

R-7969

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Title: Strong Write-Once Read-Many (WORM) Storage

Background: Today's increasing digital societies and markets mandate consistent procedures for information access, processing and storage. A recurrent theme is the need for regulatory-compliant storage as an essential underpinning enforcing long-term data retention and life cycle policies.

Technology Description: Provides a method for storing digital information for storage in an adversarial setting in which trusted hardware enforces digital information compliance with data storage mandates. Secure storage overhead is minimized by identifying sparsely accessing the trusted hardware based on data retention cycles. Data retention assurances are provided for information stored by a Write-Once Read-Many (WORM) storage system.

Applications: Provides a WORM storage system providing strong assurances of data retention and compliant migration. Addresses the need for a data server that provides a defense against malicious insiders having super-user authorities and administrative privileges and allows for migration between devices to comply with decades long retention periods.

Advantages: Conventional compliance storage products and research prototypes are fundamentally vulnerable to faulty or malicious behavior due to a reliance on simple enforcement primitives that are ill suited for the IR threat model. This technology provides a strong, compliant storage system for realistic adversarial settings that deliver guaranteed document retention and deletion, quick lookup and compliant migration, together with support for litigation holds and several key aspects of data confidentiality.

Patent Number / Publications: Patent Pending

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