The Registry and Repository from IBM Healthcare and Life Sciences delivers a standard method for managing document sharing between healthcare enterprises, ranging from private physicians to clinics and in-patient facilitiese

Cross-Enterprise Document Registry and Repository

What is XDS and XDS-I?

Integrating the Healthcare Enterprise (IHE) defined the XDS/XDS-I technical frameworks that implement established messaging standards to achieve specific objectives for sharing critical medical information between enterprises.

The Cross-enterprise Document Sharing (XDS) Integration Profile defined by the IHE provides a standards-based specification to manage the sharing of documents among healthcare enterprises. XDS for Imaging (XDS-I) extends XDS to the imaging domain.

A typical implementation requires an XDS Registry, Repository, and Audit Repository as shown in the diagram below.

IBM XDS Registry and Repository

The XDS repository stores documents in a transparent and persistent manner and responds to document retrieval requests. As such, IBM implemented this actor in a Services Oriented Architecture (SOA) over several types of persistency layers (File System, Content Management and DB2). Additional IBM features that were not defined by the IHE profile include WADO to DICOM for images, and centralized administration and configuration of the component(s).

The XDS registry stores information about the documents (metadata) so that documents of interest for patient care can be easily found, selected, and retrieved—irrespective of the repository where they are actually stored. IBM implemented this actor in a SOA design on top of WebSphere and DB2. In addition to the functionality defined by the IHE profiles, IBM added a wide range of features to the Registry to easily monitor and administer it from a centralized location and services for ranking and sorting the results.

IBM ATNA Audit Repository (ARR)

IBM also implemented this actor in a Services Oriented Architecture (SOA) on top of WebSphere and DB2. The IBM ARR solution includes extra features beyond the IHE profile in support of reliability and scalability. These features include additional reliable protocol support for message delivery and failover capabilities for multi-site configurations.

Legacy Systems

IBM recognizes that for most implementations a transition from legacy systems is required, which is why IBM also provides additional software components to facilitate inclusion of legacy systems into an XDS implementation. The supporting software components are:

- HL7 v2 to XDS Adapter
- HL7 CDA to XDS Adapter
- Legacy PACS to XDS adapters

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