

# Health Level 7 - Working Group Meeting Report

## San Antonio, January 12 - 17 2003

**Richard Harding**

### **Introduction**

I was selected by HL7 Australia to be an Australian delegate to the HL7 Working Group Meeting which was held in San Antonio Texas between the 12<sup>th</sup> and 17<sup>th</sup> of January 2003.

My travel and accommodation expenses were provided by HL7 Australia under an arrangement with the Commonwealth Department of Health and Ageing Queensland Health provided my salary for the time involved.

This report is intended to fulfil the requirements of the travel grant guidelines of HL7 Australia to report on the meeting within 6 weeks of return including transferring information to the appropriate Standards Australia working groups.

### **Proposed Scope of Participation**

My request to attend the San Antonio Working Group Meeting was based on the following main subject areas:

- V3 dynamic model
- V3 Pharmacy and Pathology
- V3 Discharge and Referrals
- V2 Items mainly Pharmacy and Pathology
- V2 Microbiology

### **Outcomes of Meeting**

#### ***Dynamic model***

At San Antonio, I learned about the HL7 Development Framework (“HDF”). This is a newly-emerging body of work that seeks to explain the creation and use of HL7 V3 messages using recent developments in Software Development methodologies. In particular the HDF is using UML (Universal Modelling Language) to describe the process and to be used in the requirements Gathering and Analysis stages of message development and message usage.

Chapter 2 of the HDF deals with what some of us have previously called the Dynamic Model. Chapter 2 is being developed by Charlie Mead and others. We discussed how to progress our common agendas to simplify the V3 Dynamic Model. This work is essential to making V3 easier to understand.

### ***V3 Pharmacy and Pathology***

There was very little discussion on these topics at San Antonio because most of the time of the Orders and Observations TC was taken up with resolving ballot responses to v2.5. However, on the flights home and in transit lounges, Peter MacIsaac and I collaborated on producing some Diagrams and text to be used in the Storyboards section of the Fourth V3 ballot.

### ***V3 Discharge and Referrals***

A small group met on the Monday night and focussed on producing formal UML models for the data required for a Referral and to create a useful storyboard to help our design. The group the group mainly consisted of Australians but also included Stephen Chu (New Zealand) and Neil Jones (UK).

At that stage, we were unaware of the Charlie Mead work with the HDF (HL7 Development Framework) but managed to produce several of the models that the HDF requires.

This is a very significant body of work produced essentially by IT14/6/6 Working group members and forms a very firm basis on which the work of that group can proceed.

It is also very satisfying to see many of our International offering support to further this work. This includes Bob Dolin and Martin Kernberg (USA).

### ***V2 Items mainly Pharmacy and Pathology***

This item was to progress several issues that Queensland Health has identified in specifying the interfaces for our Clinical Information Systems project. This involves changes to HL7 V2 and so must be targeted at V2.6. No work was done on V2.6 at San Antonio because the meeting was focussed on resolution of the V2.5 Ballot.

### ***V2 Microbiology***

Little progress was made on Microbiology this meeting owing to the non-attendance of two prime movers in the Microbiology discussions.

## **Unplanned Outcomes of Meeting**

### ***Discovery of the HL7 Development Framework***

For me, this was the highlight of the Meeting.

For some time I have attempted to simplify the “Dynamic Model” of version 3 HL7 and have been making progress with very little theoretical support for my arguments. In Australia I have been advocating for us to explain the AS4700 documents in ways that our business partners (Pathologists, Pharmacists etc) can understand.

The HL7 Development Framework provides formal underpinning for these two agendas. It is based on UML – the Universal Modelling Language – which has become a preferred tool of Application Developers and Application Architects and is rapidly becoming an international standard.

Since San Antonio, I have had considerable dialogues with Charlie Mead and made substantial comments on his written material. I intend to guide the utilisation of the major

artefacts of the HDF within Queensland Health and to advocate for its usage for Commonwealth projects and within published Standards Australia material eg AS4700.

### ***V2.5 Ballot Resolution***

Most of the time of the Orders and Observations TC was taken up with resolving ballot responses to v2.5. I participated in this work.

Ballot resolution is the process by which the integrity and quality of HL7 messages are maintained at the same time as it evolves to fulfil new requirements. I spent a number of sessions involved in this process. It involves detailed and unattractive work, understanding the content of ballot responses submitted by others and resolving them. This work is essential to maintain the overall quality of the HL7 product.

### **The value proposition for Australian Participation:**

At the very least, we should consider the following attributes in our assessment of the value of Australian participation in HL7 Working Group Meetings:

#### ***Catering for Australian requirements***

Traditionally this has been the only consideration for Australian participation. The value of Australian participation is to directly influence new developments to cater for Australian requirements and to change existing standards where Australian requirements are not currently adequately addressed.

#### ***Research and Development***

Health Informatics is not a mature discipline and many of the concepts are currently still under development. Australians are often in the forefront of Research and Development thinking in various areas (consider the contribution of Thomas Beale, and Sam Heard in EHR theory for example. Other examples exist for Discharge and Referral modelling and messaging, Microbiology data representation, standardised data types etc etc). HL7 working Group meetings provide one of the few venues internationally, where such ideas can be discussed in open forum. Australia has a vested interest in progressing the maturity of these domains and could be seen to have an obligation to provide the resources to do this work.

#### ***Governance of International Standards***

Australia also has an interest to preserve the integrity of the HL7 standard that we are using (V2) as it evolves. Therefore there is indirect value to be realised by contributing to the governance of V2.

The same values can also be realised from contributing to the governance of the V3 development.

#### ***Exposure to new ideas***

Further value can be attributed to the ideas that attendees bring back from these meetings. Some of these are quite small, possibly inconsequential in themselves, but others such as the HDF (HL7 Development Framework) are likely to have an extensive impact on the way Australian Health informatics presents its ideas and carries its normal business eg application development, enterprise architectures etc.

Another “idea” that should greatly affect Australian Health Informatics (Pharmacy coding specifically and Decision support generally) is the Drug database demonstrated in private sessions by Neil Jones (UK).

### **Recommendations and Actions**

1. That the **Requirements Gathering and Analysis phase of the HDF** be promoted as a viable methodology for documenting business processes within Australian healthcare informatics. The diagrams produced from this process should also be promoted because they will simplify the task of explaining to a business expert (eg a Pathologist or pharmacist) precisely what HL7 attempts to do for them. The diagrams should be included into AS4700 documents.  
For action by the IT14/6/x committees, possibly assisted by R Harding.
2. That the **Neil Jones drug database be demonstrated** to IT14/6/4 for its consideration. Peter Macisaac might be appropriate to do this. Purpose is to indicate the complexity of data necessary to have systematic Electronic Decision Support in Pharmacy.  
For action by IT14/6/4 Chair (I Cheong).
3. That a coordinated effort be made within IT14/6/6 to **develop a Version 3 Referral message** in a constrained timeframe eg to get to public ballot stage in 3<sup>rd</sup> quarter of 2003. Firstly, the models and glossary for the Referral and Discharge domain need to be developed. These are then used to the draft HL7 V2 message (currently in an AS4700.x draft standard) and be published within it whenever possible. They are also used to develop a draft V3 messages  
For consideration by IT14/6/6.
4. That HL7 Australia committee and the Department of Health and Ageing consider whether a **per diem allowance** be provided to attendees instead of the current reimbursement process. This idea was first raised by Heath Frankel.  
For action by HL7 Australia executive (in the first instance).

Richard Harding, 12-Mar-2003