

# Why do we need IHE profiles?

## What is missing with existing standards?

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# Topics

- Introduction
- What's missing – general principles
- What's missing – particular examples
- What might be missing in the future...
- Conclusion: some suggestions
- Questions

# Introduction

- About me, briefly:
  - Worked in local NHS IT for 14 years
  - Completed health informatics PhD in March
  - Now teaching IT project management (BSc and MSc) and pursuing further research in health informatics
  - Healthcare interoperability has long been a key concern: HL7 UK Board member since 2005

# Introduction

- **Disclaimer**
  - This presentation does not purport to represent an official view of the University of Portsmouth or of HL7 UK
  - May contain nuts

# Introduction

- “What’s missing with existing standards”
  - It depends what kind of standard you mean!
  - Oxford English Dictionary is a standard for the **spelling** and **meaning** of words
  - Fowler’s Modern English Usage is a standard for correct **usage** of words
  - Neither pretends to be a standard for how to use words and sentences to **compose** a sonnet, a letter or an encyclopaedia

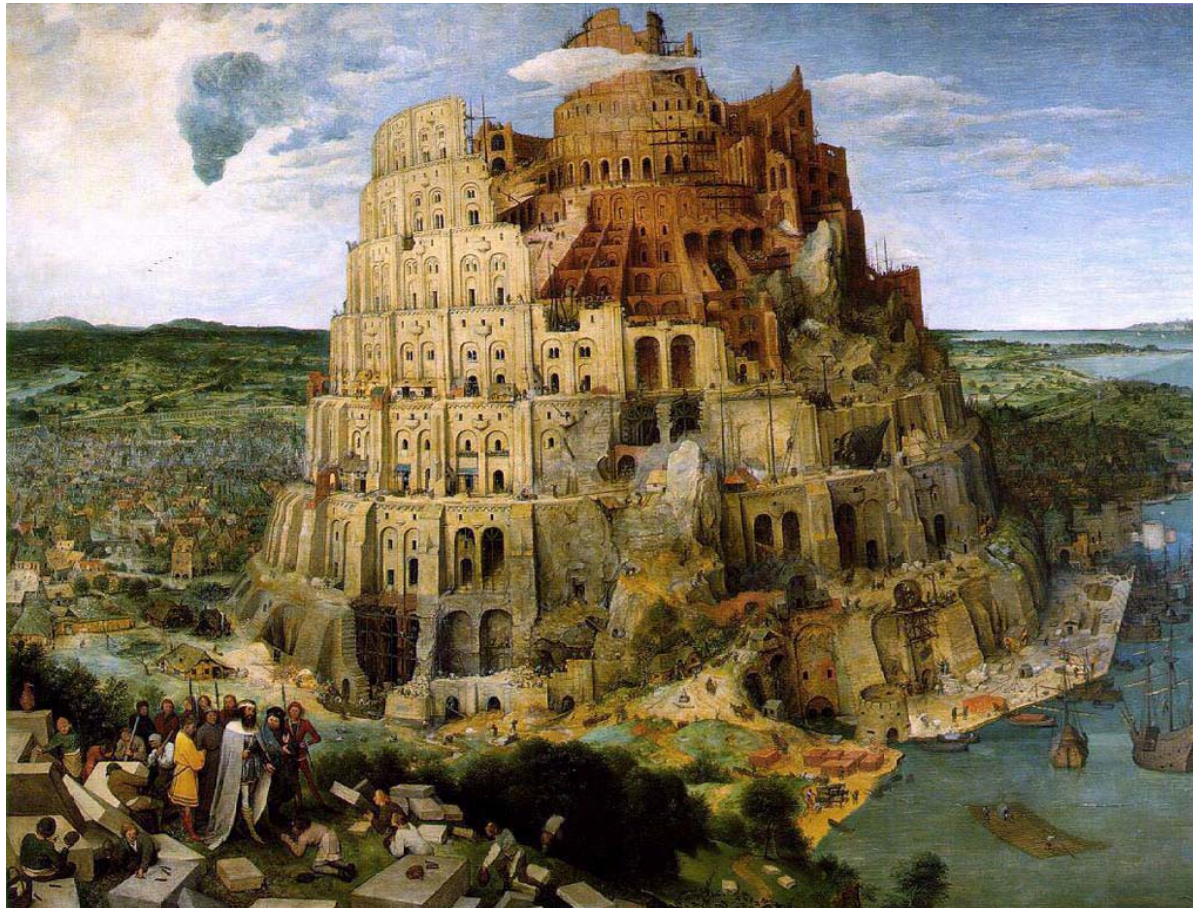
# Introduction

- Similarly, healthcare interoperability has various standards for different levels
  - XML defines a correct file format, a generic tagging method and a validation mechanism
  - DICOM defines medical image handling
  - PMIP defines (inter alia) a bounded list of laboratory codes for test results
  - HL7 defines abstract standards (RIM, CDA) and messaging standards (v2.x, v3)

# Introduction

- Any **particular** use case needs a particular way of using the generic standards: a **specification**
- How does **this** Renal system interoperate with **this** PAS to maintain patient demographics?
- How does **this** lab system pass results to **this** EPR repository?
- What is missing is UK **specifications**

# Missing general principles



# Missing general principles

- Minimal opportunity for re-use (new wheels are invented all the time!)
- Maintenance is expensive and complex (each wheel has its own parts!)
- Procurement specifications are weak (you can only say you want a round thing that rotates!)

# Missing general principles

- Consequence: no semantic consistency
- No independent conformance testing for the UK market
  - University of Ballarat, Australia, offers certified tests for HL7 v2.3.1
- No firm basis for Trust or local health community integration strategy
  - In practice, often vendor-led tactical decisions

# Missing use cases



- “It just goes to show that we talk different languages to different people”

**Philip Marlowe**

Raymond Chandler (1944)

The Lady in the Lake

# Missing use cases

- LSP PAS  $\leftrightarrow$  Trust (eg TIE, EPR, ISP)
  - Typically HL7 v2.x ADT messaging
  - HL7 UK A.2 exists but not widely used
  - LSPs all offer different approaches
  - Integrators all offer different approaches
  - Bi-directional interface allowed? (eg ADT, order status)
  - This scenario is an obvious candidate for a UK IHE Profile based on HL7 v2.x

# Missing use cases

- Local PAS → Trust (eg TIE, EPR, ISP)
  - Typically HL7 v2.x ADT messaging
  - HL7 UK A.2 exists but not widely used
  - PAS vendors all offer different approaches
  - Integrators all offer different approaches
  - “Legacy” PAS unlikely to support two-way
  - This scenario is another obvious candidate for a UK IHE Profile based on HL7 v2.x

# Missing use cases

- Spine → Trust (or ISTC)
  - Choose & Book referral letters
  - Currently a sealed unit for most hospitals
  - Semantic interoperability GP ↔ C&B...
    - ... then gets printed out
  - Opportunity for XDS registry of CDA docs?
  - Can *some* of the rich semantic content be exposed to “legacy” Trust systems?

# Missing use cases

- Trust (or ISTC) → GP
  - Discharge summaries
  - Clinic letters
  - Problem: multiple source systems
  - But: PMIP works with multiple LIMS
    - It can be done... (Given adequate constraints!)
  - Possible XDS/CDA solution with a bounded code list?
    - Start somewhere rather than wait for holy grail

# Missing use cases

- **ISTC  $\leftrightarrow$  LSP/Trust PACS**
  - DICOM images and HL7 v2.x orders and reports
  - Working solutions exist, including DoH procured product set, but approaches are inconsistent and proprietary
  - This scenario has more workflow complexities but is a candidate for a UK IHE Profile based on HL7 v2.x and DICOM

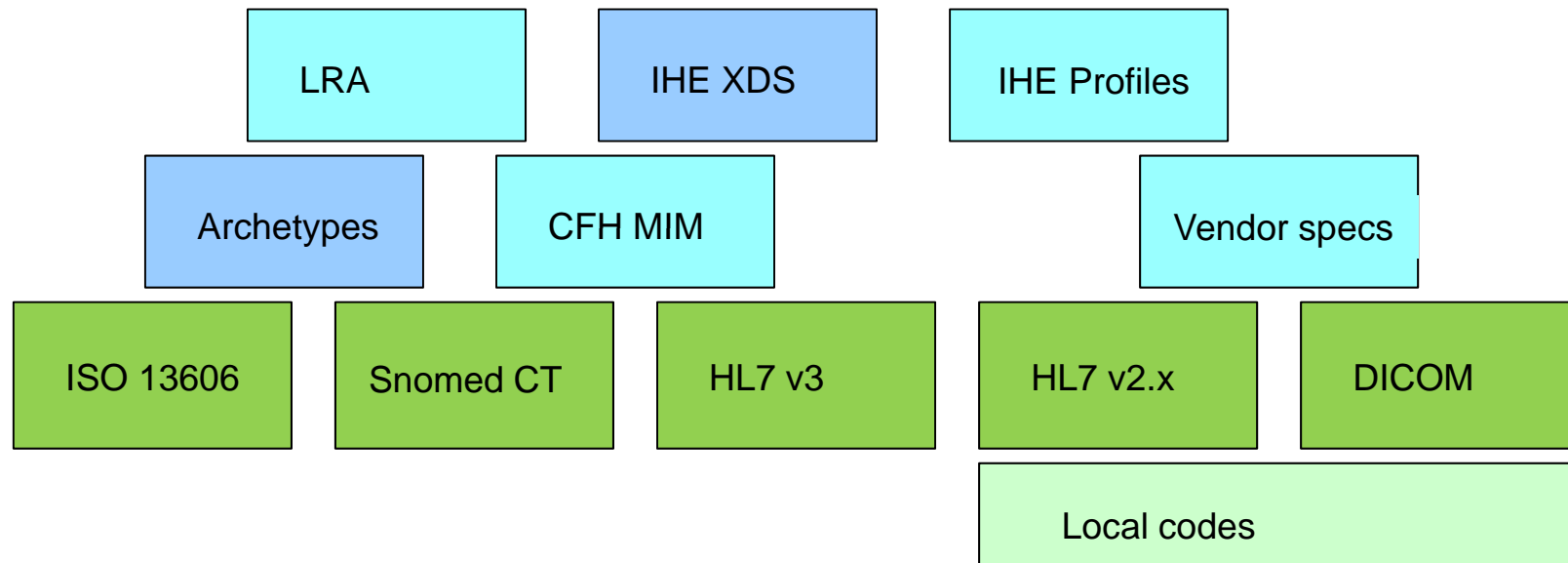
# Missing use cases – Future (?)

- Other short & longer term issues
  - Realm (home countries, Europe, world)
  - Service (NHS, social care, police, YOT, housing, education...)
  - Lab to lab
  - Disease registries and screening services
  - LSP region (cross-cluster or across sub-region deployment units)
  - Non-LSP areas (eg the South)

## Conclusion: Some suggestions

- UK IHE Profiles offer an obvious approach for several immediate needs
- Probably requires a new UK HL7 v2 A.3
- IHE XDS is at a formative stage in the UK and could help some use cases
- IHE Connectathons provide a trusted and open arena for integration testing
- Consider conformance testing as a commercial opportunity?

# Conclusion: Some suggestions



“There is always an easy solution to every human problem—neat, plausible, and wrong.”

H. L. Mencken, New York *Evening Mail*, November 16, 1917, quoted at

<http://www.bartleby.com/73/1736.html>

# Conclusion: summary

- The problem is with **specifications** not with standards
- There are currently gaps in general principles and in particular cases
- IHE Profiles, XDS and testing methodology are an important part of the solution set
- Now is the time to take the opportunity to work together (home countries, IHE-UK and HL7 UK) to progress the UK position

# Questions

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