



# Medical & Electronic Healthcare Records

XAM Value Proposition  
June 2009



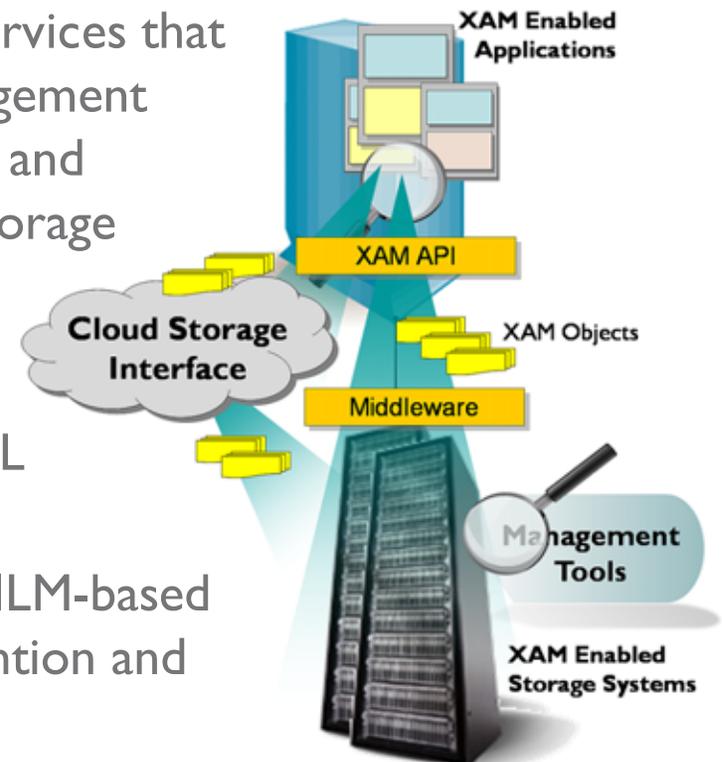
- XAM Introduction
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## ➤ The open XAM API specification

- ◆ Defines the programming interface and services that enable applications and information management services to define, store, retrieve, search, and manage XAM objects on XAM-enabled storage systems

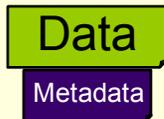
## ➤ XAM objects are:

- ◆ Exportable or importable as standard XML containers
- ◆ Provide for extensible metadata enabling ILM-based management, eDiscovery, long-term retention and preservation
- ◆ Portable, location independent, compliant, secure



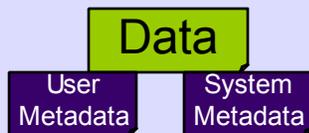
# XAM is a Data Storage Interface

Information Resource Domain: Applications  
Understand the semantics of the content  
(bits)



Data Storage Interface

Data Resource Domain: the content (bits) are  
opaque to the Applications and Services



Data Storage Interface

Storage Resource Domain: the bits are  
contained by these Services



**Resource Domains classify services into specific areas that each deal with a different aspect of the problem**

An information domain application creates data and associates metadata with it

Certain Data Storage Interfaces can accommodate both Data and Metadata (XAM, Filesystems with extended attributes)

Metadata aware Data Services interpret Data System Metadata as the requirements for its lifecycle and implement policies for retention, placement, lifecycle, etc.

Other Data Storage interfaces (based on blocks or objects) provide virtualized Containers for the Data bits and the management of those containers

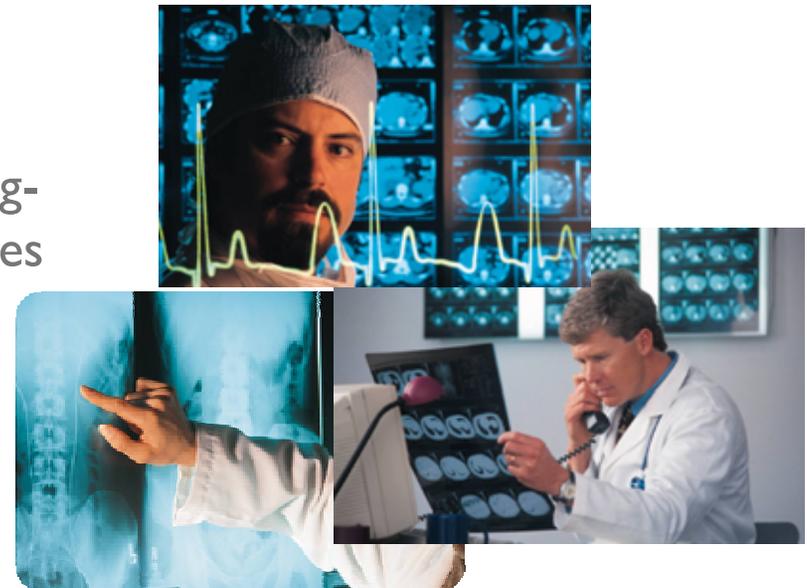
Storage services are employed to meet those requirements at this point in the data's lifecycle, however the storage services are unaware of the data's requirements

- **XAM provides choice, flexibility, and makes information portable**
  - ◆ Choice between storage devices and applications, flexibility to change vendors or use storage devices from multiple vendors
- **XAM reduces costs**
  - ◆ Reduces application porting, testing, and support costs, and improves utilization efficiencies & time to market
- **XAM empowers ILM-based management practices**
  - ◆ Retention, disposition, security, and other requirements can be embedded in the metadata allowing application-based and external services to act on XAM objects automatically based on business rules
  - ◆ Reduces cost and improves storage utilization efficiencies

- XAM metadata is the foundation for extended e-Discovery, analytics, and litigation support capabilities
- A standard container enabling centralized, shareable, and controlled medical and health care records
- Retention and Preservation systems utilizing XAM provide a standard preservation object format
- XAM provides cloud-based services with missing information management control capabilities

## ➤ Top Challenges

- ◆ Creating centralized, shareable, protected, confidential, persistent, long-term client health care records requires capabilities not in place today:
  - > A portable, controlled information container
  - > Federated search
  - > Storage interoperability
  - > Standard formats supporting expanded metadata and interchange
  - > Preservation-class practices
  - > Information management practices
  - > Physical and logical migration practices



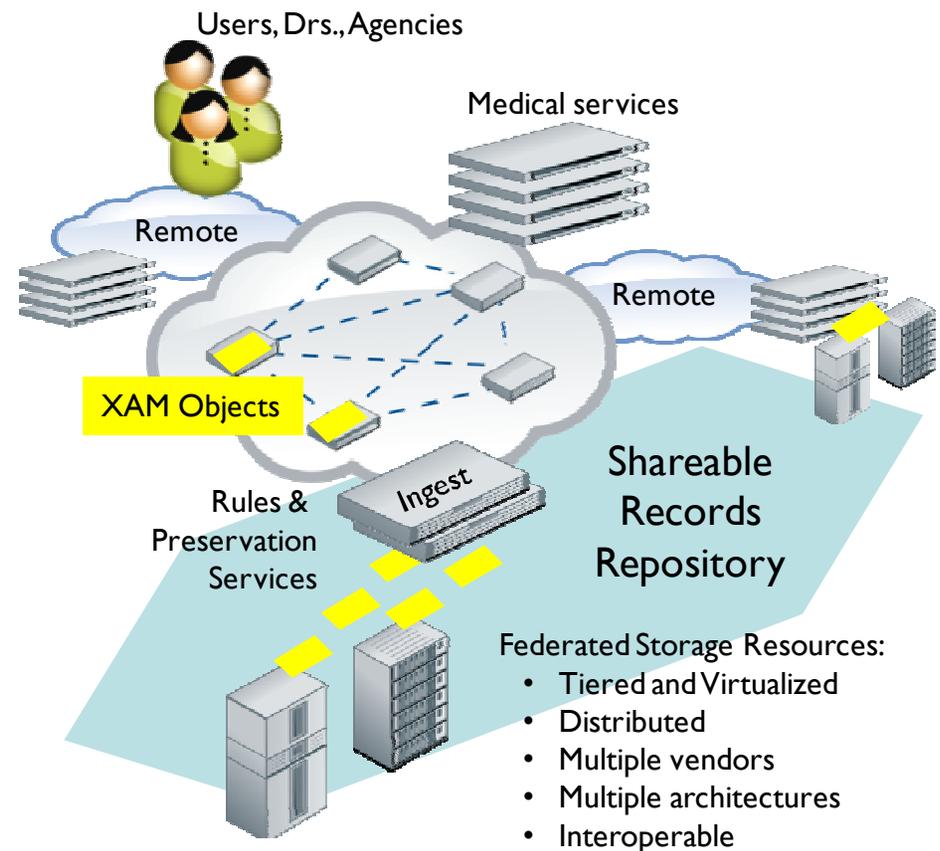
*Medical records retention periods are generally 5-15 years and now the plan is to make them shareable. Without XAM, this is technically not feasible*

## Vision

- With XAM, information becomes portable and pervasive and capable of supporting the vision of the EHR initiatives
- XAM features, benefits, and attributes relative to EHR
  - ◆ XAM objects are self-contained, portable, location independent preservation objects that can be shared and discovered
    - Readers can be embedded allowing application independence
  - ◆ All critical preservation and security control services are supported – authenticity, integrity, availability, discoverability, portability, confidentiality, audit logs, ILM-base management, migration, ...
  - ◆ Migration and management costs are greatly reduced

- Medical services produce records in XAM format with pertinent metadata
- Target repositories ingest delivered content and convert non XAM files into XAM objects
  - ◆ Objects are hashed, audit logs started, indexed for discovery, access control and storage policies initiated based on classification rules

## Potential EHR Preservation Service



- XAM defines a standard object container enabling shareable medical and health care records
  - ◆ Allowing for centralized collection, distribution, portability, and information exchange
  - ◆ Readers can be embedded allowing application independence
  - ◆ Supports all security, authenticity, integrity, & chain of custody models
  - ◆ Supports all preservation services for long-term retention
  - ◆ Reduces cost by enabling ILM\*-based practices and minimizing physical and logical migration impact

\*ILM: Information Lifecycle Management – service management style framework for cost-effectively aligning datacenter storage, security, services, applications, and infrastructure with the business requirements for the organization's information

- A standard XML container enabling centralized medical and health care records
  - ◆ Allowing for centralized collection, distribution and information exchange
  - ◆ Readers can be embedded allowing application independence
  - ◆ Supports all security, authenticity, integrity, & chain of custody models
- XAM metadata is the foundation for extended e-Discovery, analytics, and medical litigation support capabilities
  - ◆ Rich XAM metadata can be searched and analyzed
  - ◆ Extensible XAM container: provides for security, integrity, authenticity, audit logs, chain of custody and litigation hold controls, and can hold medical or litigation review metadata

## ➤ For more information on XAM

- ◆ SNIA XAM Home
  - > <http://www.snia.org/forums/xam>

## ➤ Contact information:

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