

**HL7 WORKING MEETING**  
**ORLANDO, USA**  
**23 – 28 JANUARY 2005**  
**- DELEGATES REPORT -**



February 2005

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## Delegates Summary Commentary

"Health Level 7" ("HL7") is widely recognised as the internationally leading creator of standards for healthcare inter-system and inter-organisation messaging, for decision support, clinical text document mark-up, user interface integration as well as a health data modelling and message development methodology.

The term "HL7" is used both for the organisations involved in developing and supporting the healthcare standards as well as for the standards themselves developed by the HL7 local organisations in 30 countries.

Australia plays an important and significant role in the development of the HL7 Version 2 and Version 3 health data interoperability standards. This is justified by our need for comprehensive and seamless interoperability between the substantial capital investments in healthcare automation in our country, in particular the *HealthConnect*, NEHTA and State/Territory Health information technology strategies and programs. Through its procurement of health IT products from mainly overseas vendors, Australia is a "consumer" of standards and needs to ensure that the international standards to which these systems are built include the Australian requirements by design. Failure to do this either results in costly local modifications or simply hinders data exchange.

Work on the health information standards takes place within the Standards Australia IT-014 Committees as well as at the three international HL7 Working Group Meetings, usually held in the USA, although to be held for the first time in Holland in May 2005.

The recent Working Group Meeting in Orlando, USA, was an important meeting for Australia for several key reasons:

- Successful inclusion of Australia's Discharge/Referral messaging requirements in the about to be published V2.6 messaging standard - HL7 V2.x is widely implemented across Australia.
- Progress on the 'Clinical Statement' without holding up the V3 Care Provision standard – both critical for *HealthConnect*;
- Progression of the pathology standard in V3 - important for any future migration of Australia's messaging to HL7 V3;
- Acceleration of the international harmonisation on the data types between HL7 and the European CEN towards a successful harmonisation expected in May 2005 - this is an important HL7 V3 implementation infrastructure for Australia (the recent V3 evaluation by the HIC was aborted due to implementation problems).

Details on each of these achievements can be found within the delegates reports referred to in the Delegates Report.

This WGM had an all-time record 593 registrants (over 100 from outside the US). The meeting involved six full days of committee work involving 40 technical committees and special interest groups.

The HL7 Standards processes are by their nature participatory rather than representative (such as some of the ISO committees) and without in-person participation, results cannot be achieved. For example, a failure to secure acceptance for the Australian Discharge/Referral proposals for V2.6 would have had a detrimental impact for several state government projects relying on this functionality. Clinical Information handling in HL7 Version 2.x is a requirement of these projects. The V2.x

Discharge/Referral messaging is also used for uploading to HealthConnect EHRs. The lack of this functionality in HL7 Version 2.5 had led to Australian proposals for enhancements to V2.6.

The Australian IT014-06-06 Collaborative Care Committee spent a substantial amount of time gathering and achieving consensus on these requirements. Due to the internationally leading nature of the Australian Federal and State/Territory government projects, these enhancements are radical for Version 2 and the proposals were initially voted down in the ballot. According to the HL7 processes (which are quite similar to the Standards Australia consensus-building approach), the negative votes were then deliberated in committee (and significantly outside committee) at the Orlando Working Group Meeting with the goal of convincing the negative voters of the merit of Australian proposals.

The negative voters were able to be convinced of the merit of the Australian proposals and converted their negative votes in support of Australia. This success was solely due to the presence of the Australian experts, the involvement and credibility of Australians in leadership positions (three Co-Chairs) in the International HL7 organisation and the perseverance and leadership of David Rowed, Chair of IT 14-6-6 (Collaborative Care Committee within Standards Australia) and Co-Chair of the HL7 Patient Care Technical Committee,

Similar approaches apply to the other key achievements listed above and elsewhere in this report.

Due to the past funding of Australian expert attendance at the HL7 Working Meetings, Australia can only maintain and extend its proven influence if it is able to adequately support experts to participate in these working meetings, provide continuity of their attendance to allow them to maintain their positions in the HL7.org leadership and support their contributions between meetings.

Additionally, consideration should be given to the strategic level of Australian expert representation. Regrettably, the comparatively small Australian delegation (five co-funded experts) was unable to cover some areas that are important to Australia such as Clinical Decision Support, Vocabulary/Terminology, Patient Safety and public health and emergency response. Work is progressing in these and in other areas identified by NEHTA, HealthConnect and others that will influence the progress of Australian projects. However, we cannot effectively influence the agenda at the Working Meetings in these areas to ensure the standards are developed and evolve in a timely manner that reflects the requirements of Australia. Countries with substantial national projects like the UK are now sending up to 30 experts to the HL7 Working Meetings to ensure their interests are maintained.

Commonwealth co-funding was provided for five delegates to attend the meeting. The funding covers meeting registration, travel and accommodation only; the experts' employers fund the experts' time.

To achieve the strict national timeframes set by NEHTA, HealthConnect and the State/Territory government implementation projects, we believe Australia needs to be able to influence the development of the HL7 Version 2.x and Version 3 standards in a timely manner to ensure the Australian requirements of these projects are included. A strategic and sustainable approach is required if we are to be able to align our national priorities with the often lengthy international standards development processes to ensure that that standards-based Health IT products and systems are available when they are needed.

The delegates who have compiled this report have debated at length how to summarise the state of play with V3. This is a topic for another report, however, as one delegate put it [right now and for the foreseeable future] HL7 is where Australia must join the Research and Development into standards that will support the use cases that Continuum of Care will present. Australia has much to

contribute, not the least of which is a health environment where Continuum of Care is a major issue. HL7 is the only forum in the world where a huge slice of these issues are debated continuously in open session with a wide participant base. The current technological underpinning for these debates is V3.

“Love V3 or hate V3, if you want to participate in moving global health informatics forward, then the best forum you have is HL7 and V3. You don't have to love the product, but when you need to discuss implementable detail you need to "talk V3" to be able to engage in the debate.

It is those talks - clinical statements, medication, dynamic model and the rest - that will produce the common understanding that allows the world to progress. Consider the debate we had over mood codes and V2 - how much more difficult would that have been if we could not characterize the issue by using a V3 term - mood code.

I have no way of knowing if V3 technologically will be an evolutionary dead-end. I do know that the ‘concepts’ that we are discussing and resolving today using V3 terms will be the basis on which any evolution past V3 will be based. I also know that we need some experience of using XML to realise rich and hugely complex data structures before we can move forward.”

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## **Introduction to Delegates Report**

This report summarises the observations and contributions of HL7 Australia and New Zealand delegates attending the HL7 Working Group Meeting 23- 28 January 2005, Orlando, Florida, USA. Detailed reports provided by individual participants are referenced in the body of the report. This report builds upon the on site mid-week report previously provided by delegates which was distributed to the HL7 Australia & Standards Australia IT 14- 6 e-mail list and posted on the HL7 Australia web site.

Note that the main purpose of this Working Group Meeting was to resolve the negative ballots on those standards that did not pass ballot before the meeting. The process is to hold committee meetings to hear the reasons for the negative ballot, to discuss these in committee and then to make changes to the standards by consensus that then allows the negative balloters to change their vote from "negative" to "affirmative". The standards that fall under this category include:

- HL7 V2.6
- GELLO
- Template Architecture
- 13 other V3 artefacts
- EHR - Long term Care Setting - US Realm
- Structured Product Labelling, Rel 2

Key: WGM = working group meeting; TC = Technical Committee; SIG = Special Interest Group; ORC = Organisation Review Committee; TSC = Technical Steering Committee

## **Statistics**

- The WGM had an all-time record 593 registrants (over 100 from outside the US)
- HL7 has local organizations ("Affiliates") in 30 nations
- Six full days of committee work
- 22 concurrent tutorials
- 40 technical committees and special interest group meetings

## **Highlights**

- Australian delegation successful in negotiating the withdrawal of negative ballots against Australian Discharge /Referral message enhancements to V2.6 Chapter 11 (that were created and proposed by IT14-06-06), which now allow the communication of clinical intent, concern, etc.
- Arden Syntax V2.5, CDA V2, 8 V3 part-standards ("Artifacts") and one EHR part-standard successfully passed the ballot.
- The Patient Care TC (co-chaired by David Rowed) has taken over from the Structured Documents TC the responsibility for developing the Continuity of Care Record (CCR) as an HL7 artifact (CDA clinical content – based on clinical statement pattern).
- Organizational Review Committee (ORC) recommendations for structural and operational reforms offer promise for improvements to HL7 standards development processes. Australia had substantial input in the work and findings of the ORC.
- Proposed new governance approach of SNOMED International were widely publicized.
- The Security SIG was elevated to Technical Committee status.

**Strategic Issues of interest/concern to Australia** – see below for details

1. **SNOMED International** - a significant shift in the Collage of American Pathologists (CAP) approach to the future of SNOMED International has become apparent. There is continued reticence of countries and large corporations to sign licensing agreements with CAP. An official report to the European Community which recommended that "the EU should further consider whether an international agreement could be reached whereby SNOMED could be managed by a global public body". SNOMED International is now - with the blessing of CAP - seriously considering alternative structures that are more congruent with international standards development organizations.
2. **NLM Vocabulary Project** - This project is tasked with the harmonisation of the Consolidated Health Informatics (CHI) vocabularies in the NLM UMLS metathesaurus with the HL7 vocabularies.
3. **Development of the Clinical Care Record (CCR) as an HL7 artifact (CDA)** - this is an important political move, as the CCR was previously developed outside HL7.
4. **ISO TC215 Data Types** - Tom Marley (UK) has distributed a pre committee ballot draft of the proposed ISO data types standard. Australia's Grahame Grieve has undertaken to review this for HL7.
5. **Management of 'Clinical Statement' in the context of the ballot** – agreement was reached to create a separate clinical statement domain in the Ballot document, enabling the documentation on how to use the clinical statement (including refinement and extension) to be developed as part of this ballot. [See Heath Frankel's report].

## Ballot summary

The following HL7 Standard successfully *passed final ballot* before the meeting:

- CDA V2

The following HL7 Standards passed committee-level ballot before the meeting:

- Arden Syntax V2.5
- V3 CMET Rel 3
- V3 Drug Stability Reporting Rel 1
- V3 Implantable Device Cardiac Rel 1
- V3 Transport Specification - MLLP Rel 2

The following HL7 Standard *passed Draft Standard for Trial Use (DSTU) ballot* before the meeting:

- V3 Pharmacy Rel 3

The following HL7 Standards *passed Update/Informative ballot* before the meeting:

- V3 Transport Specification - Web Services profile Rel 1
- V3 Annotated ECG Rel 1 Implementation Guide
- EHR - Small Ambulatory Care Setting - US Realm
- Structured Product Labelling, Rel 1 Implementation Guide

## CDA

Clinical Document Architecture (CDA) release 2 passed membership ballot. Core domains including the RIM, Abstract data types and XML implementation technology specification will be balloted as a normative ANSI standard within the next month.

## **Community Based Health Services**

- Community Based Health Services (CBHS) SIG revised Charter approved by the TSC, confirming editing responsibility for the Referral Chapter of version 2 and version 3 on behalf of the Patient Care TC.
- Isobel Freaun presented recommendations from CBHS SIG regarding V3 ballot to Patient Care highlighting need for clarification on what is an 'environment', 'topic' and on the use case for introduction of a new 'New' message. Resolution of these issues to be addressed via the list.
- CBHS SIG considered request for involvement in HL7 from National Association for the Support of Long Term Care (NASL), US long term care vendor association (Refer to Isobel Freaun's report]

## **Control/Query**

- Two new co-chairs were elected: Doug Pratt (Siemens) and Anthony Julian (Mayo Clinic/Foundation).
- Grahame Grieve (Kestral Computing Pty Ltd.); Joann Larson (Kaiser Permanente); and Rene Spronk (Ringholm GmbH) remain in post.
- The TC worked through V2.6 ballot resolution; transport ballot resolution; and dynamic model enhancements.

## **Data types**

- Most work at this meeting focused on preparations for the first full release expected in the next 2 or 3 weeks.
- C/Q will open a window for proposals for change to the datatypes for Release 2. This window will close mid-march or so. Proposals will be discussed at the May WGM and by teleconference, following which the data types will go to ballot in the next cycle.

## **Data collection to support chronic disease management/referral/discharge summaries.**

This project is an initiative of the clinical statement folk in Patient Care TC. William Goossen (HL7 Netherlands), who is involved in 'real' implementation of V3 for NICTIZ, the Dutch equivalent of NEHTA, describes the task as developing internationally agreed formats and uses for clinical descriptions / data / scales. Stephen Chu (HL7 NZ) and William are the co-leaders of this initiative. Stephen has produced a first draft document for comment and editing/expansion by the ad hoc group, based on the structure of a UK document received from Charlie Bishop. The plan is to start with this limited set of data - define the standard structure, produce the data dictionary and then work toward developing archetypes or clinical templates for these concepts. The ultimate goal is to expand this limited set to a data collection.

## **Dynamic Model**

- Dynamic Model has finally been recognised as a mainstream problem for HL7 committees with full sessions of Patient Care and Modelling and Methodology committees devoted to the topic and significant discussions in Laboratory, Pharmacy and Control Query committees. A chair of Modelling and Methodology declared that Dynamic Model issues were the number one hot topic for that committee at the next Working group meeting.

- A formal Dynamic Model "Project" is being set up to focus effort towards the areas of highest need, to provide a formal environment in which decisions can be made and to provide voting rules for these decisions. [Refer to Richard Harding report]

## **EHR**

- Three new Co-Chairs were elected to the EHR TC under somewhat unusual circumstances (block voting by the EHR Vendors Association), they are Linda Fischetti (re-elected - Veterans Administration); Peter DeVault, Epic Systems Corporation; and Corey Spears, Physician Micro Systems, Inc. Australia's Sam Heard remains in post.
- Progress reports on the HL7 – National Library of Medicine EHR Project were given, including a 'demo' by Phase 1 consultant, Liora Alschuler. This is a two year, three phase project to provide US government and private sector agencies with an implementation guide for the transmission of patient information between disparate EHR systems. Phase 1 is to implement a simple query-response message set executed between two EHR systems (the 'demo' involved a rare V3 lab message supplied by Epic). Phase 2 will implement a more complete query-response message set that preserves the semantic content of the patient information and involves creating a HL7 CDA Release 2 transaction containing a number of clinical statements.
- The work of the EHR TC is advancing on a number of fronts, including EHR Functional Model, Conformance, and Ambulatory Care Minimum Functional Set.
- Don Mon from HIMSS described in detail the experience of the group looking at the functionality of Personal Health Record systems. [Refer to Sam Heard's report]

## **HL7 Object Model (HOM)**

- The HL7 Object model developed at the meeting. It is now usable, but not yet written as a specification. There is considerable short-term implementation interest in UK/Canada/USA. A full draft will be presented for committee ballot in the next ballot cycle.
- If you don't know what the HOM is it is an object based implementation of the RIM and data types along with a simple serialisation algorithm that is compatible with most web services and XML serialisation toolkits. Further details can be obtained by contacting Grahame Grieve on [grahame@kestral.com.au](mailto:grahame@kestral.com.au)
- ISO TC215 (Tom Marley) has distributed a pre committee ballot draft of the proposed ISO data types standard. Australia's Grahame Grieve has undertaken to review this for HL7 in the next couple of days, the process and outcome of which will be discussed further on the data types list. It is very close to the HL7 abstract specification.

## **International Affiliates Meeting**

- Decision made to split future IA meetings into two parts - a decision making and an information update component. Where there are more than 2 IA delegates per meeting this will free the rest to attend the increasing number of competing committees now scheduled on the Sunday such as MnM tooling updates.
- \$US6, 000 request from HL7 Australia and HL7 New Zealand was approved to promote awareness of HL7 in the region, Vietnam, Malaysia, Indonesia, and Pacific Islands etc.

- The new VP and General Manager of SNOMED Int, Kevin Donnelly, addressed the IA meeting to explain the changes in approach of the CAP to 'releasing' SNOMED so it can become a truly international standard. His main message was that SNOMED Int is looking at a new governance structure that will see it separate from the CAP board.

## Patient Care

- Co-chair ballot: Dan Russler (McKesson, USA) re-elected. Other two Co-chairs: David Rowed (Australia) and Judith Warren (USA) remain in posts.
- Australian led delegation successful in negotiating withdrawal of V2.6 Chapter 11 negative ballot comments on inclusion of mood codes and segment identifiers – see David Rowed's report on details and comprises agreed to. Further work still to be done to incorporate the agreed changes.
- The Patient Care TC taken over the responsibility from Structured Documents TC for developing the Continuity of Care Record (CCR) as an HL7 artifact (CDA clinical content – based on clinical statement pattern). An international project group has been established, lead by Dan Rusler (PC Co-Chair and McKesson) and involving several of the Patient Care and Community Based Health Services SIG members, including Australian/New Zealand. This project fits well with the work interests of IT14-6-6 regarding the role of messages and documents and discharge summaries. Heath Frankel coordinating the modelling. [Refer to Heath Frankel's report]
- Care Provision Domain (containing V3 referral and event summary messages) ballot reconciliation commenced during meeting and to continue via the list – Heath Frankel to take lead. Main concerns related to need for further explanation of the model which includes the Clinical Statement pattern. [Refer to Heath Frankel's report]
- Patient Care TC is addressing the Dynamic Model and the issues of documents vs messages from the perspective of clinical communications.
- Patient Care resolved to commence work on Version 3 Query-based messages following a proposal from IT 14-6-6, which is responding to the needs of HealthConnect.
- Discussions will continue via the list with the **Patient Administration TC** to resolve the links between Care Provision 'events' and Patient 'encounters' through use of a Care Provision Referral and Event CMET. [Refer to Heath Frankel's report]

## Patient Administration

- Klaus Veil was re-elected as co-chair.
- All V2.6 negative votes were resolved and the balloters changed them to "affirmative" votes.
- The code definitions of the Patient Encounter class (Inpatient, Ambulatory, Home Health etc) were discussed with the Patient Care TC. to determine the difference between a Patient Encounter and Care Provision Event It was agreed that Care Provision would encapsulate the clinical information relevant to an episode of care while the Patient Encounter would provide the administrative information for a single encounter within the episode of care. [Refer to Heath Frankel's reports]

## **Patient Safety**

- Two new Co-Chairs elected Robert Borotkanics, Agency for Healthcare Research and Quality and Clive Flashman, UK National Patient Safety Agency. Lise Stevens (FDA) continues in post.
- Individual Case Safety Report (ICSR) expected to pass ballot. SIG moving onto generic patient safety report. SIG keen for Australian input given US interest in the Australian developed incident management system AIMS and efforts to see this become the preferred supplier of patient safety systems in the US [Refer to Isobel Freen's report]

## **Pathology**

- Much of this meeting was devoted to consideration of the ballot feedback on the new artifacts developed at the out-of-cycle meeting in November. The Laboratory Committee (as it is named in HL7) is focused on the hard slog of creating and documenting the many artifacts that we require to complete a first release of the V3 Laboratory specification.
- Another out-of-cycle meeting is convened for Chattanooga in late February. (Richard Harding has decided not to attend.)

## **Review of HL7.org's operations (Organisational Review Committee)**

- The ORC does not formally meet at Working Group Meetings because of alternate pressures on all members. ORC, with Australian representation from Richard Harding, meets weekly by teleconference which alternate between 2am and 8am Brisbane time.
- The ORC has made a number of recommendations to the HL7 Board who have endorsed and acted upon all of these. Most recently, ORC recommended appointment of a Project Manager (Jenni Puyenbroek - ex McKesson) to coordinate, synchronise and support the work being done by standards developer volunteers by prioritising the work being done and focusing effort on the most critical tasks.
- HL7 artifacts are produced by many and varied committees each acting with some degree of isolation from its peers. ORC is currently considering how to make these artifacts more consistent among committees and is looking at limited reform of the Organisational structure and improved procedures to facilitate this.

## **Services Architecture Meeting**

A well attended meeting, facilitated by Ken Rubin, enabled this project group to list services work priorities and to allocate work to providing an outline of what respective priorities would seek to achieve. HL7 Australia had previously - as proposed by some of its members - formally expressed its support of this initiative as this work offers huge potential benefits to HealthConnect, NEHTA and other jurisdictional projects in Australia.

[Refer to Heath Frankel's report]

## **Templates SIG**

Work continued on the Templates ballot, which may be submitted as a membership level ballot in the next cycle. It is recognised that templates are similar to the current static models with minor additional requirements. Several parties are developing templates using the existing tooling waiting for the full templates functionality. Several other parties are asking for them to be developed now. Patient Care is likely to publish some example templates as CMET's in its next ballot. [Refer to Heath Frankel's report]

## **Terminologies and HL7 ("Terminfo")**

This is a project hosted by the Vocabulary TC with two aims: to develop a specification of a general approach to resolving issues related to the interface between HL7 information models and terminologies or code systems and to develop a guide on use of SNOMED Clinical Terms (SNOMED CT) concepts in the HL7 Version 3 communication standards. [Refer to Isobel Freen's report]

## **Vocabulary TC**

- An evening session provided the opportunity to receive an update on the HL7 - National Library of Medicine (NLM) Vocabulary Project. For details, including concerns raised by International Affiliates at the potential impact of this 'US realm' project see notes taken by Isobel Freen in her report.
- No delegates able to attend the TC meeting, except for the joint session with Term Info committee on Friday when there were no other competing meetings.

## **Future Meetings**

The next HL7 Working Group Meeting, to be held in Noordwijkerhout, The Netherlands, on May 1-6, 2005, will be the first working group meeting held outside the American continent; a WGM was held in Toronto, Canada, in April 1999.

Anyone planning on attending is being encouraged to register by mid Feb as hotel bookings are being linked to registration. There appears to be good support from US delegates to travel to the Netherlands. HL7 Netherlands expect strong interest from European countries and several other meetings (ISO, IHE, etc.) are being planned around this WGM.

The 2005 Plenary Working Group Meeting will be in San Diego, USA, Sept. 11 -16.

HL7 Australia would like to thank IT14, the Commonwealth Department of Health and Ageing and the experts' employers for supporting their attendance at the HL7 Working Group Meeting.