

RIS and open standards EPR
or
Use of XDS with a RIS

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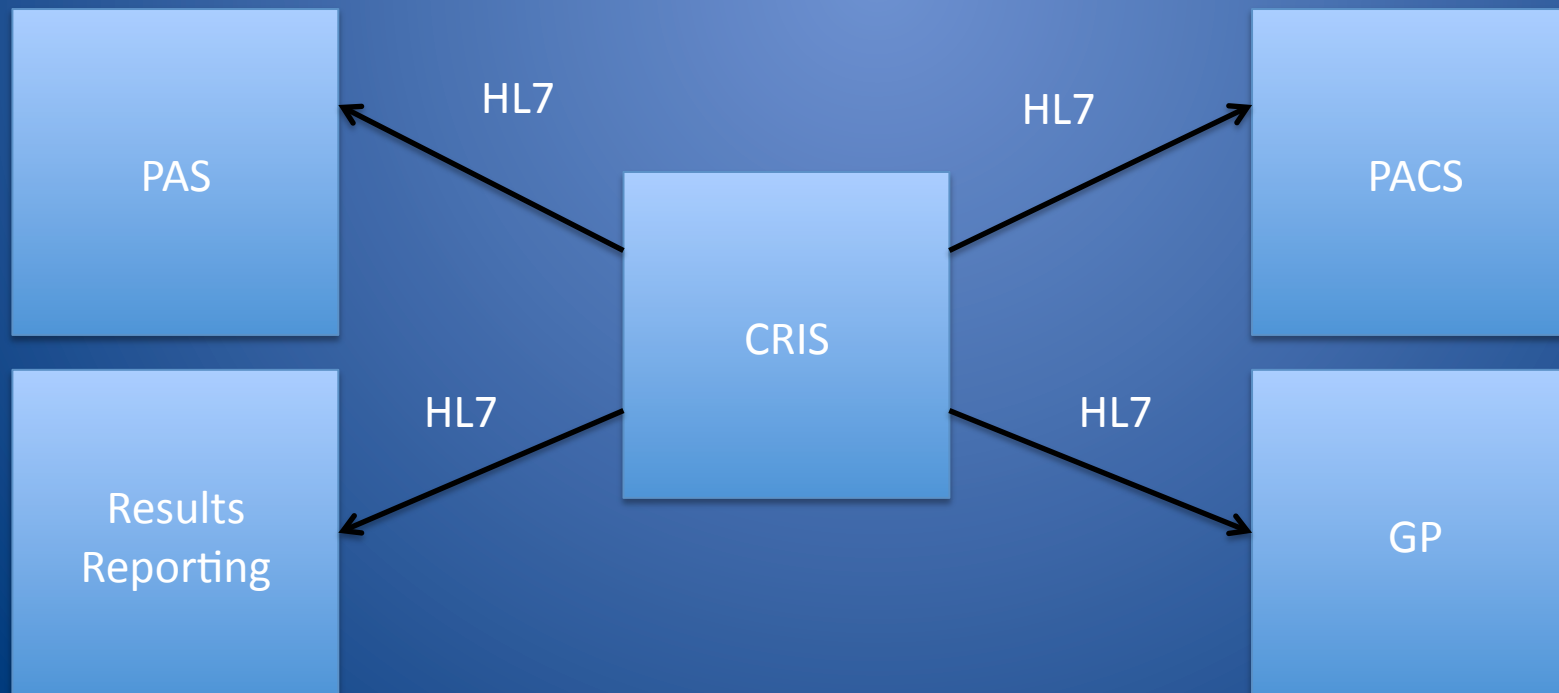
Use of XDS with RIS

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- Sometimes referred to as..... Dr Evil



Current Dataflows

- CRIS currently sends HL7 to all of these systems separately.
- These systems then hold the data in a proprietary manner
- They handle inserts, updates, addendae etc differently
- It is easy for them to get out of step
- A lot of code management may be required to make sense of the coded data elements



XDS - What is it?

- A way for different enterprises to share documents
- IHE standard based on EBXML standards.
- Documents are stored in multiple (local) repositories
- One registry “indexes” all the documents
- Google for patient records!

What can we use it for?

- Making event status, reports, request cards or other scanned documented viewable across multiple CRIS installations.
- Cross entity workflow – Requests could be referred to another hospital for imaging and/or reporting
- By adding the –I component image transfer becomes possible. (r2)

How does it work?

- Document producer (CRIS) creates and submits documents (Status Changes, Scanned docs, Reports etc) to Repository
- Repository submits document meta data (patient, request info etc) to Registry
- Document Consumer (another CRIS, PAS, PACS system) queries central registry and retrieves documents from Repositories

Our implementation

- Each CRIS Server talks to the XDS Registry and Repositories. Caches documents in file system and meta data in local CRIS database.
- CRIS Client retrieves documents and meta data from CRIS server.
- Patient Consent is required to submit documents to the XDS.
- A spine enabled RIS will get consent from the PDS service.

Create Event On CRIS

- XDS interface on CRIS server picks up NEWATT/NEWAPPT trigger and creates a Registry Folder representing the event on the XDS Registry.
- Queries XDS registry for any existing documents for this patient. Performs async download of any documents from the Repositories for later viewing by the clients.
- Creates a subscription on Registry for changes/additional documents for this patient. Subscription expires ~30 days after event date.

Document Creation

- XDS Interface “Prints” the report into a PDF document. Document is submitted to the XDS Repository. CDA (r2)
- XDS Repository stores document and sends the meta data on to the XDS Registry
- XDS Registry stores meta data and notifies any systems with a subscription for this patient.
- CRIS systems with subscription store the meta data in database and download the documents to the file system.

Scan Document/Add Image

- Same as per report. The image is wrapped in a PDF. CDA (r2)

Subscription expires

- Subscription expires 30 days after event attendance date. Or after event completion
- Subscription kept alive by certain event activity
- On Subscription expiry CRIS removes cached documents and meta data

New CRIS Components

- Modification to CRIS Client to view documents from other trusts.
- Outbound interface on server to send events, reports and images to XDS services.
- Inbound interface receives notifications from XDS registry.
- XDS Repository – stores documents
- XDS Registry – stores meta data and manages notifications and queries.

Screen shot

The screenshot displays a medical software interface with the following components:

- Window Title:** CRIS - Reception mode. Hospital: HSS01
- Menu Bar:** File Options Tools Help
- Toolbar:** Includes icons for lock, folder, CRIS logo, printer, mail, and other utilities.
- Patient Information:**
 - CRIS No: 15776
 - Hospital No: [Empty]
 - NHS No: 543 788 7345
 - Surname: ADAMS
 - Forenames: RACHEL
 - DOB: 23/02/1968
 - Sex: FEMALE
 - Title: [Empty]
 - Age: 41 Years
 - Address: [Empty]
 - Telephone: [Empty]
 - Ward: Jupiter Ward/SPOCK DR 09/10/2009
 - File No: 23/02/1968
 - Film Loc: Not traced since creation
 - Film Date: 09/10/2009
 - No. Atts: 1/1
- Navigation Tabs:** Menu Patient Details Events Event Info Event Details Event Forms Report Remote Documents
- Event List:**
 - CRIS Event on 09/10/09 1006 Requested by C915 Exams CANKR
 - Report 09/10/2009 1008 By HSS Support User At Healthcare Hospital
 - Replaced
 - Report 09/10/2009 1007 By HSS Support User At Healthcare Hospital
- Report Viewer:**
 - Healthcare Hospitals NHS Trust (Training): Clinical Report Page 1 of 1
 - Patient: ADAMS, RACHEL. DoB: 23/02/1968
 - Ref. Locn.: Jupiter Ward. Hosp. No: CRIS No: 83123
 - Referrer: SPOCK DR. NHS No: 543 788 7345
 - VERIFIED Verified By: HSS Support User 09/10/09 0825 First Typed By: HSS 09/10/09 1007. test report
 - VERIFIED Verified By: HSS Support User 09/10/09 1008 Addendum By: HSS Support User 09/10/09 1008 First Typed By: HSS 09/10/09 1007. AN ADDENDUM HAS BEEN ENTERED AT THE END OF THIS REPORT test report
 - ADDENDUM START more
 - Event Number: E-218534 Examination Date: 09/10/09
 - Ref. Source: SPOCK DR, Healthcare Hospital, Priory Road, Mansfield Woodhouse, Nottinghamshire, NG19 9L
 - Examinations: CT Ankle Rt
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- User:** HSS Support User