

HL7 UK eZine Spring 2008



Welcome to the Spring 2008 HL7 UK eZine. Since our last issue, Patrick Mitchell-Jones has resigned as HL7 UK Chair, and we welcome Rik Smithies as his successor, elected at the EGM on 10th December.

This issue features the first part of a guide by Hugh Glover to the standards stack in and around HL7v3, and an article from HL7 Italia. Representatives from HL7 UK were invited to visit HL7 Italia in May 2007; Ian Townend and Ann Wrightson spent a memorable couple of days in Rome enjoying the local atmosphere and exchanging experiences of implementing HL7v3.

From the (New) Chair

By Rik Smithies



Greetings. I've taken over from Patrick Mitchell-Jones as Chair of HL7 UK. Firstly I have to say thanks to Patrick who has unfortunately had to step down from HL7 participation for the time being. We'll miss his enthusiasm, and I'll try to emulate his leadership and that of previous chairs.

Some of you may know me, and if not I won't bore you with my life story. I've been around HL7 for a few years now, enough to know what works, what doesn't and what's good in theory but you can forget about in practice.

The Board of HL7 UK aims to respond to our members' needs. But I'm conscious that we are only in regular contact with a small fraction of the membership.

If you think there is something HL7 UK should be doing, something that you would like to see, or even something that you want to bring forward yourself,

then do please let us know. Even more so if it's something you wouldn't normally associate with HL7. Bounce an idea to the members list, or mail me at chair@hl7.org.uk.

One of the things I'd like to see is a broadening of the topics that get attention from HL7 UK. Messaging standards fit into a wider standards setting, and technical standards are just one of the tools our members use to get their job done.

HL7 is developing well internationally, with CDA adoption setting the pace. Recent innovations in terminology integration and template mechanisms have had strong input from the UK. But not everyone deals with standards at this level, and everyone in this field has mundane integration work to get on with today.

We aim to cover issues across the range from the technical to business and commercial. All our members have wider concerns than HL7 and standards. If it's to do with healthcare informatics, it's a good candidate for an HL7 UK Technical Committee meeting, or perhaps a discussion thread on the lists. So let's hear from you.

HL7 Italy

HL7 Italy is a non-profit association to provide a reference point for Italy with respect to the development and the dissemination of HL7 standards, according to the rules and constraints defined by HL7.org for National affiliates.

As a result, HL7 Italy is an advisor for the Ministry of Health, in the project called "Mattoni SSN" ("Implementation of Patient File" task) for the proper planning of the New Health Information

System (NSIS), which requires the development of a common language to allow the exchange of information between the national level and the regional health systems; Permanent National Board for eHealth (Department of Innovation), in the architectural strategy of the National eHealth Infrastructure.



In Italy, the responsibility for the delivery of healthcare services is delegated to the Regional Authorities, thus a federated approach is mandatory. The National eHealth infrastructure is based on:

- a federated structure built on top of the eGovernment network;
- an integration of all existing regional and local systems, with a low invasive impact (protection of investments and existing architectures);
- a distributed mechanism to handle citizens health history: the Virtual Electronic Health Record (V-EHR).

Each clinical document is stored where produced, and the V-EHR contains the references to the clinical documents allowing the creation of a patient's EHR "on demand". The core of the eHealth infrastructure is the document routing of the individual medical event to the appropriate actor (not only databases or specific applications). The V-EHR is based on "IBIS" which is a distributed Infobroker (index), i.e., a distributed registry / repository, based on ebXML v. 3.0 technology standard. HL7 Italy is working on HL7 CDA templates of the

individual medical event, on the registry metamodel (eBRIM), on the PRPA and MR domain, and on the OID Italy-tree.

Content: HL7 Italia www.hl7italia.it
contact info@hl7italia.it

Photo: Angelo Rossimori, a formative force in HL7 Italia and an ambassador for HL7 standards and standards based healthcare information integration.

HL7UK 2007 Making Interoperability Work

by Charlie McCay, Conference Chair

The annual HL7UK conference brought together an impressive array of speakers and attendees for a stimulating couple of days in November. Given the pressure on everyone to meet short-term delivery demands, the buzzing conference was an impressive investment of time, and one that the conference evaluations showed to be richly rewarded.

A number of US speakers including the CEO and incoming chairman of HL7.org missed the thanksgiving holiday to be with us, and showed how the international HL7 organization is moving to be more focused on delivering standards in a more transparent and predictable way.

There were excellent presentations on the use of CDA, and the role that IHE has in defining profiles, and in providing a testing framework at connectathons. This was complemented by some excellent discussion of the Nation Integration Centre's testing from both supplier and tester perspectives. The full list of presentations, including most of the slides, are available at <http://www.hl7.org.uk/marketing/archive/HL7UK2007.asp>

However just as interesting as the presentation was the opportunity to talk



with attendees at the conference, and learn what they are doing to make interoperability work. There was plenty of time to share problems, solutions, hopes and fears for NHS interoperability, and to reflect on the breaking news of missing child benefit data. It was very clear that the NHS needs to be able to share meaningful clinical data safely, and that there is much work to be done in 2008 and beyond to ensure that this happens in a timely and economic way

Many thanks to everyone that made the conference possible, especially the generous sponsorship from Oracle, BT, Sentillion, Orion Health and Intersystems. Thanks to Keith Naylor for the photo of the conference hall, Hotel Russell, London.

Notes from the TC Chair The Standards Stack, Part 1

By Hugh Glover

Recently I've heard several times the adage "Give a man a new hammer and every problem becomes a nail".

This always strikes a chord with me, partly because a hammer is always something I keep in my toolbox, and partly because as a slightly snotty eight year old watching my Uncle use a hammer to drive in a screw while mending a fence I observed: "That's not very good practice", to which he replied "I'm not practising"!

One conclusion you may draw from this is that I would advocate a hammer as a universal solution, and by inference I would advocate HL7 as the solution to all problems. Indeed if you have a problem that can be solved by HL7 and you already have all the skills then why learn something new?

Driving a screw with a hammer can be an effective and pragmatic solution to a rough carpentry problem. It is never an appropriate and pragmatic solution if you are fixing grandma's prized lacquer cabinet. Get the toolbox out and find the right tools for the job. So what are the other tools in our standards toolbox? And who supplies them?

HL7 UK eZine Spring 2008



HL7 V2 and V3

The objective of HL7 standards is to define the format of messages to be passed between one system and another.

There is a lot of necessary baggage associated with this, and this baggage may be applied to other purposes, but the bottom line is HL7 is for messaging.

Version 3 was a reaction to the perceived failings of version 2. Where v2 has a small range of concepts that can be used very flexibly, v3 has a much wider range of concepts (that can be used to create new concepts) that can only be used in very particular way. So where v2 was easy to write, it is much harder to know how to read it because every implementation has its own interpretation of the concepts and you must be told that interpretation and work to it.

Version 2 also has many sub versions. V2.2, 2.3, 2.4 are all used in the UK and more recent versions are available up to 2.7. For the UK there is a specific implementation guide called A.2 (pronounced "Eh Dot Two") which took v2.4 (plus a little of 2.5) and provided guidance on implementation in the UK.

Version 3 is undoubtedly more complex than version 2, but that complexity makes it much easier to understand a message as delivered without other reference material. In practice, version 2 has a wide installed base in the UK and the USA and is in many cases doing the job required. In such cases there is no

immediate driver for it to be replaced by version 3. Similarly new systems are tending to be built in version 3 to get the benefits of a much greater degree of standardisation.

Supporting Standards

HL7 doesn't exist by itself – it uses a whole raft of others to make a working system. You will probably know some of these quite well.

UML

The Universal Modelling Language – in many ways parallels HL7 version 3, not surprising since it was a deliberate design aim of version 3 to be UML-like. If UML had been more complete when HL7 v3 was being developed it would have reduced the scale of concepts that version 3 has to describe.

UML is a language in the way that music notation is a language. They are both a set of notations that produce a diagram describing something. Like music notation can describe many different sorts of music, UML can describe many different sorts of system. These descriptions can cover the components of the system and its behaviour but ultimately the aim of UML is description. HL7 v3 uses some UML descriptive techniques to develop and document v3 messages.

[UML](#) is maintained by the [Object Modelling Group](#)

XML

The relationship between HL7 and XML is the same as the relationship between HL7 and English. HL7 specifications are documented in English, but could be in Dutch (in fact some specifications are) or any other

language. XML is the representation of a message that HL7 v3 happens to use. This is a convenience, but not a necessity.

At the most basic, XML is a means of dividing a block of text into sections and sub-sections and sub-sub-sections and sub... There is a lot more that has been erected on this framework which is a help to HL7 but fundamentally XML is about marking up text into a structure without declaring a purpose. [XML](#) is maintained by the [W3C](#).

SOAP/WSDL

When the postman drops a letter though your letterbox the letter inside the envelope is the message you have been sent – think of this as an HL7 v3 message. Usually we throw the envelope away, but if you think about it for a moment there are some standards at work here – the way the address is written, where the stamp is placed, maybe even a return address on the back. SOAP (loosely speaking) is the equivalent of an envelope.

WSDL (again loosely speaking) is the service that resulted in the envelope being delivered to your door. Did Auntie Bessie choose registered delivery? Maybe it was a private mail company not good old Postman Pat? All of these are the services used to deliver the message.

XML pops up again here because both SOAP and WSDL are implemented using XML in the same way that the postal service description, the envelope and the letter are all written in English (or at least a language) [SOAP](#) and [WSDL](#) are [W3C](#) standards.

HL7 UK eZine Spring 2008



Vocabulary

HL7 messages have to talk about actions and things. For example if the message is an “order” and the thing is a “lab test”. The lists of actions and things are all managed by means of vocabulary – lists of words and phrases with (usually) clear and detailed definitions. There are many different vocabularies used, some created and maintained by HL7 itself, and others by external bodies. In the UK Snomed®CT provides much of that vocabulary. If messages talk about medicines then in the UK they will use the dm+d (NHS dictionary of medicines and devices) which is a subset of Snomed®CT.

Snomed®CT is provided by [IHTSDO](#) - the International Healthcare Terminology Standards Development Organisation (which is easier to pronounce as It-see-doo but don't say I said so). [Editor's note: I heard both this pronunciation and “Eye-hits-doe” at the recent HL7.org WGM] [dm+d](#) is maintained by the NHS. *That concludes Part 1 of a look at the standards stack from an HL7 perspective. Next time rather than looking inward at standards to support HL7 we will look out at standards like IHE Profiles, ENV 13606, ISO that either use HL7 or run in parallel to it.*

News from HSSP

HSSP, the Healthcare Services Specification Project, hosted a workshop with HL7 UK in 2006. Since then the first tranche of HSSP specifications, concerning identity management, record sharing and decision support, have been published as HL7 DSTUs.

At the recent HL7.org WGM, HSSP set up a new online forum to help all interested parties keep in touch with the work of the project. Here is the announcement from Ken Rubin, HSSP co-chair, giving the details:

In an attempt to further improve HSSP's processes (and to help keep everyone on the mail lists sane), we have created a forum bulletin-board site that is being piloted for the next several months.

The website <http://hsspforum.org> is also linked from the HSSP wiki, <http://hssp.wikispaces.com>

Why a new forum? We are trying to address several issues:

- to improve ability to "catch up" on activities for the casual participant
- to remove "high chatter" discussions from the list keeping it better suited to a broader community
- to improve visibility into HSSP activities fostering HSSP openness

That said, a few things aren't changing. Namely:

- all documents and major revisions will still be posted to the wiki and announced on the lists
- any time a new topic is created in the forum it will be announced on the list
- decisions reached on the forum will be announced on the list
- the forum will complement existing tools - namely wiki and listserv - not replace them

Browsing the forum can be done without registering. You'll only need to register if you wish to contribute. Also, we have created thread for feedback and encourage folks to post their opinions there. We'll review that feedback when we decide the success or failure of the pilot.

HL7 UK Events

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

April

2nd HL7 UK Board Teleconference

9th *Sharing Clinical Documents and Integrating Workflow* (IHE/BCS event sponsored by HL7 UK)

16th HL7 UK Technical Committee Working Meeting & HL7 UK AGM, London

May

4th-9th HL7.org Working Group Meeting, Phoenix, Arizona, USA

14th HL7 UK Board Teleconference

June

11th HL7 UK Technical Committee Working Meeting, London

September

14th-19th HL7.org 22nd Annual Plenary & Working Group Meeting, Vancouver, Canada

October

1st-2nd HL7 UK Technical Committee Working Meeting, London

22nd-23rd HL7 UK 2008 Conference, London

Please see the HL7 UK website for fully up to date event details.

Future issues depend on you!

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