

# Standards for Requesting and Scheduling Information Flow

Order Comms, RIS, PACS, GP systems, Modality etc.

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# What is "Order Comms"?

(Shouldn't that be "Request Comms" here?)

- n Order Comms is to paper, what PACS is to film
  - n Replacement of older technology by electronic equivalent
  - n Should be "better"
  - n But like PACS, needs both technology and procedural changes

# What do people do with paper requests?

- n Requesters:
  - n Give clinical details and suggested examination
  - n Add diagrams
  - n Write them anywhere
  - n Pass between organisations
- n Office Staff
  - n Schedule
  - n Split/combine requests
- n Radiologists
  - n Agree and “justify” or modify
  - n Scribble protocol notes
  - n Read at reporting time
- n Radiographers
  - n Scribble examination notes – dose etc.

# Need for Integration and Standards

- n Multiple Systems
  - n Clinical System (PAS, GP System etc.)
  - n RIS ç è Modality
  - n PACS ç è Modality
  - n Clinical System (again)
- n So, standards are needed:
  - n DICOM
  - n HL7

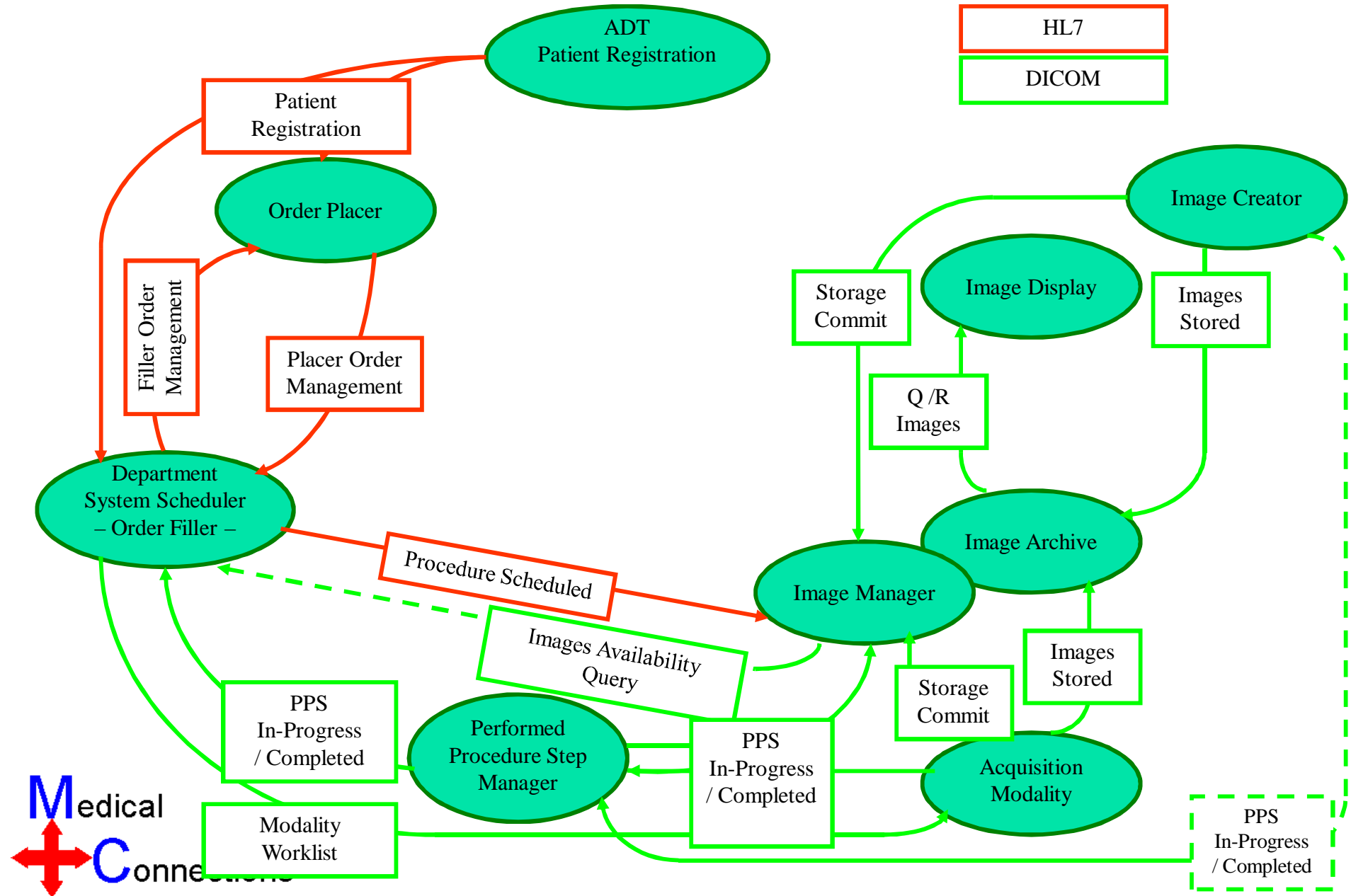
# Where IHE fits in - requesting

- n Two main standards:
  - n HL7
  - n DICOM
- n Potential problems:
  - n Overlap between HL7 & DICOM
  - n Gaps between HL7 & DICOM
  - n Ambiguity in HL7 (and lesser extent in DICOM)

# Basic IHE Scheduled workflow covers these issues for requesting

- n Covers everything up to the point of getting images into PACS
  - n Reporting is separate
- n Almost everyone in the world agrees how to do it
  - n only significant exception is one part of one small Island off the European coast, which has spent 5 years redefining its "own way"
- n Established, readily available technology
  - n Little change required in last 10 years
  - n But some improvements are needed

# Scheduled Workflow as DICOM/HL7



# Summary of DICOM & HL7 used for "Order Comms"

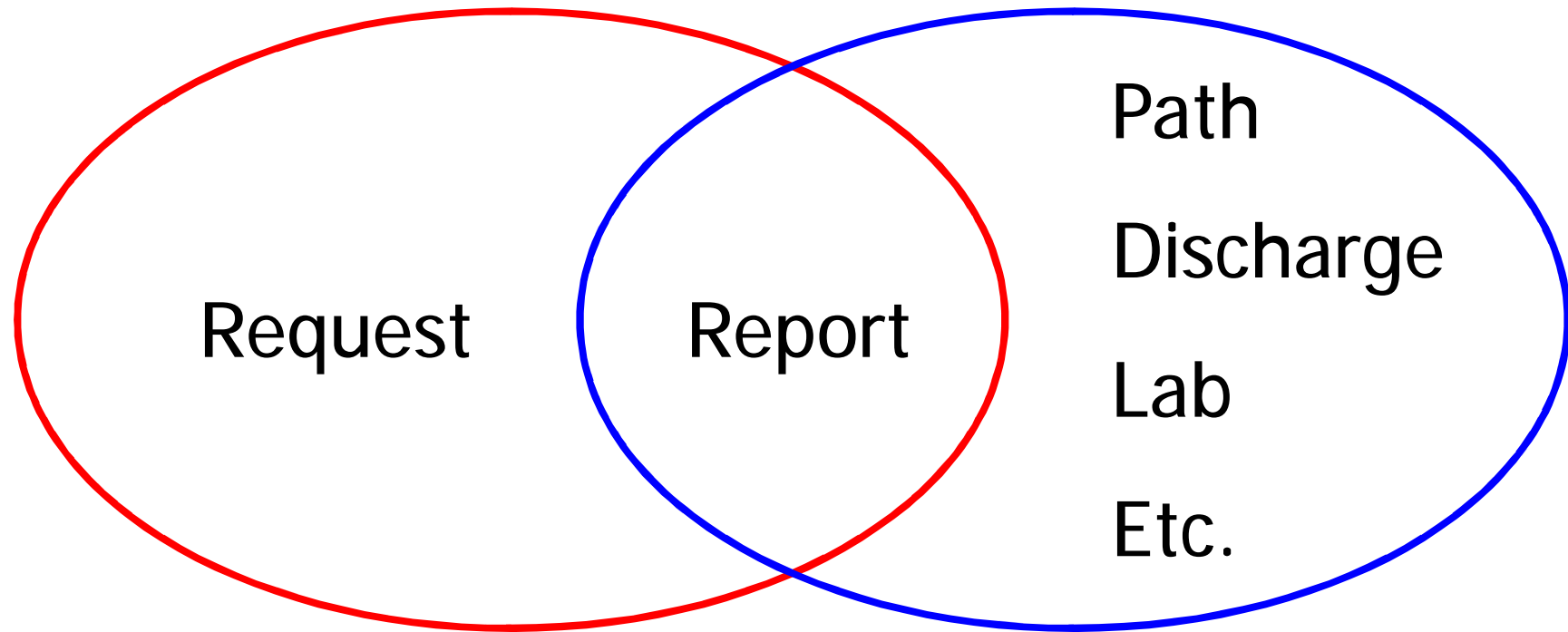
## n HL7

- n ADT: Patient Demographic updates
- n ORM: Imaging request management
  - n Requests
  - n Modifications (messy)
  - n Cancellation
  - n Notification to PACS

## n DICOM

- n Modality Worklist
- n Performed Procedure Steps

# Requesting vs. Reporting



Messaging – HL7

Document - XDS

# Reporting - More choice!

## n Format

- n HL7 V2
- n Text/PDF
- n Multiple Proprietary systems (inc. those based on HL7 V3)
- n DICOM SR
- n CDA (HL7 V3)

## n Indexing & Communications:

- n Proprietary (inc. web)
- n DICOM (for SR or even encapsulated CDA!)
- n XDS / XDS-I

# What goes wrong if you don't use proper standards

- n Delays while you re-invent the wheel
- n Increased costs for writing custom solutions
- n Proprietary "lock-in"
- n Multiple "silo" systems
- n Functional problems, since locally written protocols are less tested and possibly ambiguous

# How to Use and Improve Order Comms

- n Agree & enforce proper standards for main data flow
- n Ensure proper justification procedures
- n Requested vs. scheduled vs. performed
- n “Paper equivalent” should be available to both initial reporter and subsequent clinical users.
- n “Mind the gaps”
  - n Off site requests
  - n Diagrams
  - n “Protocol notes” to radiographers
  - n Radiographer “notes” to reporter
- n Look at the wider EPR issue – not **just** radiology!