Digital Traces as Sources of Evidence & Memory

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Introduction

The global adoption of mobile phones with internet connectivity is changing the way organizations and individuals create, share, move, and store their business records and personal communications.

The adoption of online services, such as social media platforms that utilize cloud computing to deliver 24/7 access, collaborative tools and scalable solutions are introducing new risks to record-keeping and record-keeping for organizations and individuals. Two recent studies explore the impact of the online environment and cloud-based services have on digital records creation, use and preservation, focusing specifically on their future use as evidence and social memory.

Research Question

How do we ensure the trustworthiness (i.e., accuracy, reliability and authenticity) of digital records accessed, shared and stored through social media platforms and service providers utilizing cloud-computing infrastructure?

Research Projects

In 2013, the Law of Evidence in the Digital Environment (LED) Project began exploring the challenges presented by digital records to the law of evidence in 6 states. The LED Project is a 5-year collaboration between the Faculty of Law and the School of Computer Science at the University of British Columbia.

In 2013, the INTERPARC Trust Trim (ITR) Project began exploring issues of trust regarding digital records in the online environment. Trust is a 5-year multi-institutional, interdisciplinary project led by Dr. Susan Webber, based out of the Centre for the International Study of Contemporary Records and Archives at the University of British Columbia, Canada.

Research Methodology

An extensive LITERATURE REVIEW in the legal and archival domains for concepts and issues of trustworthiness, digital records, digital evidence, and social media contracts was conducted. Followed by a review of case law in North America pertaining to the use of social media content in civil and criminal cases, specifically the issue of authenticity.

A qualitative SURVEY of professionals involved with digital evidence in legal proceedings was conducted, followed by indepth INTERVIEWS with select survey participants.

In the context of records management and record-keeping standards, TEXTUAL ANALYSIS of boilerplate cloud-service contracts from selected providers’ Terms and Conditions Agreements, was conducted, including their Terms of Service, Terms of Use, and Privacy Policy.

Key Survey Findings

The Law must keep current with advances in digital technology.

![Graph](image)

Key Findings of Cloud-Service Contract Analysis

Data Ownership

Archives need to establish whether the party that stores their information and records in the cloud retains ownership. Digital ownership is not necessarily the same as ownership over information transmitted onto a physical medium. (Dorosz, M. Annals IR 569 12 (2013)). Records stored in electronic systems require arrangements that distinguish between the ownership of the records and the storage of the records (ISO 14692:2001, 8.3.3).

Boilerplate cloud-service contracts assign ownership of user-generated content to the creator, but not the metadata produced during upload, management, migration and storage. This is owned by the service provider.

Social media contracts assign ownership of user-generated content to the creator, but retain an unlimited, royalty-free, non-exclusive license to reuse members’ content, even after the account has been terminated.

Availability, Retrieval and Use

Guidelines for adopting cloud-based services is to have information and records immediately available to an organization; to fulfill their current and future business needs. Retrieval is a timely manner is required by FOIPAct laws.

Cloud-service providers promise 99.9% uptime; however, this amounts to 9 hours of downtime over a year. In reality, a number of major disruptions and data breaches to cloud-based services are reported each year (e.g., Drive 2014, MySpace rebranding).

Data Storage and Preservation

Record-keeping standards state that systems for storing digital records should ensure the records held within the system remain accessible, authentic, reliable and usable throughout any changes made to the system (E1007). Additionally, signatures and embossments conducted by the system provider should not impact the reliability and authenticity of the records (ISO 14692:2001, 8.3.5).

Cloud-service contracts do NOT address preservation activities. Backup procedures for user-generated content are the responsibility of the creator, and that uploaded content is removed.

Social media contracts state that the service supports sharing, not storage.

Data Retention and Disposition

Records management and preservation activities rely on record retention and disposition schedules to perform information governance. Schedules must remain compliant with increasingly complex legal and regulatory environments. Record-keeping standards suggest that the retention and disposition of records should be implemented and carried out by the digital system in which the records are held (ISO 14692:2001, 8.3.7).

Boilerplate cloud-service contracts and social media contracts do NOT address date of record retention or disposition.

Security, Confidentiality and Privacy

Managed access to information and records in systems ensure the authenticity of the records. Record-keeping standards require that metadata and access log documents that records are being protected from unauthorized access, use, alteration, or disclosure (ISO 14692:2001, 8.3.3). Security measures are demanded by data protection legislation (HIPAA), as well as sector regulations related to financial markets (Sarbanes-Oxley Act and Basel Accords).

Cloud-service contracts focus mainly on the security of physical infrastructure. Cloud-service contracts state that it is the responsibility of the customer to manage access restrictions for their accounts and stored content.

Social media contracts give members a false sense of privacy by providing levels of access control. Civil and criminal cases reveal that content held in social media accounts is discoverable and admissible.

Data Location & Cross-border Data Flows

Cloud computing relies on the processing and storage of data at servers located across the globe. Customer data may be processed and stored in different locations and domain jurisdictions. Legal concerns arise when a customer’s data is subject to foreign laws and access by foreign agencies (e.g., ECPA). The law is unclear if a customer’s content is located to the location of the customer, the location of the server, or the location of legal registration of the cloud service provider (Microsoft v. United States of America 34-973).

Cloud-service contracts state that control over data location and flow is a shared service.

End of Service

Prior to termination of service all records and associated metadata should be transferred out of the service in a manner that does not impair their reliability, authenticity and security (ISO 14692:2001, 8.3.5).

Cloud-service providers may and the service for breach of contract and/or invasion of the account. Notification of the customer is not required.

In the case of death, social media contracts freeze access to the account and its contents.

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