

XDS-I Image Integration project in Wales

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Introduction to PACS in Wales

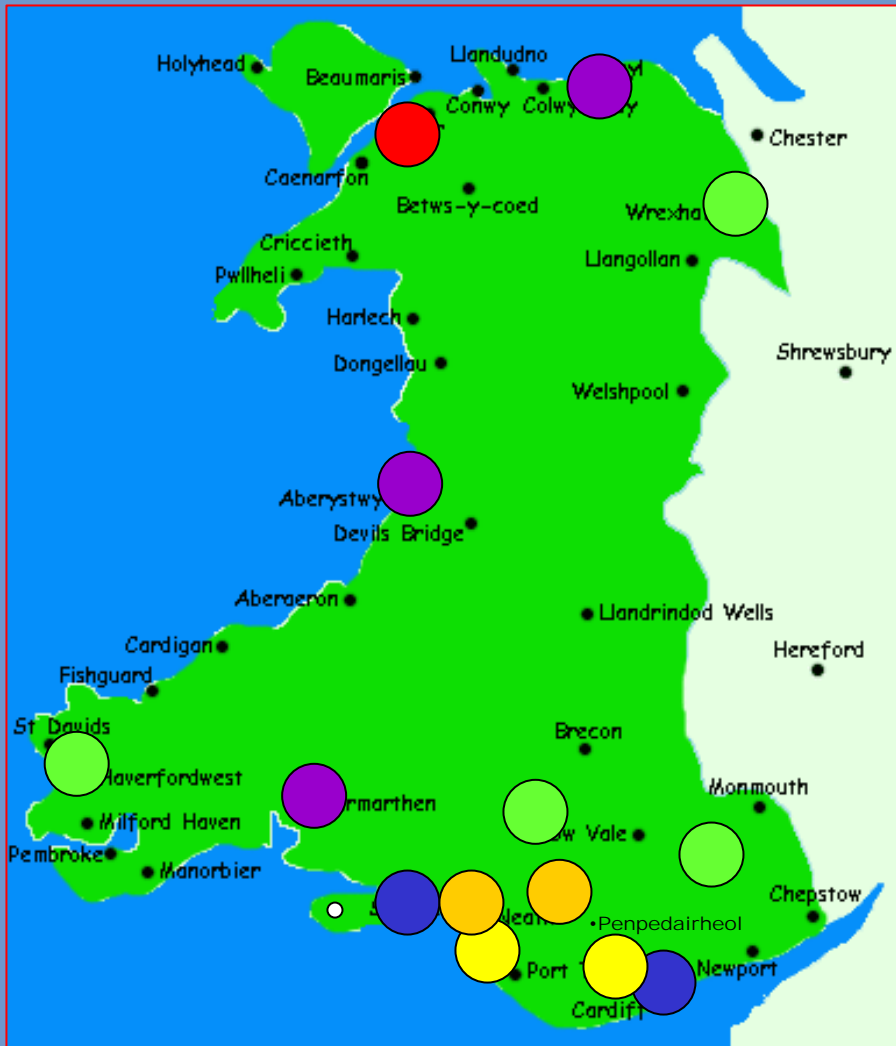


- Wales is a semi-autonomous principality of the United Kingdom
- Population ~4 million mainly around the coast
- **NOT** Part of England
- Healthcare is a devolved matter, so we have been spared the “National Program for IT” (NPfIT – CfH) fiasco which only affects England.
- Wales was filmless before England
- **But we still have work to do.....**

Existing PACS Installations

- Each of the hospital administrations (called “trusts”) chose and bought their own PACS according to local needs
 - As a result, there are 14 different PACS in Wales, from 6 different suppliers
- Different procurement types:
 - Outright purchase
 - Managed service
- Different contract termination dates – up to 2015
- Some trusts have merged and how have multiple PACS even within one trust

Current PACS Installations



Fuji x 4
Insignia (Steria) x 3
Agfa x 2
Carestream x 2
GE x 2
Ferrania x 1

Large central area
(Powys) has no
significant hospitals
and no PACS

Numbers are correct, but exact positions may not be

Image Sharing Options

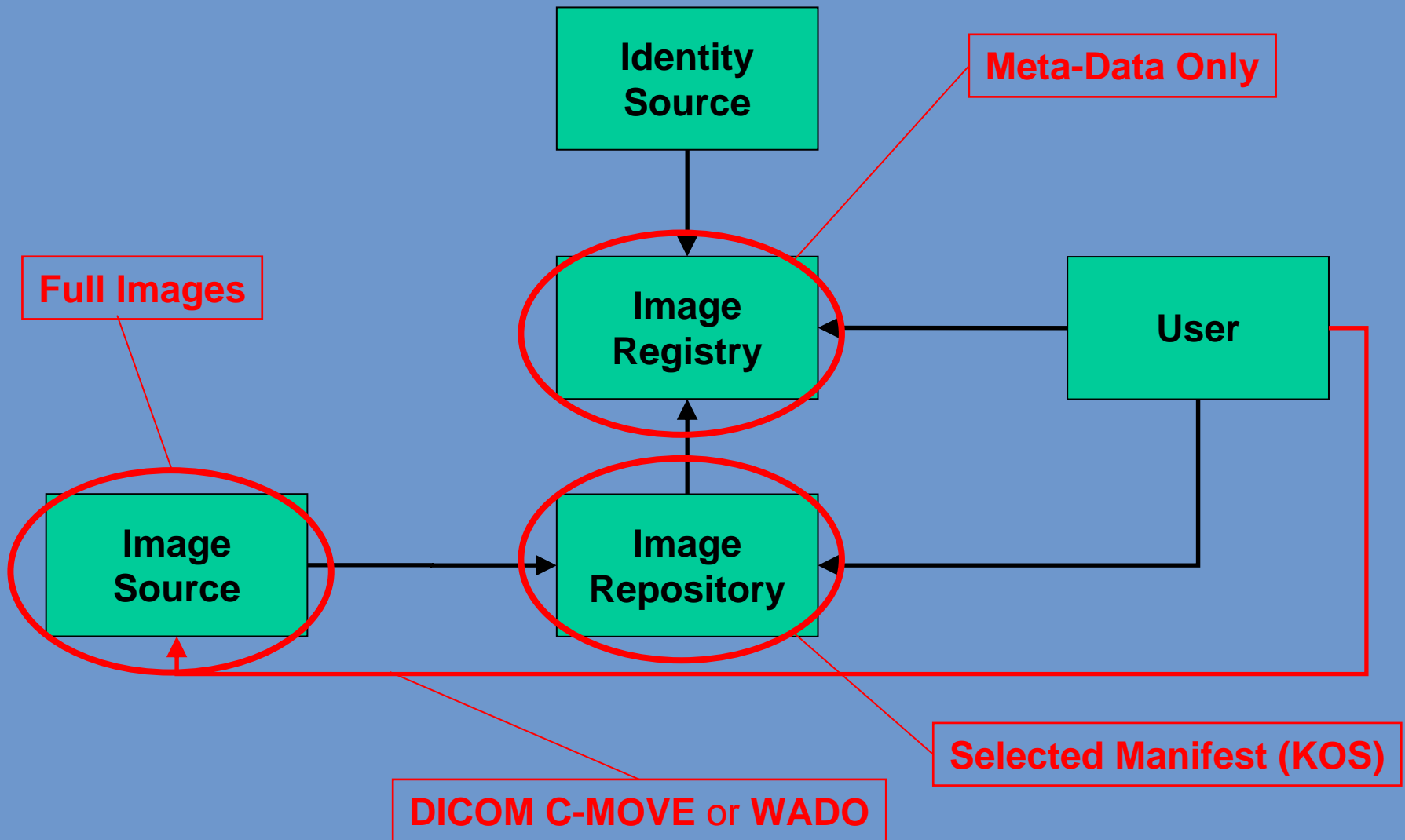
- **Replace by Single PACS supplier (like Scotland)**
 - Far too late
- **Ask a large integrator to “just do it” for us (like England)**
 - Of course not!
- **Copy all images into a single national archive (combination of England and Scotland)**
 - Very expensive and inefficient (only ~2% are ever used)
- **Persist with DICOM C-STORE & CDs**
 - Horribly labour intensive
 - No “discovery mechanism”
- **Add an indexing and integration layer “on top”**
 - Only sensible and affordable approach



Design decisions for the integration layer

- **Summer of 2008: Consultations with users and several potential suppliers**
 - Numerous options discussed
- **Proprietary solutions**
 - Considered too restrictive
 - Difficult to do a pilot and then roll-out, as we would be tied to one company
- **Pure DICOM Solutions**
 - Pushed hard by one supplier
 - Problems with indexing/discovery and of course wide area C-MOVE
- **XDS-I**
 - Supported (to varying degrees) by 5 of the 6 companies
 - Real world experience is limited
 - Decision to use XDS-I as a small-scale pilot and then consider extension

XDS-I Overview



- **Limited to:**
 - 3 or 4 hospital in small area of South Wales
 - Cancer Services only
 - Imaging only (no wider XDS usage for now)
- **Small budget**
 - Prove what can be done by indexing without duplication
- **Possible extension**
 - The “Welsh Clinical Portal” is conceptually similar to XDS, and experimental integration may be possible.

Anticipated Problems for Evaluation

- **Consent and Confidentiality Issues**
 - Wales already operates a different consent model to England (consent to view rather than consent to store), which eases problems, but still requires robust end-user security
- **“Publication” trigger – decision needed:**
 - Image generation
 - Report creation or verification (either would need RIS integration)
- **Client integration – options:**
 - Via existing workstations without PACS pollution (ideal – but needs existing PACS supplier support)
 - Via existing workstations via import to local PACS
 - Via separate application/web browser (single application – better than one per remote site)
- **Interoperability**
 - Can we do this with “pure” XDS-I enabling plug-and-play addition of other vendors?
 - Will any proprietary extensions be needed – e.g. for security?
- **NHS number**
 - Unique numbers exist, but meaningful indexing requires them to be used!



- “Paperwork” already in place
 - Business case
 - OBS
- Money only announced last week
- Projected Timeline
 - OJEC tender in the next few weeks
 - Decision over the Summer
 - Implementation this Autumn
- Could be one or multiple suppliers
 - Existing PACS suppliers
 - 3rd party XDS/XDS-I specialists

- Exciting project attempting to use XDS-I to provide a integration layer on top of existing PACS
- May involve mixture of:
 - Additions to existing PACS
 - 3rd party software
 - In-house development (RIS)
- We don't expect to get it all right first time, but hope to learn enough in this small trial to extend to the rest of Wales
- Federation of XDS (XCA) with England would be very useful for border areas in the future, should they choose to adopt a standards-based approach.