

Metadata Enrichment for Interoperable Digital Pathology Workflow

Business Challenge

A leading Health System, sought a way to enhance digital pathology workflows by improving interoperability and accessibility of DICOM image data across multiple platforms.

- Client wanted to overcome limitation of slide scanner to communicate with Cloud DICOM store by converting DIMSE to DICOM web protocol.
- Client wanted to enrich metadata of DICOM images with relevant patient and case-specific information to ensure that scanned slide images were easily traceable and shareable across storage, viewing, and analysis platforms.



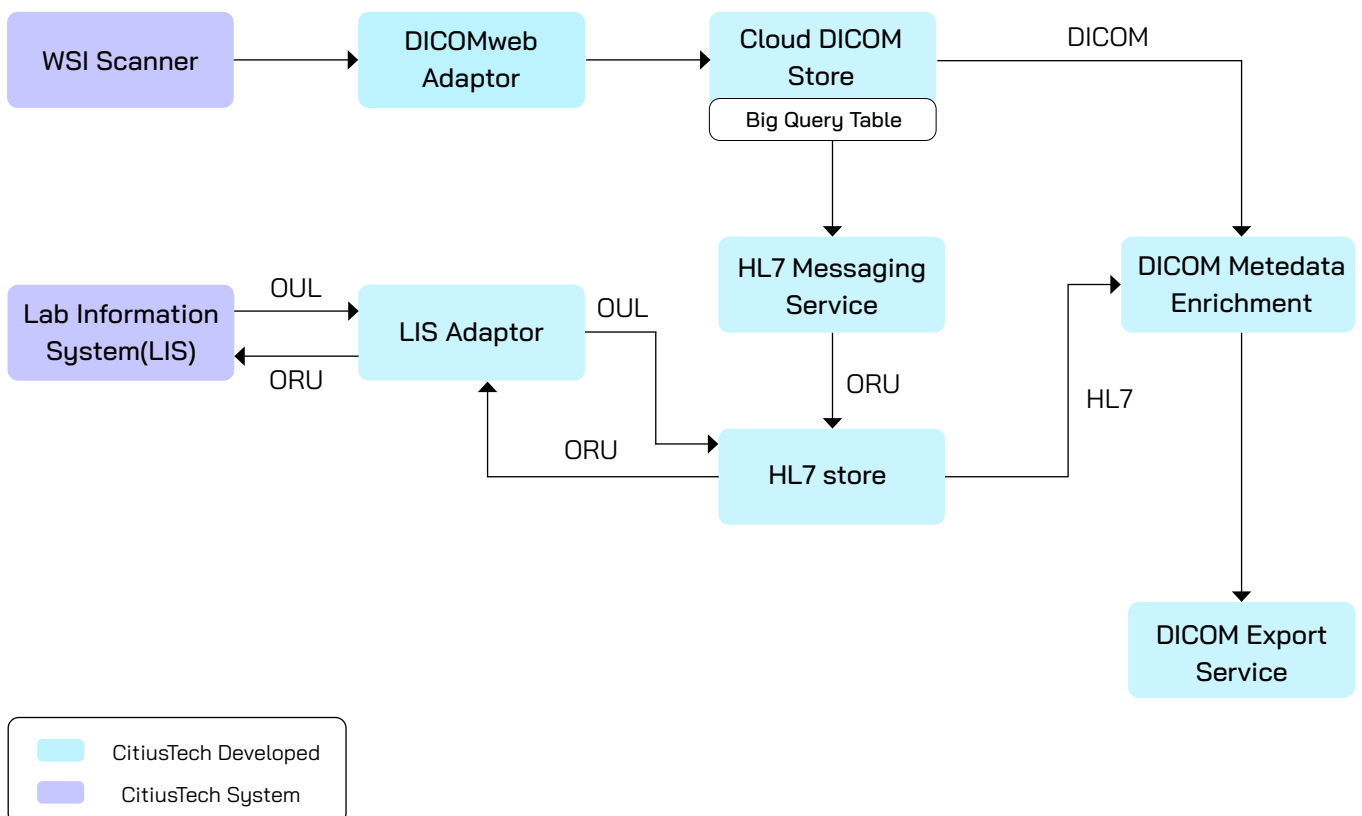
CASE STUDY

CitiusTech developed a custom data pipeline to streamline image retrieval, metadata enrichment, and storage.

The solution had three main components:

- **Pipeline to Fetch and Store Images:** A DIMSE to DICOMweb adaptor was configured using cloud healthcare APIs to facilitate the transfer of images from scanners to cloud storage.
- **HL7 Integration:** A HL7 connector service was designed to interface with LIS system. The service shared image information with LIS to fetch case information.
- **Metadata Enrichment and Storage:** Once the case information was parsed and converted to DICOM-compatible tags, slide images were enriched with new DICOM metadata. The enriched images were shared with Pathology PACS and AI Applications.

SOLUTION SCHEMATIC



VALUE DELIVERED



Improved Data Interoperability: The enriched DICOM metadata made digital pathology images fully interoperable across various platforms, supporting viewing, storage, and analysis workflows seamlessly



Enhanced Data Traceability: With enriched metadata, each scanned slide image was now associated with specific patient and case information, increasing accuracy in clinical data tracking and retrieval





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