



Authenticity, Preservation and Access in Digital Collections

Nancy Brodie

Preservation 2000

York, England December 7/8, 2000



The View from Canada





The view from Canada

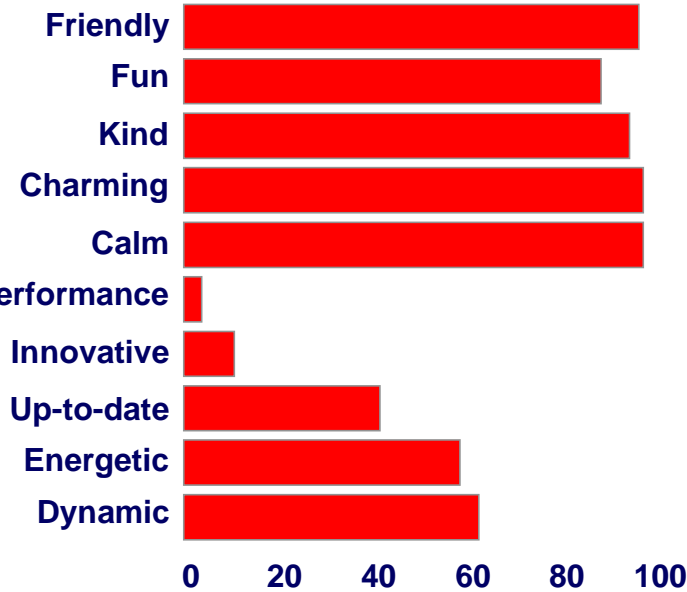




The view from Canada

Our Image

Burson Marsteller Study U.S. – Perceptions of Canada



Source: Young & Rubicon Brand Asset Valuator 1999

The Reality

Connectedness Rankings* Conference Board of Canada – 10 Country Comparison

	Overall Connectedness	Infrastructure	Access	Affordability	Usage	Socio-Economic Enablers
U.S.	1	1	4	4	1	1
Canada	2	2	3	1	2	2
Sweden	3	6	1	1	4	6
Finland	4	3	2	3	7	9
Australia	5	5	6	6	3	3
Japan	6	9	5	7	5	4
U.K.	7	5	8	5	5	9
Germany	8	7	7	8	8	7
France	9	9	10	9	10	5
Italy	10	10	9	10	9	10

* Based on a composite index. The comparisons were based on the most current data available for all countries examined, that is, primarily 1997-98 data. Source: Conference Board of Canada

...our image does not match reality

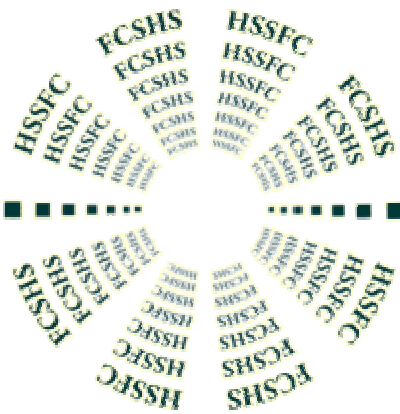


The view from Canada

- #1 in the world in Internet affordability
- #2 in the world in overall connectedness
- Resulting in - millions of electronic publishers
- All Government of Canada information and services on-line by 2004
- National Library of Canada Electronic Collection
 - Acquisition began in July 1994
 - Collection on the Web February 1995



Research from Canadian communities



- Canadian Association of Law Libraries
- Humanities and Social Sciences Federation of Canada
- Government of Canada
 - Treasury Board Secretariat
- National Library of Canada



Definitions of authentication

- Authentication provides verification that a digital object is what it purports to be and contains the contents that the author/creator or publisher originally intended. *CPA/RLG Task Force*
- Authenticity refers to a record's reliability over time and is linked to the record's status, mode, and form of transmission and the manner of its preservation and custody. *University of British Columbia*
- An authentic document is one that can be used as an official version in a court of law. Authentication may be a procedure established by a court to prove authenticity of an object.

vary by community



Related concepts

- Integrity
- Reliability
- Trustworthiness
- Credibility
- Identification and Citation
- Branding



A common understanding that....

- Authentication is a process which
 - proves the authenticity of objects
 - or
 - allows future users to determine the authenticity of objects
- Different degrees of authenticity may be required
- Different levels of authentication can be defined



The view from communities of creators

- Government
 - creator of government records and publications
- Legal Community
 - creator of laws, court decisions and secondary literature
- Academic community
 - creator of scholarly literature



Government view

- Legal authority of electronic documents
 - Citation standard
 - “appropriate technology”
- Secure and trusted environment
 - Public Key Infrastructure, encryption and digital signatures
- Common look and feel
 - identifiers through graphics and metadata
- Managing Internet information
 - for long term access and accountability



View from the legal community

- Authentication, preservation and citation required for an official version
- Partnership among legislative counsels, courts, legal researchers and law librarians
- Achieved a standard for citation
- Different levels of legal demand for authenticity
- Authentication depends on business processes and systems as well as information attributes



Academic community view

Credibility of scholarly electronic publishing is linked to:

- Peer review
- Publisher or journal reputation
- Version control: clear naming and identification of changes
- Long term accessibility
- Proper archiving

The issue is not *how* to authenticate but *what* to authenticate



Authentication provided by libraries & archives

- Part of the chain of persons, organizations and processes contributing to authenticity
- Building library and archival collections
- Methods of custody- active information protection
- Methods of preservation
- Recording attributes of authentic information
- Documented professional standards and practices

...trusted third parties

Experience of the National Library of Canada

- Goal to build an authoritative and reliable collection and preserve the integrity of publications as originally released
- Back-up and recovery procedures, firewalls
 - Gaps: protection at the document level
- Collection management policies, guidelines and procedures
 - Gaps: lack of legal deposit
- Authoritative bibliographic records and application of international naming schemes
- Attention to versions

Implications for preservation

Authentication is the enemy of the preservation of authenticity

- Use of encryption and digital signatures requires preservation of encryption algorithms, encryption and decryption software, keys, certificates, etc.
- Open access to collections adds risk to custodianship of unencrypted authentic digital objects



Implications for access

- Long term access is essential for the three communities in this report
- Accessibility puts information at risk
- Connectivity exposes information to risks outside an organization's control
- Assess the risk to authenticity
 - Functions of authenticity being supported
 - Levels of authenticity required
- Access controls in support of intellectual property rights may hinder long term access

Next steps

- Research for information life cycle
- Creation
 - Guidelines and best practices for creators
 - New information management approaches
 - Integration with document management software
- Storage and Access
 - Store unencrypted; serve encrypted
 - Transparent process
- Versions
 - Define what constitutes a version to be preserved
- Elaborate role of trusted, third party repository



International collaboration...

- The challenge is international
- Solutions must be developed with communities
- All links in the authenticity chain must be examined
- InterPares, a model for international research
 - Lead by University of British Columbia
 - National Archives of Canada a full partner

...is essential for progress