InterPARES 2 Project
International Research on Permanent Authentic Records in Electronic Systems

Creation and Maintenance of Electronic Records: Experience from the Case Studies

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Presentation Outline

- The Records Creators

- Activities Resulting in Document Creation

- The Digital Entities Created

- The Documentary Forms

- The Records Making and Keeping Practices

Completed Case Studies

Activities	Case Studies
Arts	10
Science	5
Government	7
Total	22

The Records Creators

Status	Total	Type	Arts	Sci	Govt
Private	8	Individual	2	0	0
		Corporation	3	1	2
Public	10	Government	0	1	5
		Agency	2	1	0
		Cultural Center	1	0	0
Mixed	4	Partnerships	2	2	0

The Collaboration Context

Type	T	Arts	Sci	Govt
Multi-partner creator	5	1	1	2
Collaboration with professionals, groups in field	15	6	4	5
Collaboration with professionals, groups other fields	8	1	2	5
In-house collaboration, other departments	8	2	2	5
Creator affiliation with university	6	4	2	0

".. appeared to be an emerging business process in that the web-based resources were being developed to fulfil a 'big idea' but there was no procedural context established in terms of which officers would fulfil which roles, or what records needed to be created and how they would be maintained. Rather, various individuals participated in the creation of the web site on an as needed basis, sometimes through business activities that were already being undertaken but were now adapted or applied to the creation of the website. Each individual's involvement was "trust-based".

CS05, Ontario Web Exhibits, final report

About the Records Creators

- **Lack of collaborative effort to preserve work as a cohesive whole for future re-presentation or *re-creation* and effects of nascent process of creation**.

    – Need for documentation on the work.

    – Need for a preservation strategy and dedicated responsibility for its application from the very beginning of the creation process to the long term preservation.

Activities Resulting in Document Creation

- The general purposes are the same than traditionally.
- Activities changed because technologies has allowed creators to do things that they were unable to do before or to automate a part of the process of creation.
  - In art and science, work is born digital/confined exclusively to digital environment, not brought into digital environment.
  - In government, traditional work is carried out in new way into digital environment.
- New uses are emerging.

Purposes of the Digital Entities

Artistic activities	Web	DB	GIS	Files	Other
Creation of artwork	4	4	0	3	3
Reconstitution of archaeological site					X
Performance (dance/movement)	X	X		X	X
Electro-acoustic music				X	
Computer graphics animated films				X	
Multimedia online magazine	X	X			
Multimedia interactive exhibit	X	X			X
Web Ludosynthese	X	X			
Support the creation of artwork	1	3		3	
Artist's Web site	X	X		X	
Database for moving image files		X		X	
Digital asset management system		X		X	

About the Activities in Arts

- General functions : plan activities, execute and perform works/events, record portions of these, and document and review these works/events.

- Process of activities integrates new aspects: flexibility/freedom, interaction, creative possibilities of or limits to the digital technology.

- The majority of the documents created are either born-digital or scanned and brought into the digital domain.

- New uses emerges: promotion and publicity, interaction with artwork, creation of un-real environment.

Purposes of the Digital Entities

Scientific activities	Web	DB	GIS	Files	Other
Web-based science creation	1	1	1	1	
Geographical Cyber Atlas	X	X	X	X	
Support scientific activities	0	1	1	3	
Archaeological research		X	X		
Astronomical research				X	
Spatial research				X	
Archival studies research				X	

About the Activities in Sciences

- General functions: planning/design of experiment, design/ invention/modification of apparatus, collection of data, pursuit of research, analysis of data, communication of data, publishing results.

- Digital-born creation process, formalized and often partially or wholly automated in order to reduce human input.

- Integration of new aspects: interaction, automation, possibilities of the digital technology.

- Desire to translate data into neutral/open-source formats.

- New uses : increased interactivity, create un-real environment, accomplish tasks in "real time".

Purposes of the Digital Entities

Government activities	Web	DB	GIS	Files	Other
Records Keeping	2	3	0	3	0
Land registry		X		X	
Web-based filing system (tax)	X	X		X	
Web-based civil registry (court)	X	X		X	
Services	4	4	1	2	0
Information system (treaty)	X	X			
City information system (map)	X	X	X	X	
Cooperative information system (law)	X	X			
Archival Web exhibits	X	X		X	

About Activities in Government

- General functions : registry/regulatory services, taxes, civil status records, information services, etc.

- Electronic environment seeks to replicate the appearance of the traditional environment (increase familiarity, comfort, trust).

- Processes changed and integrated new aspects: increased interactivity, reduce cost, assure security.

- Records changed.

Diplomatic Analysis

Records?	Yes	Partly	No	Potential
Artistic activities				
Artwork or part of artwork	2		5	1
Support the creation of artwork	3			
Scientific activities				
Web-based scientific activities			1	1
Support of scientific activities	3	1		
Government activities				
Records Keeping	3			
Services	1		3	1

Are They Records?

Artistic activities	Yes	Partly	No	Potential
Creation of artwork				
Reconstitution of archaeological site			X	
Performance (dance/movement)			X	
Electro-acoustic music	X			
Computer graphics animated films	X			
Multimedia online magazine			X	
Multimedia interactive exhibit			X	
Web Ludosynthese			X	X
Support the creation of artwork				
Artist's Web site	X			
Database for moving image files	X			
Digital asset database system	X			

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Are They Records?

Scientific activities	Yes	Partly	No	Potential
Web-base science creation				
Geographical Cyber Atlas			X	X
Support of science activities				
Archaeological research	X			
Astronomical research		X		
Spatial research	X			
Archival studies research	X			

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Are They Records?

Government activities	Yes	Partly	No	Potential
Keeping records				
Land registry	X			
Web-based filing system (tax)	X			
Web-based civil registry (court)	X			
Services				
Information system (treaty)			X	
City information system (map)			X	X
Cooperative information system (law)			X	X
Archival outreach (Web exhibits)	X			

About the Documentary Form

- **Lack of stability of content and fixity of the documentary form**.

  - Need of fixed stored data in the system and well- known aggregation and presentation modes.

  - Need of software compatibility and interoperability. Technological dependencies must be avoided as much as possible.

About the Documentary Form

- **Lack of integration and control over time:**

  - Need of logical grouping/organization linked to retention periods as much as possible.

Records Making and Keeping: Arts

- No formal system.

- Practices defined by technical and functional necessities.

- Individual practices used to classify and describe the digital entities.

- Capture of evidence is mostly limited to compliance with copyright, intellectual property and grant stipulations.

Records Making and Keeping: Arts (cont.)

- Electronic records are generally kept in simple directories.

- Daily or punctual back-ups of work on external storage devices like CD-ROM seems to be the main strategy.

- What matters for artists is the artwork itself, rather than its creation process.

Records Making and Keeping: Science

- Practices are largely defined by a scientific methodology.

- Ad hoc practices used to classify and describe the digital entities.

- Focus is on preservation issues.

Records Making and Keeping: Government

- Formal systems where traditional administrative activities, such as registry, are implemented.

- Effects of a nascent business context.

About the Records Keeping Practices

- **Lack of description**:
  - Capture metadata related to establishing identity and proving integrity of the records.

About the Records Keeping Practices (Cont.)

- **Lack of organization**:

  – Do not conceive as separate from the rest of the records (paper records).

- **Lack of retention measures:**

  – Need of control mechanisms in the creation of records.

About the Records Keeping Practices (Cont.)

- **Lack of control**:
  - Implement measures against technological obsolescence.