



HL7eu imaging overview

HL7eu WGM, Cologne, Dec. 2025

Bas van den Heuvel



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HL7



Europe

IHE

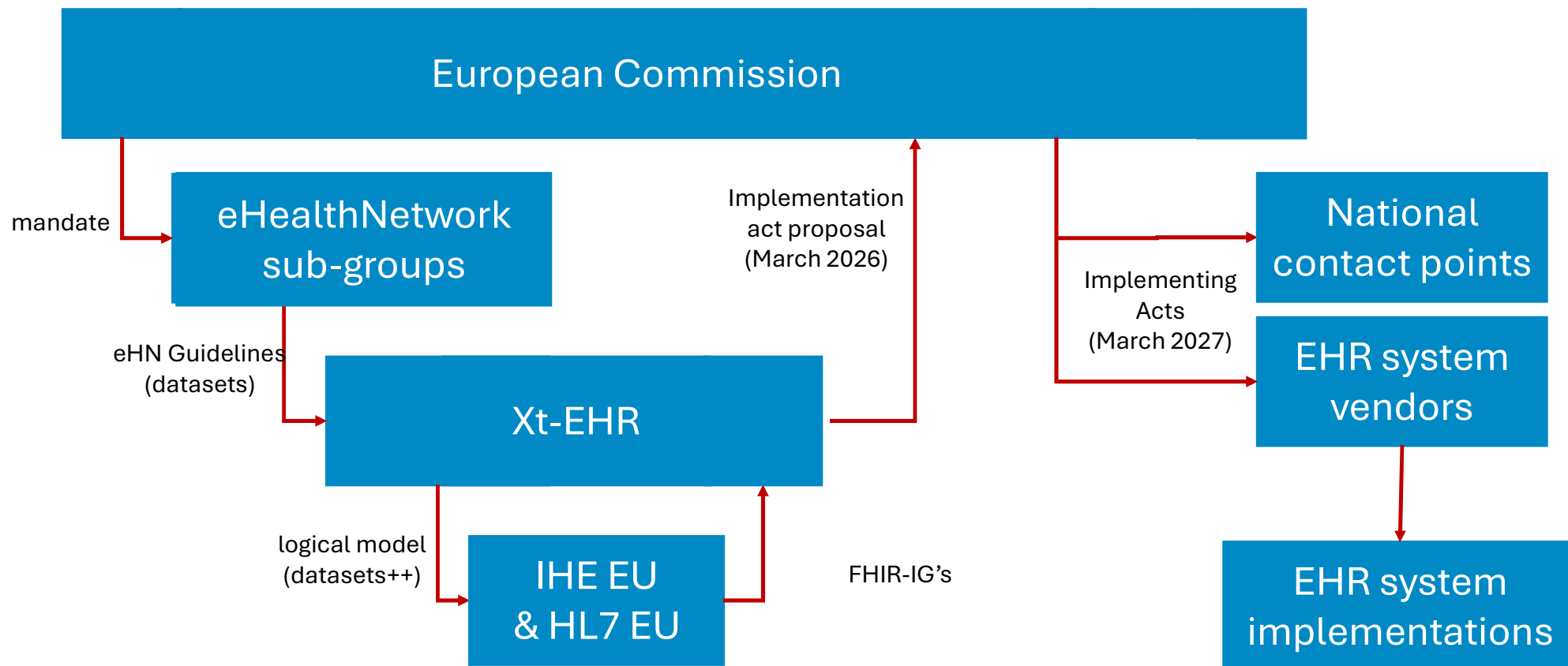
EUROPE

EEHRxF



- **Group 1 (phase 1, 2029)**
 - Patient summaries
 - Electronic prescriptions and dispensations
- **Group 2 (phase 1, 2031)**
 - **Medical imaging studies and reports**
 - Medical test results, including laboratory test and related reports
 - Discharge reports

Who decides what?

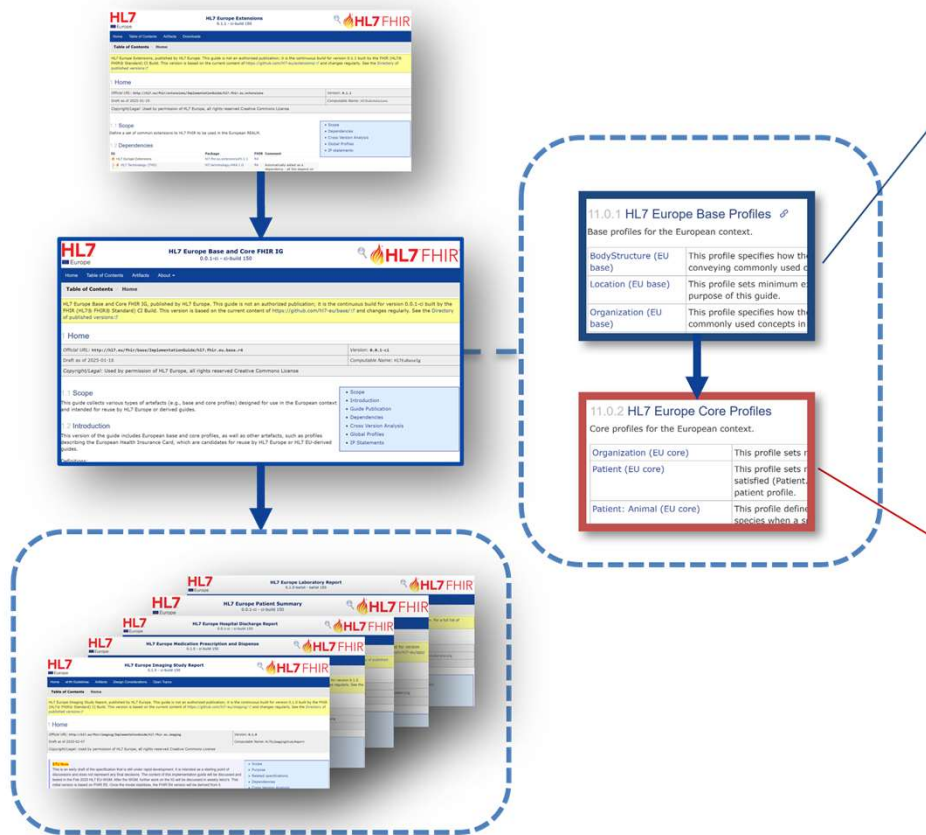


EEHRxF definitions

Extensions (R4/R5)

Base and Core (R4/R5)

Scoped HL7 EU IGs (R4/R5)



Base

- **Baseline** for all HL7 Europe profiles.
- **Loosely constrained**, providing a flexible foundation.
- **Rarely used “as is”**, but always extended or specialized.

Core

- Defines **essential constraints** that cut across many use cases.
- Serves as the **first reference point** for the large majority of HL7 Europe FHIR IGs.
- Can often be used **“as is”**, without further refinement.
- Realizes the **common EHDS logical models** in practice.

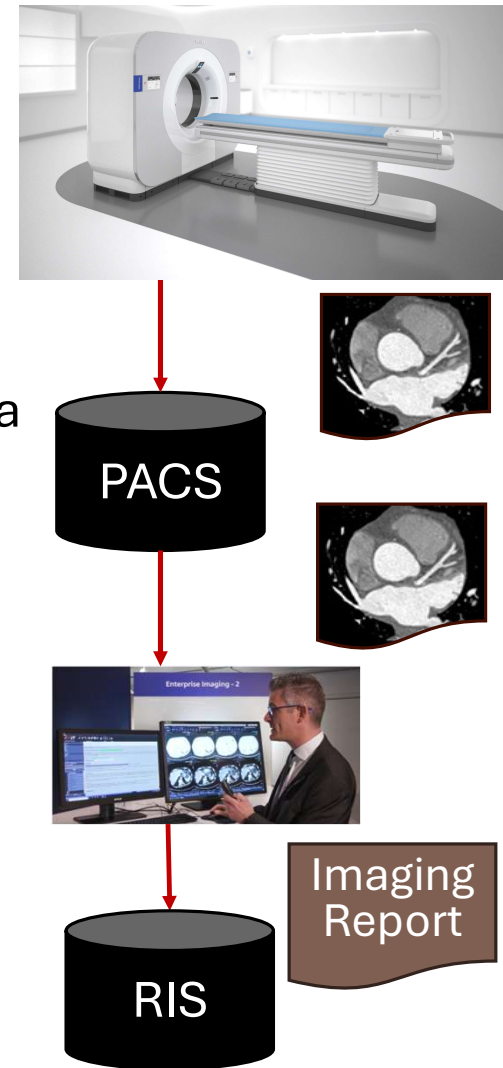
Imaging Report vs Imaging Manifest

- **FHIR Imaging Manifest**

- Data from the PACS
- holds the information required to access the imaging data (data from the PACS).
- holds the URLs needed to access the content in a document that can be shared in document exchange infrastructure (IHE-XDS/IHE-MHD)

- **FHIR Imaging Report**

- Data from the report repo
- holds the Imaging Report (data from RIS).
- typically signed and cannot change.



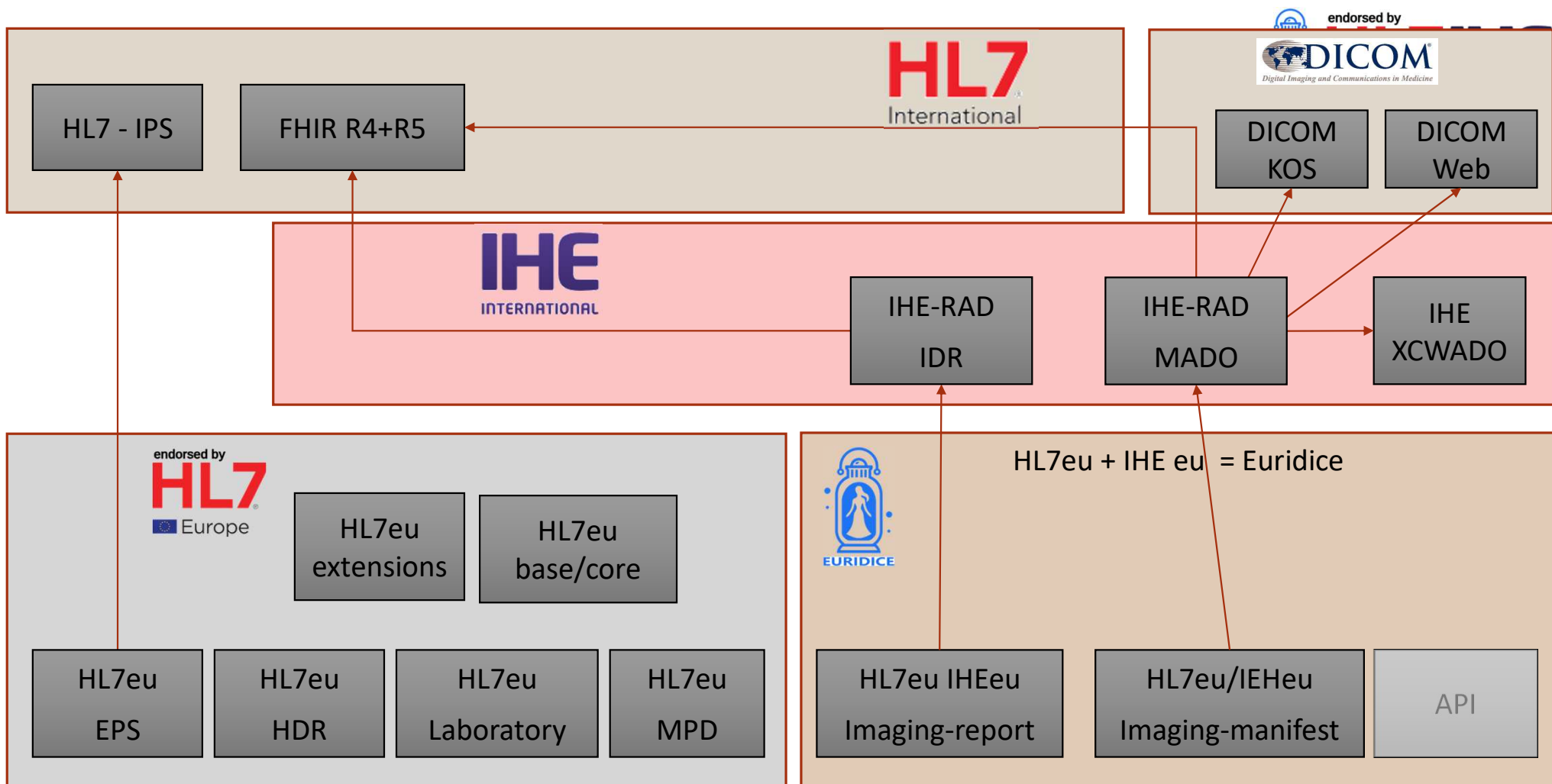
History

2025

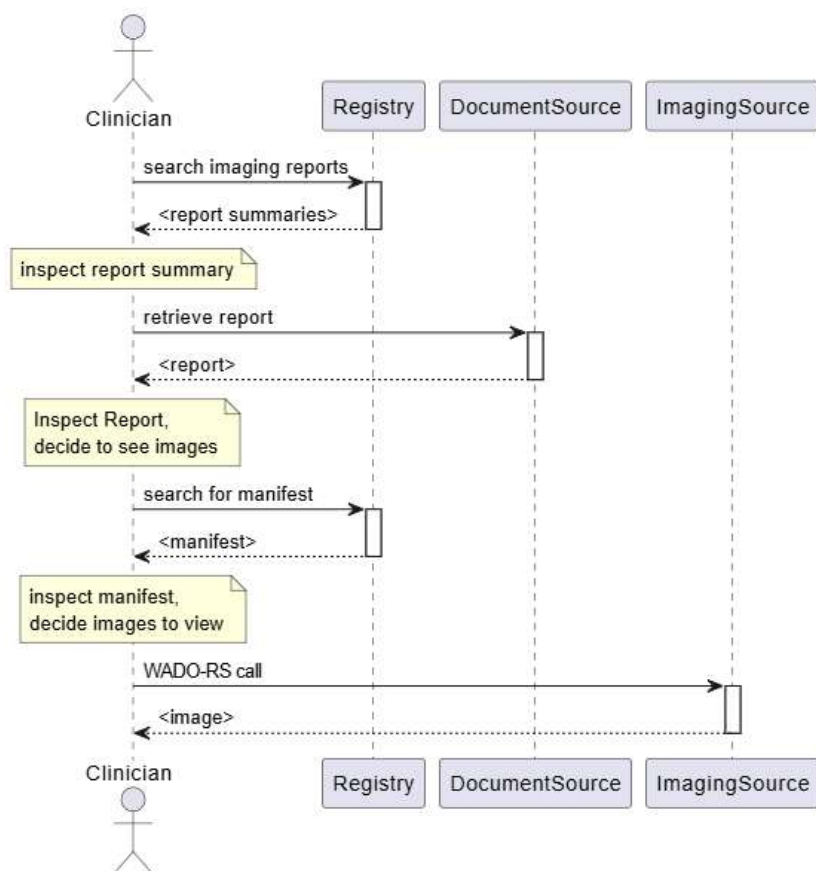
Q1	Imaging PSS approved	
	Initial IG	
	Lisbon WGM	
	Start of weekly calls	
Q2	Split in manifest and report	
	Map on Xt-EHR model	
	Prepare for ballot	
	HL7 Connectathon	
	1th ballot on R5	
	IHE-Connectathon Viwnna	Start of joined manifest
Q3	Ballot resolution	Refine specification
	Create FHIR R4 version	Move to IHE-RAD
		KOS-eu vs KOS-DC
Q4	Final ballot resolution	Selected as 2026 WP
	HL7eu WGM Cologne	
	Update Xt-EHR mapping	Public comment on MADO
	Prepare for R4 ballot	

2026

Q1	R4 ballot	Public comment
	Ballot resolution	Process comments
Q2	Publish first version	Publish first verion
		IHE-Connectathon
	IHE-Connectathon Brussel	Brussel



Typical use case



Clinician searches for documents. Select the document to inspect and downloads it.

After inspection of the document, it searches for the manifest related to the report, downloads it and determines which image/serie to view.

Using the (XC)-WADO URL, the Clinician download the relevant DICOM images and renders them.



Imaging Report



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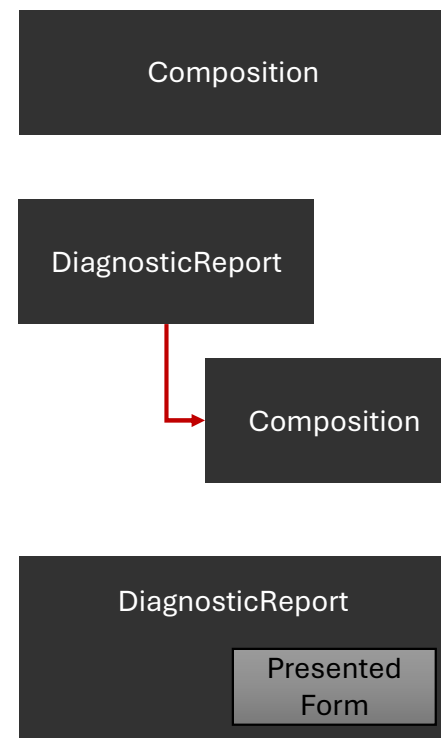
Europe

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EERxF document approach

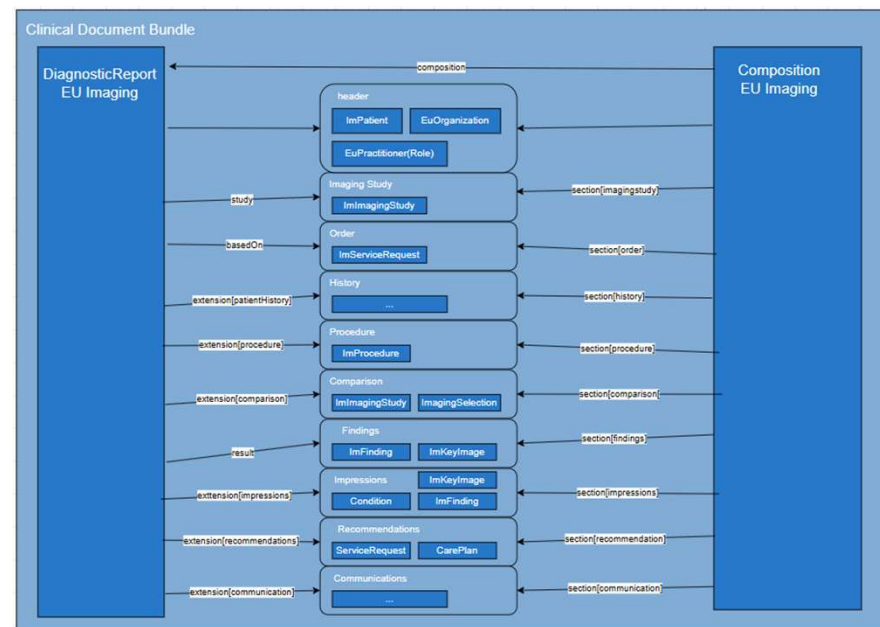
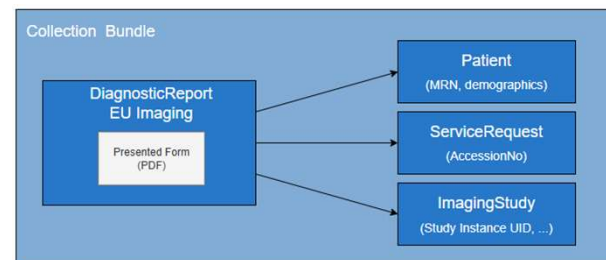


- EHRxF documents are FHIR based.
 - MPD is special -> not discussed here
- Different Design patterns
 - Composition based (EPS, HDR)
 - DiagnosticReport based (Laboratory, Imaging-Report)
 - ImagingStudy based (Imaging Manifest)

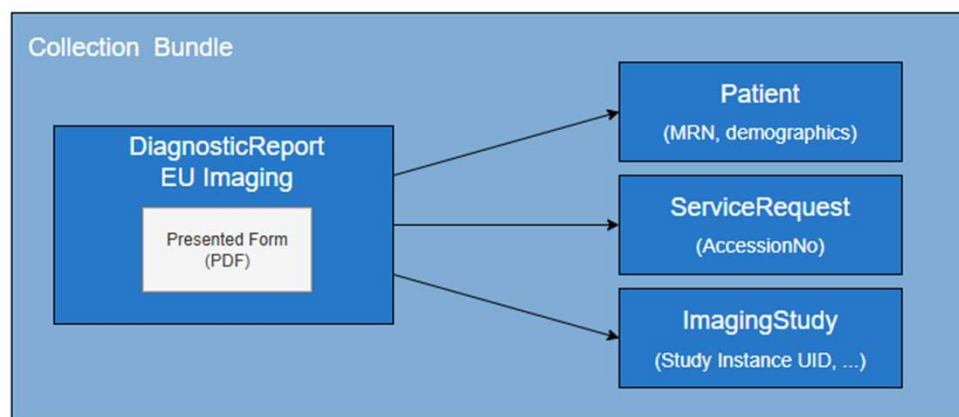


Imaging Report

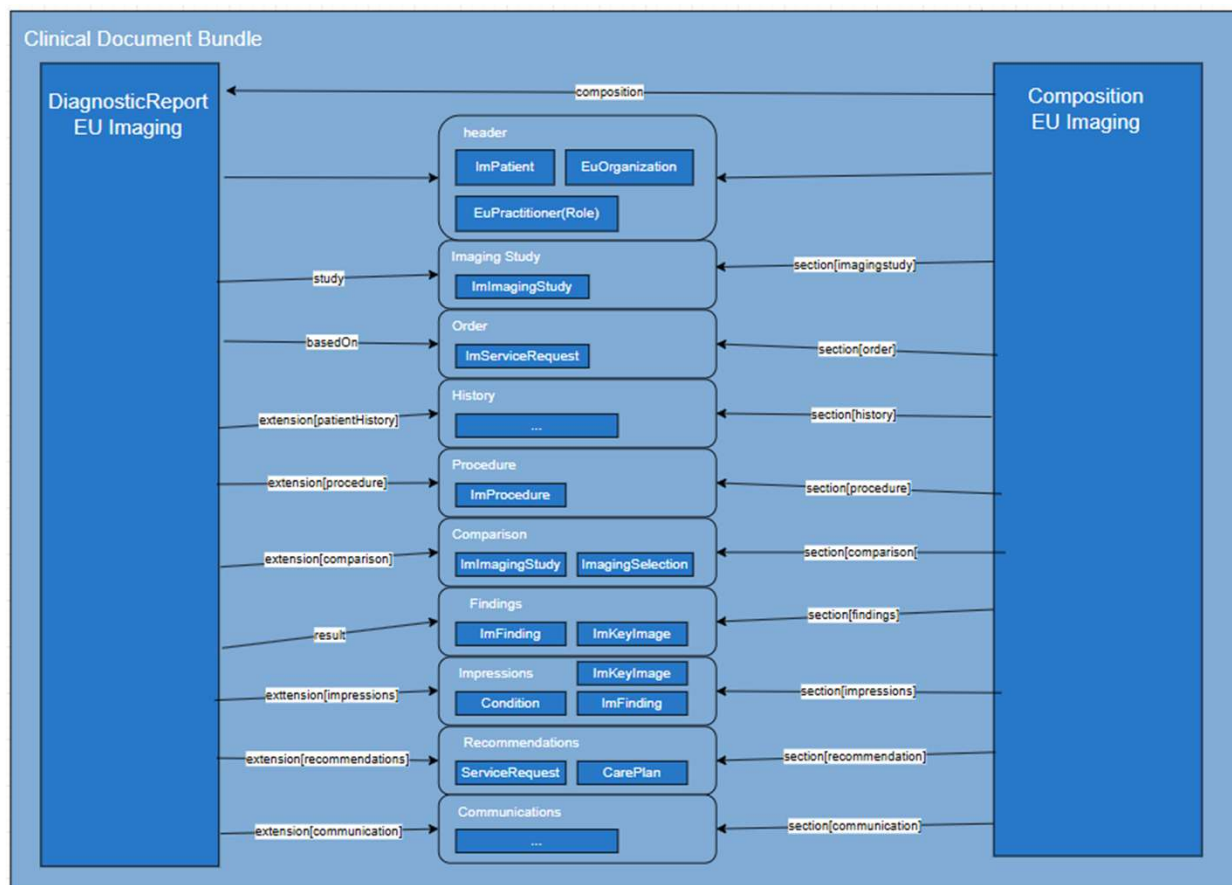
- **Disclaimer:**
 - Current plans for different forms of imaging reports – no decision has been made yet.
- **Legacy reports:**
 - defines how to represent pdf only and CDA based reports.
- **Future reports:**
 - intended to be expressed as FHIR documents where the DiagnosticReport is the source for structured data and the Composition a rendering of this data (similar to CDA)



Legacy reports

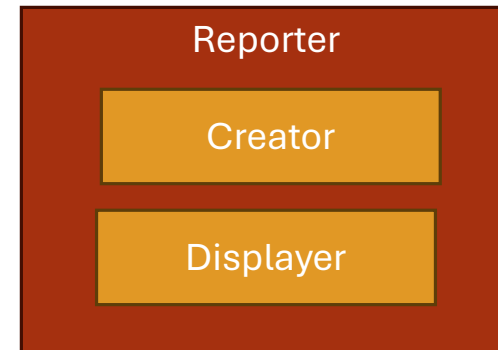


Full report



Actors

- What actors for documents?
- Current proposal:
 - Creator
 - Differs in name from Producer (IHE-MHD)
 - Creates document content (create, update, edit, ...)
 - Specifies what it is required to produce
 - Details on ORU based/CDA based/ new reports
 - Transaction (user-creator): update-document
 - Processor
 - Works with the document in order to fulfill some goal
 - Examples include: registries, AI processing, data crawler, CDS, quality reporters, ...
 - Specifies what is required for safely processing reporter
 - Displayer/rendered
 - Renders the report
 - Examples include: reporters, viewers, ...
 - Specifies what are the (minimal) display requirements for safe display as well as guidelines for effective display
 - Details on rendering different document variants.
 - Transactor (user-displayer): display report



Are these the actors?
Do we need
additional/less?
What capabilities?

Imaging Manifest

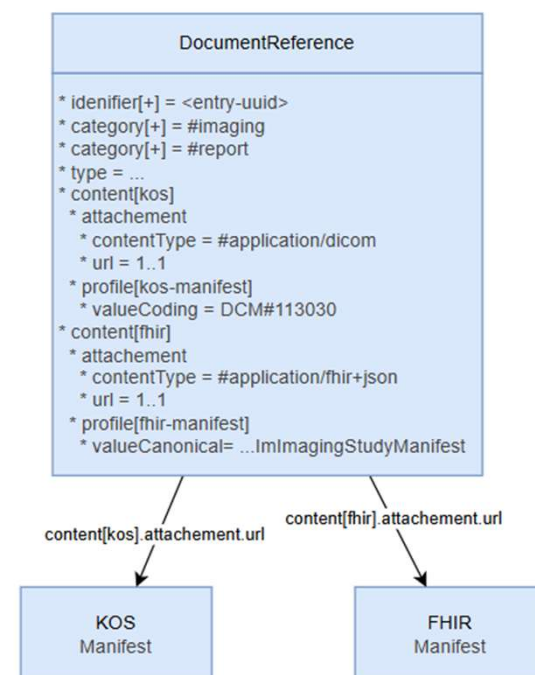
Imaging manifest

- **Goal:**

- a document that can be shared in a document infrastructure
- Status:
- New profile in IHE-RAD – (almost) out for public comment
- Provides:
- the information needed to determine what series/instances to download
- Information on key images
- the URLs to download the content (WADO, XCWADO, viewer, IID)

- **Format:**

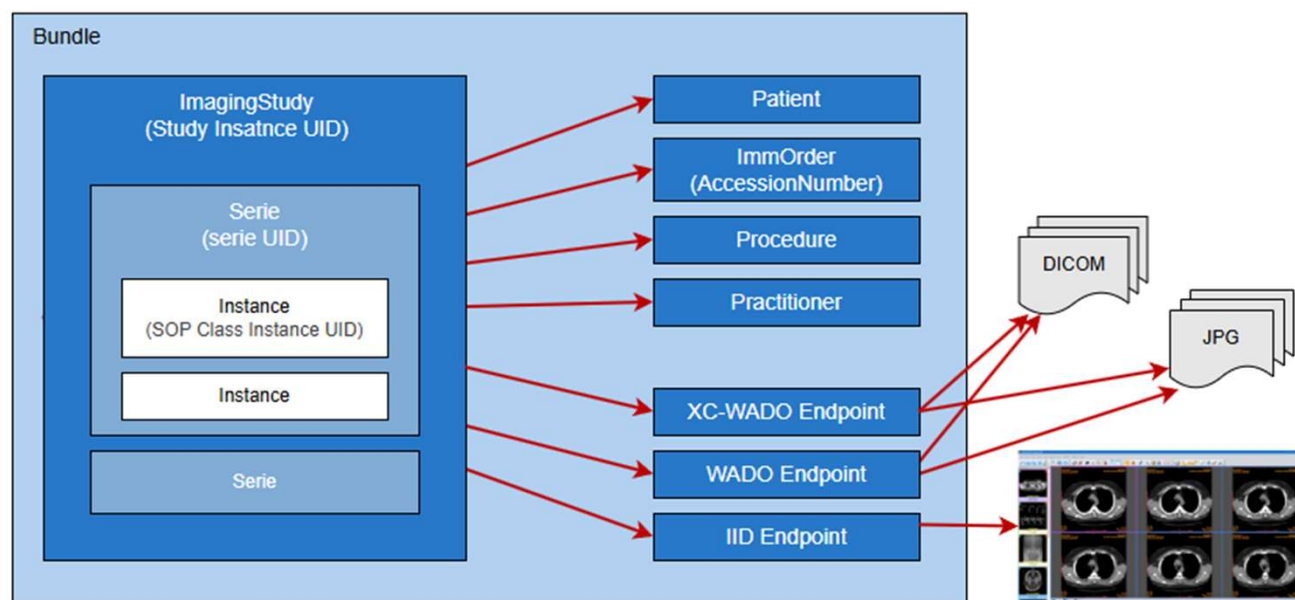
- DICOM KOS & FHIR variant
- Server provides both, clients decides what to use.
- Mappings will be provided to translate one into the other (in text and in code)



IHE-MADO – FHIR variant

- Why FHIR?

- Historical, this came from the HL7eu camp.
- Better aligns with the Imaging Report. Potentially allowing a Bundle that holds both report and manifest data.
- Richer format allowing for more expressive representation of the content.



MADO KOS

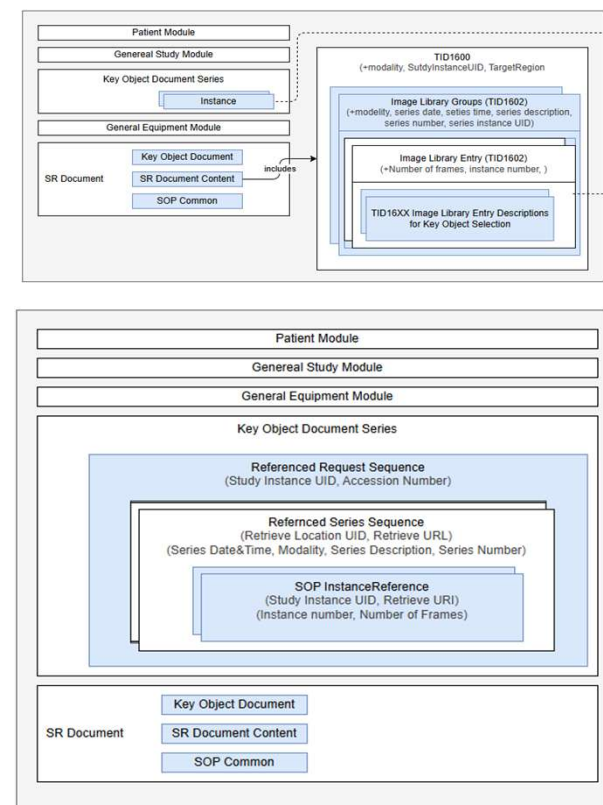


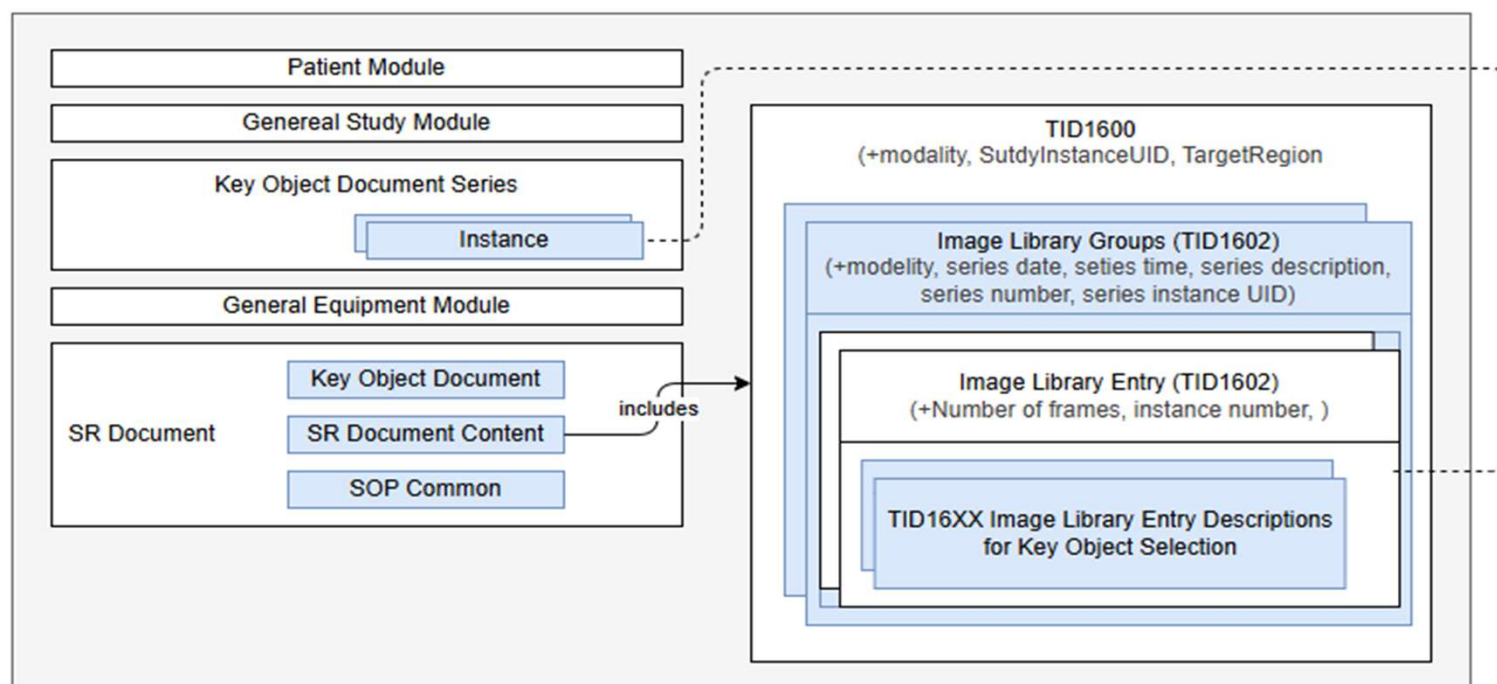
- Why KOS?

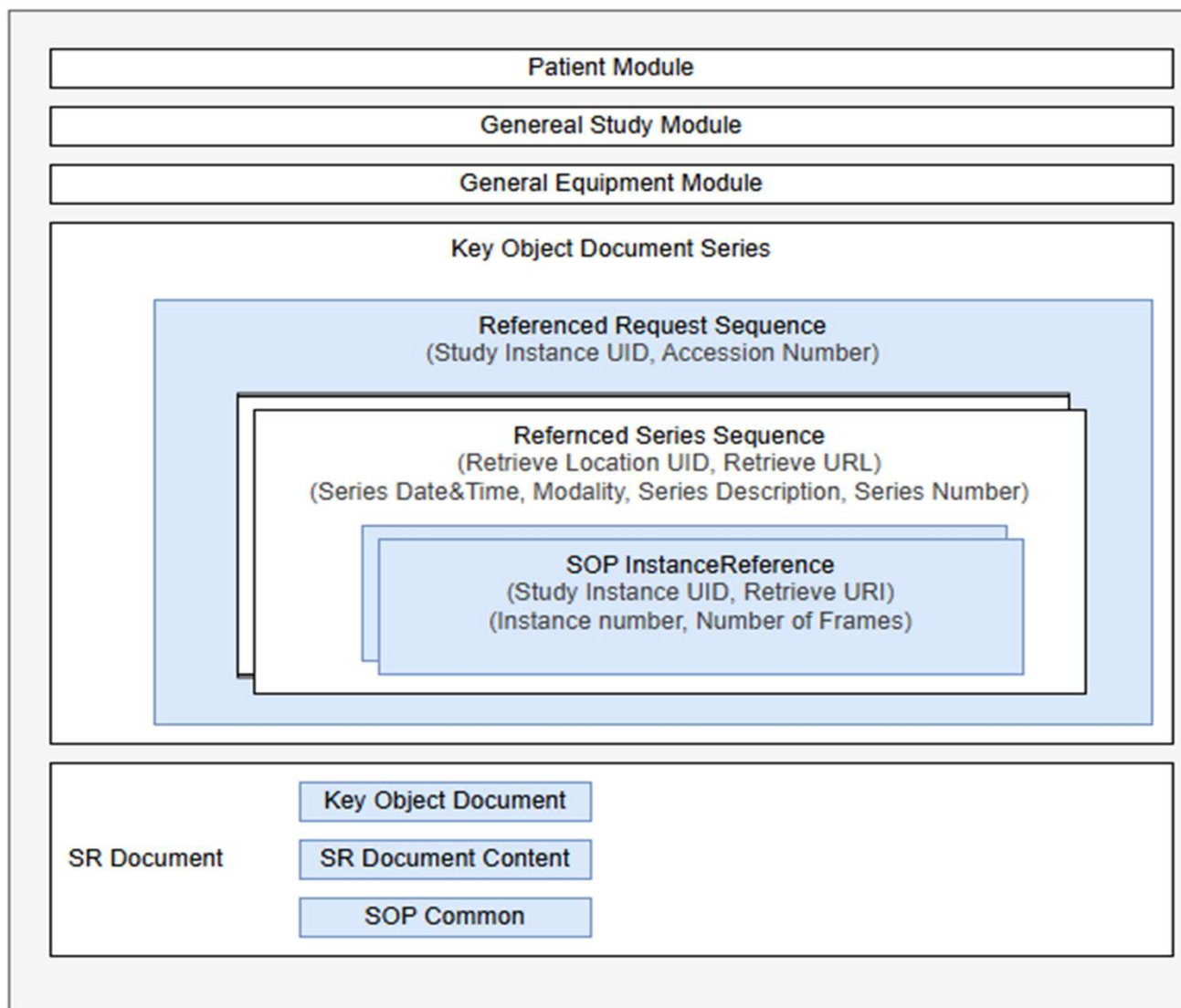
- Backwards compatibility, existing systems will be able to handle the manifests as normal KOS and only need to implement the retrieval based extensions (XC-WADO-viewer)

- Different options are discussed:

- KOS based with extensions in DICOM part (from IHE-MCWG)
- KOS based with extensions in DICOM-SR part (proposal David Clunie)









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What's next?

Agenda for today



- Q1 – general intro
- Q2 – MADO
- Q3 – Report
- Q4 – everything not discussed previously
- 2025-12 HL7 EU WGM: Imaging - HL7 Europe - Confluence



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