

# IT-014 Health Informatics Committee

Executive Summary Report

HL7 Meeting

15<sup>th</sup> - 20<sup>th</sup> May 2011

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*With input from Australian Delegation and other employer funded  
Australians at the meeting:*

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- *Richard Dixon Hughes (Delegate)*
- *Grahame Grieve (Delegate)*
- *Hugh Leslie (Delegate)*
- *David Rowlands (Delegate)*
- *Patricia Williams (Delegate)*
- *Vince McCauley (Delegate)*
- *Andy Bond (NeHTA)*
- *Sarah Gaunt (NeHTA)*
- *Stephen Chu (NeHTA)*
- *Stephen Royce (NeHTA)*
- *Tine Connell-Clark (NeHTA)*

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# 1 INTRODUCTION

HL7 is an international organisation with its origins in the USA, and an expanding group of international users participating in its standards development processes. HL7 provides international standards for inter-system and inter-organisation messaging, for decision support, clinical text document mark-up, user interface integration, EHR/PHR systems functionality as well as a health data model and message development methodology. It produces global health informatics standards through a process of collaboration, which involves its local affiliate, HL7 Australia.

HL7 standards are the dominant health-messaging standards in the USA, Canada, Germany, Holland, Finland, Japan, Korea, Tai wan, New Zealand, and Australia and are being adopted as health-messaging standards by many other countries.

There are many national HL7 organisations that participate in HL7 development activities. These include Argentina, Australia, Brazil, Canada, China, Croatia, Czech Republic, Denmark, Finland, Germany, India, Japan, Korea, Lithuania, Mexico, New Zealand, Pakistan, Switzerland, Taiwan, The Netherlands, UK, Spain, Greece and Ireland.

The May 2011 HL7 International Standards and Education Meeting was held at Orlando, Florida USA. The meeting covered 6 days, running from Sunday 15<sup>th</sup> May to Friday 20<sup>th</sup> May. On weekdays formal meetings are scheduled from 8am to 5pm. However some meetings are scheduled from 7am and others go to 10pm (and sometimes later) most days.

This HL7 working group meeting was supported with 430 registrants from over 22 countries.

It should be noted that the HL7 International standards work is not structured as "Work Items" that are put forward to the HL7 body for approval, rather most projects arise from the work within the many domain and specialist committees. However, these proposed projects need to be well-defined and documented and require approval by the respective Steering Division and the Technical Steering Committee to ensure appropriate internal (HL7) and external (international standards development organisations) harmonisation.

This report summarises the committee proceedings, issues and actions for consideration by Australia from this HL7 International Standards and Education Meeting.

## 2 OBJECTIVES OF THE MEETING

The event is a true working meeting, not a conference, with many individual groups meeting to develop, discuss and improve HL7 standards, processes and implementation guides and to determine the most effective way to meet the needs of the stakeholders – both those present at the meeting and those in the wider community of interest. While HL7 engagement with stakeholders in other forums is also strong (through regular, often weekly teleconferences), the ability to influence the work program, outcomes and strategic direction requires physical presence at working group meetings.

The overarching objectives are to benefit the Australian health system and wider community by:

- Improving Australian capacity to implement health informatics standards and eHealth systems by expanding local knowledge and expertise based on international best practice.
- Promoting free trade and its benefits to health ICT (by lowering the cost of integrating and implementing local health information systems, many of which are imported, and by reducing costs to Australian exporters) – both these outcomes require Australian requirements to be embedded into global standards so that they can be adopted in Australia, rather than having different standards across domestic and international markets, and
- Improving Australian health information systems by facilitating a standards-based approach to development and implementation, and achieving interoperability between systems.

Other more specific objectives for Australian engagement in international standardization via the HL7 International include:

- Monitoring and influencing HL7's strategic positioning as a global SDO, encouraging its collaboration with other international and global SDOs and assessing and contributing to the strategic positioning of its key products (HL7 V2.x, V3, CDA, EHR, etc.) so as to encompass Australia's health information interchange and related requirements.
- Negotiating the inclusion of Australian healthcare messaging requirements into HL7 V2.8, CDA and V3 specifications for:
  - Patient administration;
  - Diagnostics (pathology, radiology);
  - Collaborative care (E.g. Electronic Discharge Summaries and e-Referrals, so that Australian requirements become a formal part of these Standards.
- Negotiating the inclusion of Australian health sector requirements into the HL7 Standards so that Australian EHR developments are supported by the upcoming HL7 and related ISO EHR Standards.
- Negotiating the harmonisation of ISO, HL7 and CEN Standards to achieve progressive inter-SDO eHealth standards harmonisation with the long-term goal of a unified set of global health informatics standards.

- Monitoring, and influencing as necessary, new initiatives to standardise clinical data content so as to improve Australia’s ability to unambiguously and safely exchange semantically interoperable clinical data.
- Assessing and influencing HL7’s work on service oriented architectures (SOA), as required by Australia’s national direction setting, and negotiating the inclusion of Australian health sector requirements (in particular, those described by NEHTA) into service specifications being jointly developed by HL7.
- Assessing and influencing the positioning, development, implementation, utility and effectiveness of CDA (including CDA Release 3), to support Australia’s interest in CDA in its national E-Health program.
- Assessing, exploring and proposing approaches to the embedding and transportation of archetypes in HL7 V2.x messages for referral, diagnostic results and collaborative care to support Australian interest in the use of archetypes for the exchange of clinical information.
- Progressing the international harmonisation of common data types and vocabulary for healthcare information that will meet Australia’s identified requirements.

Additional Australian interests are pursued opportunistically as and where formally agreed upon by the community and to support specific objectives which are required for the development of Australia’s national eHealth agenda and other national interests.

### **Relevance to NEHTA programs**

NEHTA has endorsed a range of Australian Standards derived from international standards work by including them in the National E-Health Standards Catalogue. As the implementation of NEHTA’s domain-specific initiatives are based on many of these standards, it is important that Australia continues to be involved in the international forums that develop, manage and maintain these, and other potentially relevant, health informatics standards.

### 3 MEETING LOGISTICS

The table below shows the meeting schedule for some of the larger meeting groups. Most US based meetings have greater than 60 separate working groups and committee meetings.<sup>1</sup>

Meeting	Sun	Mon	Tue	Wed	Thu	Fri
Anatomic Pathology		O				
Architecture Review Board (ArB)	X	X	X	X	X	
Board of Directors			X			
Business Model Task Force Meeting			X			
CCOW				X		
Clinical Decision Support			X	X	X	
Clinical Genomics			X	X	X	
Clinical Interoperability Council			X	X	X	
Clinical Statement					X	
Community Based Collaborative Care		X	X	X		
Education & Marketing		X	X		X	
Electronic Health Records		X	X	X	X	
Electronic Services				X		
Emergency Care		X	X	X	X	
HL7/CEN/ISO/IHTSDO/GS1/CDISC	X					
Health Care Devices		X	X	X	X	X
Implementation / Conformance		X	X	X		
Infrastructure and Messaging			X	X		
International Council	X			X		
Modelling and Methodology	X	X	X	X	X	X
Orders and Observations		X	X	X	X	X
Patient Administration		X	X	X	X	
Patient Care		X	X	X	X	X
Patient Safety		X	X	X	X	
Pharmacy		X	X	X	X	X

<sup>1</sup> 'X' indicates days the Fresh Look Task Forces / Committees / Task Forces met. 'O' indicates emerging areas which might be relevant to Australia for consideration of coverage in future. 'N' indicates a group which has concluded and is no longer running – this work has generally been subsumed into the work of another committee (which is indicated).

Public Health Emergency Response		X	X	X	X	
Regulated clinical research information management		O	O	O	O	
Security		X	X	X	X	
Services Oriented Architecture		X	X	X	X	
Steering Divisions (X 4)		X				
Structured Documents		X	X	X	X	X
Templates					X	X
Terminfo Project (complete – now in Vocabulary)			N			
Tooling			X	X	X	X
Vocabulary		X	X	X	X	X

Tutorials are also offered and these are of great value both to new comers and to older hands to bring them up to date on generic changes made that may not be discussed in their individual committee areas (e.g. vocabulary submission requirements). At this meeting 30 tutorial and 2 certification examinations were held concurrently with 62 working group and task force meetings.

The number of concurrent sessions makes it difficult for a small delegation to effectively follow the issues and to influence change. It is noted that delegates funded by their employer, or individually, to international meetings have no obligation to work with or relate information back to the Australian delegation, though some have done so in the past. It is clearly desirable that there be a cohesive Australian position.

Given the participatory natures of the HL7 committee work, it is vital that Australians are present and participate in the committee work. Intensive work is done in the committees and often 2 or 3 Australian subject matter experts are required to get the Australian requirements into the consensus-based processes. In most cases, beforehand preparation of "Australian Positions" on the matters to be worked on is not effective, as the discussions and views often substantially change during the consensus-building process. Most of the work done in committee is "leading edge" standards development work that often cannot be locally previewed, assessed and commented on beforehand. As a result, the selection process of the funded participants focuses on their expertise and interests as well as their ability to effectively communicate complex technical issues and achieve the desired outcomes for Australia in a collaborative consensus-based committee environment.

As is customary, the Australian participants<sup>2</sup> met on a daily basis to plan and monitor its involvement, identify any additional sessions and/or activities that should be covered and to identify emerging issues - particularly those that are relevant to the Standards Australia IT-014 and/or NEHTA work plans. Australian participants also coordinate their activities through Skype.

<sup>2</sup> This included those Australian attendees who were not funded from the DoHA contract administered by Standards Australia.

## 4 RECOMMENDATIONS ARISING FROM THE MEETING

The principal issues/actions and recommendations identified by the Australian delegation at the May 2011 HL7 Meeting are summarised in this section. The alignment to the IT-014 Committee Structure is also listed.

Topic	Issue / Action / Recommendations for Australia	Recommended for Action by
<p><b>The Business Model Task Force</b></p>	<p>As per previous recommendations, the development of the HL7 business model needs close scrutiny and input from HL7 Australia to ensure that Australia is not disadvantaged by the intellectual property (IP) rights and the pricing proposals.</p> <p><b>Action: Review and extensive input into the proposed business model.</b></p>	<p>IT-014, Standards Australia (SA), HL7 Australia</p>
<p><b>New Affiliate Agreement</b></p>	<p>In alignment with any new business model for HL7, the new affiliate agreement must closely meet the needs of the Australian use of HL7 in the national eHealth initiative.</p> <p><b>Action: Australia must have significant input into the new affiliate agreement specifically to ensure localisations are incorporated appropriately for Australia.</b></p>	<p>HL7Australia, SA</p>
<p><b>National quality (measures) framework (NQF)</b></p>	<p>The NQF119 paper format measures are proposed to be transposed into e-measures. This will require re-tooling (conversion from paper based to electronic) in order to validate the equality of the measures.</p> <p><b>Action: Consideration of the uses, application and equivalency of this to the Australian eHealth environment.</b></p>	<p>IT-014</p>
<p><b>Semantic Health Information Performance and Privacy Standard (SHIPPS)</b></p>	<p>The SHIPPS project will be of use in the Australian environment in highlighting the issues in terms of the increasing use of data for secondary purposes and its relationship to data quality. This will be a significant issue once the PCEHR and related EHR system is Australia is active.</p> <p><b>Action: Progress and outcomes from the project need to be monitored and used to inform development work in data quality. These will also link back into the quality e-measures environment and work.</b></p>	<p>NEHTA, IT-014</p>

<p><b>Risk Assessment Cookbook</b></p>	<p>The Risk Assessment Cookbook is being seen as an across the board tool for HL7 workgroups and as such its potential use and potential modification for the Australia context should be considered.</p> <p><b>Action: Review the Risk Assessment Cookbook for its application to Australia’s development. Inform changes that could be incorporated for HL7 or EHR.</b></p>	<p>NEHTA, IT-014</p>
<p><b>Security and Privacy Ontology Ballot</b></p>	<p>The full ballot for the Security and Privacy Ontology for HL7 will be available in the coming months.</p> <p><b>Action: Allocation of resources (from NEHTA) should be assigned to review this project as its adoption will affect all future work in this area of security and HL7.</b></p>	<p>NEHTA</p>
<p><b>CBCC Confidentiality Codes Project</b></p>	<p>Whilst still at the proposal development stage, the confidentiality code sets developed from this project need to be aligned with any potential use in HL7 formats for Australia.</p> <p><b>Action: Input to development of confidentiality code sets once project is accepted as a work item.</b></p>	<p>NEHTA, IT-014</p>
<p><b>Anatomic Pathology</b></p>	<p><b>Action: Consider whether active Australian oversight of this work is required.</b></p>	<p>IT-014, NEHTA</p>
<p><b>Webinars available</b></p>	<p>Develop method within Australia of circulating availability of webinars (particularly when the time zones suit better, or the material is recorded).</p> <p><b>Action: Heather Grain to inform HL7 Australia and SA of upcoming events and opportunities.</b></p>	<p>HL7 Australia and SA to distribute information on relevant webinars.</p>
<p><b>Development of roles and competencies</b></p>	<p>Australia needs to define the HL7 related jobs where we have significant needs and to identify what we consider the appropriate competencies so that we can influence the priority developments at HL7 international and consider the development of an educational strategy for HL7 in Australia.</p> <p><b>Action: HL7 Australia and Nehta/AHIEC consider this issue.</b></p>	<p>HL7 Australia and AHIEC / Nehta</p>
<p><b>Education Strategy</b></p>	<p>Identify if there is a need for Australian Education strategy</p> <p><b>Action: HL7 Australia considers and potentially develops an education strategy – this could be incorporated into a broader standards education strategy which has been a priority for IT-014 for some time but which has no funding.</b></p>	<p>SA, HL7, NEHTA, DOHA, JSCHIS</p>

<p><b>Australian workshops</b></p>	<p>Possibly covered by an Education Strategy, regular workshops, designed to deliver quantifiable skills (not only to inform) be considered for operation in Australia. This requires understanding of the skill gaps in the community and engagement of relevant educational approach ensuring suitable pedagogy and outcome identification and assessment.</p> <p><b>Action: Consider development of a skill focused education workshop series.</b></p>	<p>HL7 Australia, AHIEC</p>
<p><b>Standards websites</b></p>	<p>There are a number of standards related websites of relevance to the Australian market – e.g. NEHTA, Standards Australia's eHealth site, HL7 Australia, HL7, AIHW data standards pages, etc. Well marked cross links would be useful, to ensure interested parties are aware of the other relevant sources.</p> <p><b>Action: Consider links to relevant websites.</b></p>	<p>Standards Roundtable</p>
<p><b>Terminology and Health Devices</b></p>	<p>The Rosetta Terminology, which captures 11073 terminology and co-constraints used by 20+ vendors in IHE PCD domain, was discussed. This terminology is used for NIST semantic conformance testing over the last 2 years. It is used in OBX-3 and for units (OBX-7). Its coverage is comprehensive coverage – 579 terms, 218 of which are new. All vendors have mapped to or use this terminology directly</p> <p><b>Action: IT-014-06-05 (Diagnostics) to examine Rosetta approach to units of measurement.</b></p> <p><b>Action: Assign this work as a “shadow work item’ to a committee at Standards Australia – possibly IT-014-06-05.</b></p>	<p>SA, IT-014-06-05</p>
<p><b>International Membership and Affiliation Task Force (IMATF)</b></p>	<p><b>Action: Continue to negotiate the Affiliate Agreement through HL7 International Board and International Council approval, in particular supporting the Australian model of localising HL7 specifications through IT-014.</b></p> <p><b>Develop recommendations on HL7 International Membership that preferably strengthen but at a minimum do not result in a weakening of Australia’s ability to influence global standardisation to meet our needs.</b></p>	<p>HL7 Australia</p> <p>HL7 Australia</p>
<p><b>PCEHR Access</b></p>	<p>Consider the relationship and opportunities of the PCEHR support health information needs in times of major disaster. It is appropriate to consider this before such a need arises.</p> <p><b>Action: Nehta to consider.</b></p>	<p>NEHTA</p>

<b>Integrating the Healthcare Enterprise (IHE)</b>	<p>A number of Affiliates noted close collaborations, including formal collaborations in some jurisdictions such as Canada, between HL7, other standards bodies and IHE.</p> <p><b>Action: IT-014, NEHTA, DOHA to note.</b></p>	IT-014, NEHTA, DOHA
<b>Interdependent Registries - Provider and patient Registries</b>	<p><b>Action: Disseminate DSTU when published for information of NEHTA, Medicare and Jurisdictions implementing Provider registries.</b></p>	SA
<b>General</b>	<p><b>Action: There is a need to review the relationship between SOA specifications and other related profiles and standards. E.g. IXS and PIX/PDQ, RLUS, XDS and hData.</b></p>	NEHTA
<b>Template Interchange format project</b>	<p><b>Action: NeHTA to consider engagement with this project so that an outcome consistent with Canada and New Zealand requirements can be reached.</b></p>	NEHTA
<b>Template usage for conformance/ compliance</b>	<p><b>Action: Standards Australia Conformity Assessment taskforce to include the International work on Templates into its work scope. Both Co-chairs of this Committee were at the HL7 meeting.</b></p>	SA
<b>TermInfo</b>	<p>PCEHR and other clinical system implementations should note that this work is seen to be useful and informative, but not practical to implement. Consider Australia's position on Vocabulary sections of Core Principles work.</p> <p><b>Action: NEHTA to note.</b></p>	NEHTA
<b>Vocabulary education</b>	<p><b>Action: Development of an HL7 vocabulary education plan could be leveraged by Australia to develop materials defined as an Australian priority.</b></p>	IT-014, HL7 Australia
<b>Vocabulary conformance</b>	<p>Need to ensure Australian HL7, vendors and NEHTA review the ISO document on conformance and provide comments to the ballot</p> <p><b>Action: Review document at ballot.</b></p>	NEHTA, IT-014-06 members, MSIA
<b>V2 terminology model</b>	<p>Consider if the changes proposed (when finalised) impact Australian HL7 vocabulary – which they are expected to do.</p> <p><b>Action: IT-014-06 to consider the potential impact of these changes and any workload required to manage these changes.</b></p>	IT-014-06

<p><b>CTS2</b></p>	<p>If adopted by Object Management Group (OMG) sites may ‘sign up’ as initial users, which given the opportunity for them to influence initial next stages and modifications.</p> <p><b>Action: NEHTA to consider whether this would be useful to advance Australian needs in the process and the standard.</b></p>	<p>NEHTA</p>
<p><b>National response for natural disasters</b></p>	<p>In light of the comments made by the Japanese delegation after the natural disaster in 2011 and the requirements for post-disaster health information, consideration of these requirements and Australia’s capabilities in this area both now and in the proposed national eHealth system should be made.</p> <p><b>Action: Ensure that post-disaster requirements are captured in current and proposed national eHealth plans</b></p>	<p>IT-014, NEHTA</p>

## 5 FUNDING SOURCE SUMMARY AND AUSTRALIAN ATTENDANCE

15 Australians attended as representatives for the duration of this HL7 meeting, 7 of whom were in the formal 'delegation'. The funding source for these delegate numbers is indicated in the table below. DOHA funded delegates were selected through an independent panel process jointly with NeHTA, DOHA, HL7 Australia and Standards Australia.

DOHA provided funding assistance for the following delegates:

- Heather Grain
- Patricia Williams
- Vince McCauley
- Richard Dixon Hughes
- Hugh Leslie
- Graham Grieve
- David Rowlands

Funding Source	Number	Change from Previous meeting
Full funding by employer: Private	0	0
Full funding by employer: States/Territories or National Initiatives (NeHTA)	5	-21
Funding assistance – DOHA through Standards Australia contract	7	0
Total:	12	-21

There was a team of delegate from NeHTA who attended the HL7 meeting and these NeHTA delegates are listed below:

- Andy Bond
- Sarah Gaunt
- Stephen Chu
- Stephen Royce
- Tina Connell-Clark

The significant difference between numbers of NeHTA members at this meeting compared to the last is due to convenient location of the January 2011 meeting being held in Australia, allowing a large delegation to easily attend, and this meeting being held in the USA.

## 6 AUSTRALIAN LEADERSHIP POSITIONS

The table below lists leadership positions held by Australians at the HL7 meeting in May 2011.

<b>Attendee</b>	<b>Position (held at the meeting)</b>	<b>Funding Source</b>	<b>Work Group or Committee</b>
David Rowlands	Chair	Standards Australia via the DoHA Funding Agreement	HL7 Australia
Grahame Grieve	Co-Chair Invited Member Co-Chair	Standards Australia via the DoHA Funding Agreement	Structured Documents (Developers of CDA) Architectural Review Board Modelling and Methodology Work Group
Heather Grain	Co-Chair	Standards Australia via the DoHA Funding Agreement	Vocabulary
Richard Dixon Hughes	Co-chair Invited Member Invited Member Non-Voting Member Invited Member	Standards Australia via the DoHA Funding Agreement	Advisory Council to the Board of HL7 International EHR WG v2/v3 CDA Strategy Taskforce HL7 International Board of Directors HL7 International Business Plan Task Force
Stephen Chu	Co-chair	Nehta	Patient Care
Andy Bond	Invited Member	Nehta	Architectural Review Board
Klaus Veil	Co-chair Co-chair	Did not attend	Publishing Patient Care

## 7 ABBREVIATIONS

ArB	Architecture Review Board
AHIEC	The Australian Health Informatics Education Council
AIHW	Australian Institute of Health and Welfare
CDA	Clinical Document Architecture
CDS	Clinical Decision Support Workgroup
CIC	Clinical Interoperability Council Workgroup
CBCC	Community Based Collaborative Care Workgroup
DAM	Domain Analysis Model
DCM	Detailed Clinical Models
DTSU	Draft Standard for Trial Use
ECCF	Enterprise Compliance and Conformance Framework
EHR	Electronic Health Record Workgroup
HL7	Health Level 7 International
IC	Implementation/Conformance Workgroup
IHE	Integrating the Healthcare Enterprise
IMATF	International Membership and Affiliation Task Force
InM	Infrastructure and Messaging Workgroup
ITS	Implementable Technology Specifications
MDA	Model Driven Architecture
MnM	Modeling and Methodology Workgroup
MSIA	Medical Software Industry Association
NQF	National quality (measures) framework
O&O	Orders and Observations Workgroup
OMG	Object Management Group
PA	Patient Administration Workgroup
PC	Patient Care Workgroup
PHER	Public Health and Emergency Response Workgroup
PIM	Platform Independent Model
PSM	Platform Specific Model
RIMBAA	RIM Based Application Architecture
RLUS	Retrieve Locate, and Update Service
RM-ODP	Reference Model of Open Distributed Processing

SAIF	Services Aware Interoperability Framework
SDO	Standards Development Organization
SHIPPS	Semantic Health Information Performance and Privacy Standard
SOA	Services Oriented Architecture
T3SD	Technical and Support Services Steering Division
vMR	Virtual Medical Record