

HL7 UK eZine Summer 2010



Welcome to the HL7 UK eZine. A highlight of this issue is a report from the HL7 International May WGM by Charlie McCay. Charlie chairs the HL7 International Technical Steering Committee, and in that role has a seat on the HL7 International Board. HL7 UK provides support for Charlie's participation in these core activities of HL7 International.

Before that, we have a discussion of current issues facing HL7 UK and HL7 Affiliates generally from our HL7 UK Chair, Charlie Bishop.

Later in the issue, Robert Worden provides us with a foretaste of the items on Semantic Mapping and Neutral Mapping Notation at the next TC meeting on 13th July 2010.

From the Chair

By Charlie Bishop

Real world pressures continue to take their toll and the recent Working Group Meeting in Rio is now a pleasant



but distant memory. Although attendance was relatively low when compared with US based meetings, all the areas that I was personally involved in continued to make good progress. However, rather than bore you all with the finer points of ballot reconciliation, DAMs and DCMs I would like to take this opportunity to bring you up to date with HL7's progress to becoming a truly international organisation.

HL7 has evolved a lot from its purely US origins to an organisation with membership and active participation from affiliates and their members in around 30 countries. There have already been a number of changes:

- The organisation's official name was changed to 'HL7 International'
- The Affiliates Council is now

called the International Council and includes a US representative

- The 'One Member One Vote' (OMOV) initiative looked at international representation and voting rights
- There have been a number of non-US based Working Group Meetings (WGMs)

However, the reality is that changing an organisation's name does not automatically change the organisation, OMOV did not give every international member a vote and the non-US WGMs are struggling with low attendance and consequent poor financial performance. It all sounds rather gloomy but the reality is that HL7 International has realised that it needs to take more radical action to become a truly global organisation.

The board has set up a number of groups to look at and report back on the various aspects of the organisation's activity, structure and governance. For example, one of the groups is looking at how membership and related items such as voting rights should work in a truly international organisation. There are many factors to consider and address:

- Healthcare economies vary significantly around the world so how can HL7 International make things financially 'fair' for everyone?
- How do national affiliates (e.g. HL7 UK) and regional offices like the new HL7 Europe office in Brussels fit in to the organisation?
- Healthcare is becoming a global business with many HL7 member organisations operating in multiple geographical locations. How does HL7 accommodate them alongside small single country suppliers and personal members?
- How do governmental/national organisations (e.g. NHS) fit in to the membership structure

Clearly there are lots of other issues and many of these overlap with the remit of other board groups. Rights of access to HL7 Intellectual Property (IP) are potentially linked to membership but there is another group looking at all the wider IP issues that HL7 International faces.

No one said it would be easy! The good news is that there is wide recognition that change is needed and something is actively being done to move forward. I will keep you informed of progress as and when there are significant developments but please bear in mind that things like this cannot (should not?) be rushed so there will not be updates every week.

If you would like to join in with the new truly international HL7, there is a fantastic opportunity on the horizon. Next January's Working Group Meeting is being hosted by our Australian colleagues in Sydney. Why not take the opportunity to attend the WGM and then see some of Australia during their wonderful summer? If you are interested, watch the HL7 UK and HL7 web sites for further details.

HL7 International WGM May 2010

By Charlie McCay

Board activity

While the board meeting itself was very short, there was a good deal of offline discussion about the fact that the money expected from the US federal initiatives was not yet contracted for. There are good channels of communications to the US federal decision makers, but the HL7 value proposition has not yet been made crystal clear. In particular it is not clear what a government would get in return for its money.

A related theme is the desire to "control



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the IP". The prospect of being able to sell national licences for HL7 IP is attractive - but to do that there needs to be a benefit that the national licensee gets - ie HL7 would need to better control the unlicensed use of its IP. The board retreat will focus on reviewing the business plan for HL7 – including the strategy of seeking to get significant revenue from national initiatives and “provider/enforcer” organizations. I personally am keen to see this address the key components of a product strategy – ie who are HL7’s customers, and what value is delivered to them.

TSC activity

Alongside project review and issue resolution for the working group, the TSC has initiated a number of projects. However it would appear that these projects have not made significant progress since the WGM, and so they may not all be pursued to completion.

Strategic Planning Documents

Quality Plan

The CTO and TSC have been asked to develop a quality plan - there has been little progress on this, though Austin Kreisler did offer to help John Quinn in the development of the document.

Product and Services Strategy

This will outline the products that HL7 sells, how they deliver value to the customers who pay for them, and how HL7 captures some of that value (ie how they are charged for, whether as membership rights, WGM attendance fees, or other licensing agreements). This is an activity that has been on the books for some time but has not had an owner willing to put significant effort into it. Ken McCaslin has agreed to work with John Quinn to make this

happen.

This will be informed by the V2/V3/CDA strategy work that Stan Huff is leading.

US Healthcare Readiness Plan

This activity was kicked off at the WGM to document the HL7 value proposition in light of the US healthcare reforms, and to ensure that any documented expectations can be met. This is particularly relevant to any direct contractual obligations that HL7 may enter into, but it should also be an opportunity to document how existing HL7 products and services can be used to help deliver on the USA healthcare ambitions. This may well be an effective route to feed in experience from the UK, so that the USA can build on what worked, and help find alternatives for what has not worked. It is complementary to the “National Initiatives”

SAIF and Architecture

There continues to be slow but real progress in developing the Services Aware Interoperability Framework (SAIF) documents and in projects using the concepts described in them. This incremental adoption is being achieved on an opportunistic basis, as it has not proved possible to get in place sufficient resources for a more planned approach. Without some significant sponsorship coming forwards I believe that slow and reasonable steady progress will be made in this way.

HL7 and other SDOs

The TSC maintains the Sunday Q4 meeting where activities happening in other SDOs that may be relevant to the HL7 membership are presented and discussed. This session is frustrating for many – as it either repeats things they know, or does not go into enough detail to address substantive issues – however

it will be maintained as an agenda spot where an overview can be obtained, and any issues publically aired.

Innovations Group

The innovations group is a TSC initiative led by Ken Lunn with board support. It is currently being run as a TSC initiative, but will be formalised into a project or work group between now and October.

We looked at a “crowd-sourcing” tool used by the VA (www.pligg.com) for the collection of innovation ideas and feedback on them.

WGM Development

Helen Stevens will be leading an ongoing workstream to improve the effectiveness of Working Group Meetings – this will capture ideas through surveys of attendees, and other statistics available from HQ, and look at what improvements can be made to add value for WGM attendees. Any input as to how the WGMs could be tweaked to add value for HL7UK members and others would be appreciated.

TSC Communications Plan

Ravi Natarajan, as Affiliates representative on the TSC, has taken the lead on improving TSC communications, particularly with affiliates. Again this is an ideal opportunity for HL7UK to engage and get what its membership values from HL7 International.

ITS, MicroITS, GreenCDA, and Domain Specific Languages

While not directly related to my role as TSC chair, I did spend a good deal of time looking at how the micro-ITS, greenCDA, and Domain Specific



Language work was progressing. I think that there is the convergence of a number of strands of thought here, from the Message Simplification work sponsored by CFH, through the Detailed Clinical Models work, and the Domain Specific Languages, and Business-name API work in Canada. This is best tracked on the HL7 ITS wiki, and has been separately presented at HL7UK technical meetings so I will not repeat them here.

The GreenCDA idea was picked up at the recent NHS ERH TAG meeting, with Robert Worden's suggestion of a greenLRA being warmly welcomed.

René Spronk has also published a report from this WGM, see

http://www.hl7.org.uk/marketing/archives/2010/100705_may_wgm.asp

From the TC Chair

By Ann Wrightson

Version 2 UK profile A.3



A new edition of the UK HL7 Version 2 profile has been under development over the last few months, spurred principally by the Interoperability Toolkit (see below). The TC meeting on the 13th July is an important milestone for this new edition. The TC will discuss the changes that are being made, and there will be a

formal decision whether to approve the draft for HL7 UK Membership ballot.

The CFH Interoperability Toolkit

The NHS CFH Interoperability Toolkit is a significant new development in the use of HL7 standards in the UK, providing standardized interfaces for common Trust integration needs. Pilot projects using HL7 v2 ADT, and CDA Discharge Summary, have already been completed. Further information is available at

<http://www.connectingforhealth.nhs.uk/systemsandservices/interop>.

SOA update

Apart from generally keeping an eye on things technical for HL7 UK, my main area of work in HL7 International is the Service Oriented Architecture WG. HL7 UK older hands may remember that we had a special TC meeting on SOA and the Services projects a few years ago. SOA in HL7 developed from an informal birds-of-a-feather group to a full WG over 2003-8, and was one of the key factors in raising the awareness of services in HL7 as a whole, which in turn led to the development of the Services Aware Interoperability Framework (SAIF) that is a major piece of current work to underpin future developments in HL7 International.

Common Terminology Service 2 (CTS2)

An early and ongoing project of the SOA WG is the Healthcare Services Specification Project (HSSP), a collaboration with OMG whereby the combined skills of both SDO volunteer communities are brought to bear to develop standards for service interfaces. CTS2 is one of the sub-projects within the HSSP. Following initial development of a high level interface specification within HL7, the OMG side of the HSSP process is now in progress, and has reached the stage of "initial submissions" - first substantive drafts of specifications submitted by OMG members. All the key documents are available on the HSSP wiki site, at <http://hssp.wikispaces.com> (follow the "Active projects" link from the front page).

Although the HSSP uses the usual membership-focused processes of both HL7 and OMG, there is also much openness and cross-participation to support collaboration. For example, in preparation for the June 2010 OMG meeting, I reviewed the formal OMG submission documents and provided comments in advance of the meeting, and key HL7 members of the CTS2 project attended the OMG meeting at which the submissions were formally presented.

Mapping in the Clear Light of Day

By Robert Worden

It is now clearer than ever before that no one healthcare messaging standard is ever going to rule the world. The siren song: “Just migrate to my shiny new standard, and all your problems will be solved” is never going to be heeded – because there is too much investment in legacy data formats, the medical domain is too rich and complex, and there are too many players in the game. Even one standards organisation, HL7, has different overlapping standards in Version 2, Version 3, and CDA. There is growing interest in Domain-Specific Languages – simple but diverse domain-specific data structures, designed to solve specific problems.



Interoperability is always going to require the translation of data between different data formats and standards. How do we do that? There is always some analysis of the form: “This element in this data structure is equivalent to that element in that data structure; so I can move the data across from one to the other.” Then code is developed to move the data. The initial analysis is called mapping; you map data from one structure or model to another. Since the rise of relational databases, mapping has always gone on, and it has always been problematic:

- People write down mappings in undefined or private notations, such as home-grown spreadsheets. In this form, mappings are difficult to exchange, review and compare.
- When mappings are just a preliminary to coding, the code becomes the reality, and the

mappings become shelfware

- Commercial mapping tools are often weak, and cannot handle the complexity of medical data
- Mapping is usually done within projects behind closed doors, or on proprietary tools; so mappings rarely see the light of day, or come under proper peer review.

There is no doubt that mapping matters. Errors in mapping lead to failures of system integration, and can endanger patient safety. Yet for the reasons above, mapping has been the poor relation of software engineering practice.

HL7 is about to change that. Realising that ‘Mappings will always be with us’, HL7 has launched a project to define a standard neutral notation for mappings, and to ensure that its own projects use that notation to capture their mappings. The aim is to define an open standard for semantic mapping. One candidate mapping notation will be available for review this summer, and is backed by Open Source tools which can run data translations directly from mappings. NHS is in the early stages of considering the adoption of such an open mapping notation as an informative part of the publication of some of its data standards.

If a semantic mapping notation is adopted by HL7 and by national authorities such as NHS, what will this mean for healthcare application integration? Briefly, the practice of mapping will come out of the back-room into the clear light of day, and there will be major benefits:

- Whenever HL7 – or some other SDO – develops more than one way to express the same information (such as V2 and V3, or CDA, or DCM, or VMR, or Green CDA) it can publish the mappings between them, as a precise definition of their semantic equivalence – or lack of it, when the mappings

reveal gaps. This is a precise target for interoperability.

- Whenever a large procurer such as NHS needs to adopt different overlapping standards, such as V2.4, CDA, or CEN13606, it can publish precise mappings between them; so trusts and their suppliers know precisely what interoperability is needed – avoiding stovepipe applications
- A single mapping notation will be machine-processable, enabling the development of a range of tools for validation, testing and implementation of mappings and translations. Tools can convert open mappings to proprietary mappings, to run on commercial integration engines.
- Mappings in an open, standard notation become accessible for peer review – increasing their quality, exposing problem areas where different models are incompatible, and avoiding the need for different projects to reinvent the wheel.

HL7 is attempting to make this mapping notation as simple as it can possibly be, while still doing the job – of expressing the semantic equivalence between different healthcare models and data structures. This standard matters. When the draft appears, read it, compare it with your own applications and needs, comment on it. It can alter the way you do healthcare integration, much for the better.

Robert will be talking about semantic mapping and the new Neutral Mapping Notation project at the TC Working Meeting on 13th July, see http://www.hl7.org.uk/committees/agendas/HL7UK_TC_Agenda.asp



The Logical Record Architecture (LRA)

By Laura Sato

The LRA is a logical model describing what data may be shared across multiple care record applications and how that data may be managed, accessed and interpreted.

As it is a logical model, it should be noted that implementations would not necessarily test conformance directly against the LRA (as there are many ways to physically comply with a logical model). Its main purposes are to:

- Act as a single logical model base for future NHS data standards (supporting improved logical consistency across standards products) – for use by suppliers and standards developers
- Act as a semantic mapping hub for disparate local and standard information / data models (supporting the documentation of where semantic equivalence exists between models, and where it does not) – for use by interface engineers and others interested in data integration
- Provide detailed guidance to suppliers and system users or buyers about where, why and how SNOMED CT and controlled vocabularies should be used within NHS care records
- Act as a single logical records data architecture for optional use by suppliers to use in or between their own systems
- Provide a useful method for

expressing NHS care records data requirements as re-usable artefacts, linked to relevant technical artefacts within the LRA, supporting traceability

- Focus on the requirements for getting data out of care records
- Provide a technical modelling methodology that allows data elements to be defined once semantically, and re-used in many entry and composition models
- Provide a terminology-binding methodology that allows for extended SNOMED CT expression constraint.

To me, true data standards are ones by which you can pass or fail in conformance testing (logical models are tools in getting there, but not end products in themselves). In future, I expect people to implement pretty much the same standards they are implementing today – HL7 V3/V2, NHS Data Dictionary, etc. – with the hoped-for impact of the LRA being that implementing any of these standards should be easier and, via influence on standards development, more mutually congruent in future.

There will be a special joint meeting of the LRA Generic Design Collaboration Group and the HL7 UK TC on the 15th September, focused on the value and significance of the LRA for the HL7 UK membership.

News from the HL7 UK

AGM

The HL7 UK AGM was held during the TC meeting on the 20th of April. We are delighted to welcome a new face to the Management Board, Richard Atkinson from Circle Health.



Philip Scott became Chair Elect and will succeed Charlie Bishop as HL7 UK Chair at the 2011 HL7 UK AGM.

HL7 UK Events

This list is correct at the time of writing. See the HL7 UK website for the most up to date listing.

July

- 13th HL7 UK TC meeting
- 13th-14th HL7 UK Management Board face to face meeting

September

15th A joint meeting of the HL7 UK TC and CFH LRA generic design collaboration group. The meeting will focus on the value and significance of the LRA for the HL7 UK membership.

October

- 19th-20th HL7 Version 2 Training
- 21st-22nd HL7 Version 3 Training

November

4th A joint meeting of the HL7 UK TC and the HL7 International RIM-based Application Architecture (RIMBAA) working group

December

8th & 9th HL7 UK TC meeting, agenda tbc.

Future issues depend on you!

Please send contributions and ideas for articles to: ezine@lists.hl7.org.uk