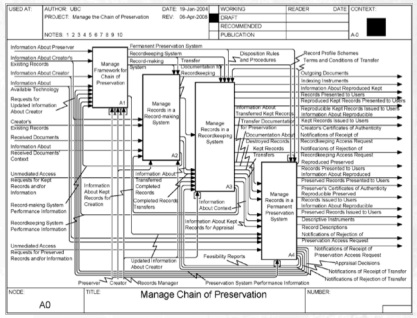
IP2 Chain of Preservation Model



This activity model provided us with some clarity as to what we might enumerate as metadata, coupled with the Benchmark and Baseline Requirements we were then able to move to the next phase.

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IP2 Chain of Preservation Model

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IP3 IP Metadata Application Profile

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IP3 IP Metadata Application Profile

Corinne Rogers and I set out to formalize, through full enumeration, all of the places in the COP that we *might need* metadata.

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Our work generated a list of more than 420 individual metadata assertions that can be made if we follow in detail the life of an archival document from creation to preservation through the lens of the Benchmark and Baseline Requirements and the COP.

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If it is possible to make so many assertions, are there a minimal set that we can prescribe to archivists?

One way to begin this research was to ask practitioners what metadata they currently rely on to presume archival documents to be authentic.

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Over the course of three case studies, Corinne and I found that unanimously our participants were much more concerned with the integrity of the digital environment than with the identity metadata prescribed by the foundational documents mentioned above.

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If the server was stable, the archivists felt confident that the creator's records were *what they purported to be,* and therefore for all intents and purposes could be presumed authentic.

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We have reflected on this finding, and we think we can make some conclusions about the long arch of this detailed work.

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By looking at contemporary digital records preservation practice through the lens of authenticity metadata we were able to glean that digital records work can be broken down into at least two tiers.

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The first, and most important tier, for the presumption of authenticity is to **audit the integrity** of the system(s) on which records are kept. To date there are two basic ways metadata figures into this tier.

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First, is the checksum. The second is visual inspection. The former can be easily seen as a kind of metadata (what we called documentation metadata in the IPAM) whereas the latter often goes undocumented and cannot be called metadata in the *classic sense*.

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The second tier of digital records practice moves from audits of integrity to **verification of identity**. None of this metadata is provided by the archivist unless they coach the records creator.

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These identity metadata for individual or aggregations of records are passed in toto to the archivist. They rely on the creator's system and the creator's own metadata work to encapsulate the entirety of the state of records as used by the creator for the ordinary course of business.

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The archivist must be aware of what is there, and the IPAM can help with that, but there is no custodial imperative to augment what is given by the creator.

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This awareness on behalf of the archivist empowers them to subsequently authenticate archival documents preserved as purporting to be what they were for the creator at the time of use.

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Authentication is not a daily activity for archivists and is therefore a second tier of activity not requirement massive investment in metadata work, except in coaching best practices in records creators.

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Classic sense of metadata?

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Assertions about…

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Given our findings, we might say that we are moving toward a working definition of metadata closer to Gilliland's, than mine.

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If we are documenting the integrity of digital systems over time, we are perhaps not making human and machine readable assertions, but rather focusing on the *sum total* of what can be said about archival documents – specifically their integrity.

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This has ramifications for how we approach cloud-based discussions of integrity. Perhaps the IPAM can help archivists craft negotiations with cloud service providers that allows them feel confident that they can audit the integrity of their preservation enviornemnt.

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Thank you!

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Google Scholar: jt tennis

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References

Gilliland, A. J. (2016). “Setting the stage.” In *Introduction to metadata: Pathways to digital information*. Third Edition. Murtha Baca ed. Available in PDF form: http://www.getty.edu/publications/intrometadata/setting-the-stage

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