



**UNLOCKING THE POWER
OF HEALTH INFORMATION**

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NEWS

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THE OFFICIAL PUBLICATION OF HEALTH LEVEL SEVEN, INC.

Health Level Seven Hosts Pioneering Cross-Continent Dialogue on Standards and Interoperability in Africa at January Working Group Meeting

HL7 hosted a high-level delegation of five Ugandan information and communications technology experts (ICT) at its 2009 kick-off Working Group Meeting in Orlando, Florida, January 11-16, 2009. This effort is a critical first step to increased interoperability information-sharing efforts between HL7 and ICT reform drivers in both Africa and Asia. The Ugandan contingent is led by Eddie Mukooyo, MD, head of the country's Ministry of Health. Uganda has served as an ICT leader since the 2003 enactment of the ICT4D National Policy which pledges the government's support for development of sustainable ICT initiatives that provide quantifiable results for the benefit of all Ugandans. Dr. Mukooyo explained the significance of the HL7 event and its potential impact on Ugandan health ICT initiatives.

"Uganda is a trailblazer in efforts to use ICT for national transformation and the improvement of the public's health. The conversations occurring with HL7 leadership present at the Orlando Working Group meeting are invaluable to our country as we contemplate revolutionary deployment of technology to connect medical personnel and to aid in the transfer of health and drug information across the healthcare system. HL7's event enables us to share Uganda's health ICT story including lessons learned, while getting vital details about the most current standards and interoperability developments worldwide. This knowledge transfer is absolutely critical in building a successful, interoperable health ICT system that works effectively both inside and outside Uganda's borders." Mukooyo adds, "The HL7 meeting also affords Ugandans the valuable opportunity to be



HL7 Chair Ed Hammond, PhD, Eddie Mukooyo, MD, and HL7 CEO Charles Jaffe, MD, PhD

active participants at the standards development table and have our voice be heard."

The shortage of educational resources and lack of direct involvement in healthcare standards development by Global South or developing world leaders was identified as a notable impediment to ICT progress by participants in the 2008 Bellagio Path to Interoperability Conference which was convened by HL7, the World Health Organization and the Rockefeller Foundation. HL7 Chief Executive Officer Charles Jaffe, MD, PhD, observed that, "HL7 - as a direct result of lessons learned at the Path to Interoperability Conference - is now providing on-going support for more hands-on participation by Global South decision-makers from Africa and Asia in standards and interoperability discussions. HL7 also continues to explore cost-effective avenues for distributing standards specifications, implementation guides, educational resources and distance learning modules to those most in need and least able to pay." Jaffe emphasized that these activities support HL7's aim to act as the global resource for healthcare information interoperability and standards harmonization.

Continued on page 3

Update from the CEO

Standards Development Organizations & the American Recovery & Reinvestment Act (ARRA): A new opportunity for collaboration

By Charles Jaffe, MD, PhD, HL7 CEO



Charles Jaffe, MD, PhD

At no time in the two-decade history of HL7 has collaboration been more critical to our success. While we have made significant strides in partnerships, our stakeholders are demanding more from us.

From every perspective, HL7 is in the midst of a transformation. Certainly, the creation of the technical hierarchy, with CTO and Technical Steering Committee

has left an impressive mark. More challenges and more changes are on the way. The opportunities created by the Health Information Technology for Economic and Clinical Health (HITECH) Act within the ARRA legislation will provide impetus for healthcare information technology (HIT) development and deployment.

The opportunities are far-reaching and may well influence the character of IT infrastructure within the US for years to come. The legislation identifies two areas for which funding will be available. In short, these include deployment of electronic health records systems for all American physicians and significant improvement in the Public Health reporting processes and infrastructure.

While the role of HIT has been characterized by President Obama as the “low-hanging fruit”, the value of HIT standards as an important component of healthcare has not been overlooked. Within the Office of the National Coordinator for Healthcare IT (ONC), there will be a new twenty-member Standards Advisory Committee, empowered to recommend standards and to support standards development. These recommendations will be embodied in a report to the Secretary of Health & Human Services by year’s end.

HL7 will be at the forefront of those efforts. We have positioned our organization to help lead the standards harmonization

efforts across the broad spectrum of standards development organizations. We have also collaborated with organizations outside of the standards environment to share these initiatives within the entire clinical domain, including the nursing, pharmacy, research, and physician communities.

In April, HL7 will host a forum for clinicians, which we have called “Bridging the Chasm” and which will be sponsored by the Agency for Healthcare Research and Quality (AHRQ). It will focus on the needs of the caregivers for developing and refining workflow processes, vocabulary and terminology, as well as patient care requirements, such as decision support. The meeting will be devoted to the requirements of the clinical community and will not be about technology. If successful, this conference will begin a process of educating the clinical leadership about the importance of healthcare IT.

Within the HITECH Act, there are opportunities for support of standards development. The HL7 leadership has developed a comprehensive proposal that it has begun to share with the Federal leadership. This plan emphasizes the broad international experience of HL7 and the role that it has played in the important programs in other countries which have lead the way in the enablement of eHealth. Contributions to our proposal from around the world have strengthened the fundamental concepts in this proposal.

In the next few months, we anticipate exciting changes in the direction taken by the healthcare leadership in the US. HL7 will be a part of those plans.

A handwritten signature in black ink that reads "Charles Jaffe". The signature is stylized and cursive.

Charles Jaffe, MD, PhD, HL7 CEO

Letter from the Chair

Exciting Times

By W. Ed Hammond, PhD, FACMI, Chair, HL7



W. Ed Hammond, PhD

After years of being almost invisible in the larger community of healthcare informatics, the use of information technology has become highly visible. A number of events have contributed to this increase in importance of healthcare information technology (HIT), and consequently standards. The rising cost of healthcare in most countries, the national spotlight on the large number of medical errors, quality issues, and an increasing decline in resources for delivering care has created momentum for change. We all suggested, without strong evidence, that computers and the effective use of HIT could solve the problem. However, most people believe that the bottom line for delivering healthcare will increase. There are also many examples of the situation being made worse due to poor design. We fail to understand the problems we are trying to solve, and what is required to solve them.

The National Health Service (NHS) of the United Kingdom initially attracted the world's attention; not so much because of what they were doing, but rather due to the large amount they were spending. The NHS's Connecting for Health became a role model for countries arguing for an equivalent amount of money to solve their healthcare issues. Canada became the next role model, spending less money, but building on what the UK was accomplishing and adopting a slightly different model. Other countries followed, with an increasing amount of money being available to develop a national HIT for healthcare. In the United States, an amount of approximately \$20 billion has been allo-

cated for HIT. How that money will be spent and how effective that spending will be remains to be seen.

What does all of this mean to HL7? As a volunteer organization, HL7 has done what the volunteers wanted to do, and at a leisurely pace. Our work processes were not well defined; projects were not well managed – largely due to limited and interrupted time of volunteers. The international attention surrounding the adoption of interoperable EHRs and the standards required to enable that vision require new thinking on the part of HL7 leadership. We must accept responsibility for the full suite of standards required; we must identify and fill the gaps. We must become more efficient in producing standards, and we must accept the additional work required beyond the creation of a standard. During the course of this year, you may see many changes within HL7, including additional paid staff to support the work of the volunteers as well as professional staff to help develop standards. The price of success is increased responsibility. HL7 will remain a volunteer organization but will incorporate new ways of working. Please help us accommodate change.

W. Ed Hammond, PhD
HL7 Chairman of the Board

Cross-Continent Dialogue *Continued from page 1*

As profound health system challenges persist, national and cross-border healthcare ICT panacea initiatives multiply and move forward on every continent. African nations, in particular, are urgently searching for workable ICT solutions in light of medical personnel shortages of more than 1.7 million care providers, an average life expectancy of only 47 years and more than three million of its citizens perishing annually from HIV/AIDS, malaria and tuberculosis. Efforts in Kenya, Rwanda, Uganda and other African nations are providing sparks of hope and eHealth innovation. For example, electronic health records employed in the harshest environments of Kenya are changing the face of HIV/AIDS treatment and software specially adapted by locally trained experts is enabling E-learning and workforce extension tools to meet specific needs. However, one of the key persistent challenges is the absence of interoperable health systems and consensus on data standards.

W. Ed Hammond, PhD, chair of the HL7 Board and Joint Initiative Council of international standards development organizations said, "There is a clear global ICT imperative now to examine the needs of key stakeholders such as patients, providers, healthcare facilities, ministries of health, districts, technology vendors, donors, and development agencies, to define and understand interoperability obstacles and to articulate what technologies, policies, skills, and leadership are necessary to achieve true interoperability. HL7 will spearhead this movement, shaping and informing international efforts."

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Update from Headquarters

Farewell to Five, and Welcome to Five More

By Mark McDougall, HL7 Executive Director

Farewell to Five Board Members

The January 2009 Working Group Meeting brought five new faces to the HL7 Board of Directors. It also was a time to recognize the many contributions of these five outgoing Board members:

- Chuck Meyer
- Freida Hall
- Liora Alschuler
- Kai Heitmann, MD
- Wes Rishel

After two years at the helm, **Chuck Meyer's** term as Board Chair came to a close at the end of 2007 and his term as the HL7 Vice Chair concluded at the end of 2008. An earlier column of mine included details on many of Chuck's contributions to HL7, such as his work on HL7's Bylaws, Policy and Procedure



Ed Hammond honors outgoing Board member Chuck Meyer for his years of service.

Manual, and the HL7 Governance and Operations Manual. HL7 will reap the benefits of Chuck's contributions for many years to come.

Freida Hall has served in several HL7 leadership positions for well over ten years. Freida chaired various HL7 Committees and Work Groups, and she served two terms as the Secretary of the HL7 Board. She was also a force on the Process Improvement Committee and spearheaded the program for welcom-

ing and supporting first time attendees. Not only was Freida an extremely hard worker, she is also one of the kindest individuals you will ever meet or have



Ed Hammond presents Freida Hall with a plaque for her service on the HL7 Board of Directors.

the pleasure to work beside. If HL7 had an award for recognizing extraordinary kindness among our membership, not only would Freida be the first recipient, but the award would likely be named after her.

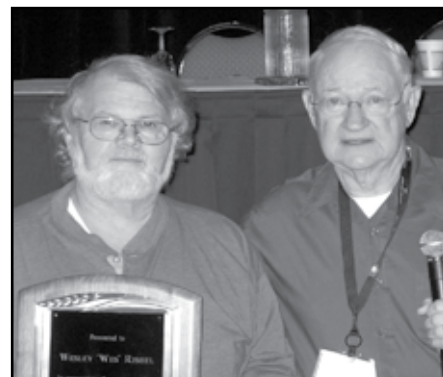
Liora Alschuler served on the HL7 Board for two terms and has been actively involved in HL7 since 1997. In 2001, she received the W. Edward Hammond, PhD Volunteer of the Year Award. Liora was a driving force behind the development and evangelizing of HL7's Clinical Document Architecture



Ed Hammond presents a plaque to outgoing Board member Liora Alschuler

(CDA), and as a Structured Documents Work Group co-chair, has been instrumental in the creation of numerous CDA implementation guides. In addition to these roles, Liora also managed the HL7 demos at HIMSS from 1999-2003 and served as the HL7 liaison to Integrating the Healthcare Enterprise (IHE).

Wes Rishel has been involved with HL7 since its beginning in 1987. Wes was one of HL7's original "twelve disciples." From chairing a SIG/TC to serving as the Chair of the HL7 Board of Directors (2002-2003), Wes has been



Ed Hammond presents outgoing Board member Wes Rishel with a plaque in recognition of his term on the HL7 Board.

involved in every facet of HL7 at every level. In fact, Wes is one of four individuals to receive HL7's golden 20 year member pin.

Kai Heitmann, MD, contributed much to HL7 throughout the years. He not only served as a spokesman for our 30 plus affiliates, but also effectively chaired the full day (~100



person) Affiliates Council meetings and provided entertaining reports to the HL7 membership during our general sessions. Kai was also a wonderful host for our May 2007 Working Group Meeting in Cologne, Germany.

We are extremely grateful for the many contributions made by Chuck, Freida, Liora, Kai and Wes. Likewise, we hope that they will continue to stay involved with HL7 in the years ahead.

Welcome to Five More

We are also pleased to welcome five new members to the HL7 Board of Directors. These individuals bring a tremendous wealth of experience to the HL7 Board and we look forward to working with them. Their names and role in the Board are listed below:

- Robert Dolin, MD, Chair-Elect
- Jill Kaufman, PhD, Secretary
- Stan Huff, MD, Director-at-Large
- Don Mon, PhD, Director-at-Large
- Catherine Chronaki, Affiliate Director

Provided below is the group photo of

the 2009 HL7 Board of Directors. On behalf of the entire HL7 organization, I welcome the new members of the Board and thank each member for their ongoing leadership and contributions to HL7.

January Working Group Meeting

Over 500 attendees participated in our January 2009 Working Group meeting held in Orlando, Florida. This total includes 146 attendees from outside of the USA, which represents an impressive 29% of all attendees. Over 40 HL7 work groups met in Orlando. Attendees also took advantage of 30 tutorials that week.

HL7 Hosts Delegation from Uganda

At the January Working Group meeting, HL7 welcomed a high-level delegation of five Ugandan information and communications technology experts (ICT). This effort is a critical first step to increased interoperability information-sharing efforts between HL7 and ICT reform drivers in Africa. The Ugandan contingent was led by Eddie Mukooyo, MD, head of the country's Ministry of

Health. Uganda has served as an ICT leader since the 2003 enactment of the ICT4D National Policy which pledges the government's support for development of sustainable ICT initiatives that provide quantifiable results for the benefit of all Ugandans. The January meeting allowed them to share the Uganda ICT story as well as get updated on current global standards developments. HL7 was pleased to host this group and looks forward to working with them in the future. For more information, please see the story on page 1.

Ambassador Program Recognition

Also at the January Working Group Meeting, Jill Kaufman, the Board secretary and chair of the Marketing Council, presented pins to four individuals in recognition of their service as HL7 Ambassador at various events. Ambassadors give standardized short presentations at conferences to promote awareness of key HL7 technical work. HL7 Ambassadors receive pins after giving three presentations. These individuals include:



Back row from left: Don Simborg, MD; Jill Kaufman, PhD; Linda Fischetti, RN, MS; Dennis Giokas; Mark McDougall. Middle row from left: Charlie McCay; John Quinn; Stan Huff, MD; Hans Buitendijk; Bob Dolin, MD; W. "Ed" Hammond, PhD. Front from left: Michael van Campen; Ken Lunn, PhD; Don Mon, PhD; Catherine Chronaki; Charles Jaffe, MD, PhD. Not pictured: Sam Brandt, MD

Update from Headquarters, continued



HL7 Ambassadors receiving pins in recognition for their service: Keith Boone; presenter Jill Kaufman, PhD; Grant Wood and Gora Datta. Not pictured: Ken Rubin

- Keith Boone
- Gora Datta
- Ken Rubin
- Grant Wood

Meeting Sponsors

I would like to recognize the following organizations that sponsored key components of our recent January Working Group meeting in Orlando.

- Gordon Point Informatics – Lanyards



Michael van Campen accepts Gordon Point Informatics' plaque from HL7 Chair Ed Hammond PhD, for sponsoring the lanyards at the January Working Group Meeting

- LINKMED – Morning Coffee Breaks

The additional sponsorship support provided by these organizations contributes heavily to HL7's meeting budget and is much appreciated.



Don Lloyd, PhD, receives his service award from HL7 Chair Ed Hammond, PhD

Special Service Award

Don Lloyd, PhD, joined HL7's staff three years ago as the publications manager, assuming responsibility for the

mechanics of our ballot cycles. Most of you are aware that the organization has three ballots each year, with 20+ documents in each cycle. In other words, the scope of Don's responsibilities is substantial. He works countless hours with the co-chairs, publishing facilitators and the publishing committee to ensure that the submissions are correct, complete, and that the ballot opens on time. In addition, he provides technical assistance for voters during the ballot cycle and maintains and makes improvements to our ballot site. Many HL7 members have told us that Don provides exceptional support to HL7's members in these and other duties. Therefore, we were thrilled that the HL7 Board Chair recognized Don with an outstanding service award for his exceptional service to HL7. Please see below for a photo of Don receiving the award from Ed Hammond, PhD.

International Events

HL7 will continue its participation in a number of events being produced around the globe. Highlights of some of the 2009 international meetings are listed below.

- HIMSS AsiaPac09: February 24-27, 2009 in Kuala Lumpur, Malaysia
- 10th International HL7 Interoperability Conference (IHIC): May 8-9, 2009 in Kyoto, Japan
- HL7 Working Group Meeting: May 10-15, 2009 in Kyoto, Japan
- Medical Informatics Europe (MIE) 2009: August 30-September 2, 2009 in Sarajevo, Bosnia and Herzegovina

We hope to see you at these events and/or at other upcoming HL7 meetings.

Best wishes for good health and much happiness to you and your loved ones.

A handwritten signature in black ink, which appears to read "Mark P. McDougall".

HL7 Quality Reporting Work Demo'd at NHIN Forum

By: Crystal Kallem, Director, Practice Leadership, American Health Information Management Association; and Joy Kuhl, Director, Health Information, Alliance for Pediatric Quality



Crystal Kallem



Joy Kuhl

Two federal Nationwide Health Information Network awardees used HL7 quality reporting work late last year as they demonstrated the ONC Quality Use Case at the NHIN Public Forum in Washington DC. The work originated in 2007 when, with support from the Alliance for Pediatric Quality, a collaborative of healthcare provider organizations and clinicians worked with the HL7 Child Health Work Group to explore and validate the feasibility of using HL7's Clinical Document Architecture (CDA) for electronic quality measure reports. Last year, with sup-

port from the Child Health Corporation of America and MedAllies, and participation from numerous contributors, the work was expanded to support three levels of quality data exchange and reporting: from patient-level to population-level. The work will soon be published as an HL7 Draft Standard for Trial Use (DSTU).

Why Data Standards for Quality Reporting?

Healthcare institutions routinely collect and report performance measure data to improve the quality of care provided to patients. Current data collection and reporting activities rely upon a variety of mechanisms that range from structured paper to electronic data entry formats – usually derived from claims-based data sets or manual data abstraction. The project participants and supporters believe that having an EHR-compatible standard for reporting quality data across vendors and disparate health information technology systems will facilitate participation in performance improvement efforts by decreasing the collection and reporting burden for providers and their organizations and improving the quality of data used for measurement.

HL7 Data Standard for Quality Reporting: QRDA

The HL7 Quality Reporting Document Architecture (QRDA) DSTU includes a technical implementation guide for exchanging patient-level quality data and reports. It also provides a framework for the exchange of patient-level quality assessments and population-level quality data and reports. QRDA is interoperable with vendor certification require-

ments from the Certification Commission for Healthcare Information Technology (CCHIT) and with requirements from the Healthcare Information Technology Standards Panel (HITSP) through use of Continuity of Care Document (CCD) templates.

QRDA Participants and Supporters

Participants and supporters include representatives from the Alliance for Pediatric Quality, Alschuler Associates, American College of Physicians, American Health Information Management Association, Child Health Corporation of America, The Collaboration for Performance Measure Integration with EHR Systems, HL7 Child Health and Structured Documents Work Groups, Integrating the Healthcare Enterprise, Iowa Foundation for Medical Care, MedAllies and others.

NHIN Trial Implementation awardees that demonstrated the use case at the NHIN Public Forum include Indiana Health Information Exchange, Long Beach Network for Health and New York eHealth Collaborative.

For more information, please contact Crystal Kallem at crystal.kallem@ahima.org or (312) 233-1537 or Joy Kuhl at joy.kuhl@chca.com or (703) 842-5311.

News from the PMO

By Dave Hamill, Director, HL7 Project Management Office

Project Scope Statement – 2009 Version

In January, the HL7 PMO and Project Services Work Group released an updated Project Scope Statement template based on feedback and suggestions from HL7 Project Facilitators, Work Groups and the Technical Steering Committee. An FAQ (Frequently Asked Questions) section was inserted along with an area to capture the project's success criteria, a reference to Roadmap Strategies, and the ability to associate a project with an implementation guide or public document.

Enhancement work continues on the template and an updated 2009 version will be released with the ability to identify backwards compatibility, the project's business case and associate target dates with working group meetings.

Project Approval Process Additions

Work is underway to have the Project Approval Process encompass projects origi-

nating from Board appointed Work Groups, TSC sponsored projects, revised Project Scope Statements, and projects that reaffirm a standard. Furthermore, information regarding the specific work necessary to accomplish each approval step and the person responsible for conducting that work will be added.

Project Cleanup

The PMO, Steering Division Project Facilitators and volunteers from the Project Services Work Group are working hard on a 'project clean-up' effort. We're proud to say we have more than 200 projects registered in Project Insight. It's now time to take the next step and clean up the project inventory so that we have the most accurate information representing the work going on by the membership. The first step is to have work groups identify which of their projects are active, on hold, or need to be closed. For the active projects, the team will gather updates regarding the project's target date, product focus, objective, deliverables, ballot strategy, facilitator, roadmap strategy, success criteria, etc.

Project Insight/Project Management Presentations Will Continue at the May Working Group Meeting in Kyoto and Beyond!

The PMO will again provide free tutorials at the Kyoto Working Group Meeting in May. The sessions, targeted for co-chairs, steering division representatives and HL7 project facilitators, will demonstrate Project Insight, HL7's primary project repository, as well as review HL7 project management processes and methodologies. Sessions are planned for Q3 Sunday and Q3 Thursday.

Additionally, each month, the PMO schedules a webinar of the tutorial. You can also have the PMO present a webinar of the tutorial at one of your work group's conference calls. Contact the PMO at pmo@HL7.org for more details.



Dave Hamill



Chuck Meyer

Governance and Operations Column:

But will it fly? Why HL7 creates Draft Standards

By Chuck Meyer, Governance and Operations Committee Member

Designing and developing products, be they consumer goods, an aircraft, or standards, is a fairly well defined process. Once you've established the need for the proposed product or standard, you bring together a group of knowledgeable, interested people who apply their training and experience to create a design. You walk through the design to ensure yourself, or your team, that it will get the job done. Then you turn that design over to one or more technicians to create a prototype for testing. Even though you may have engaged some of the most intelligent people in the world to design your standard, in much the same manner as if you were creating an airplane, you still have to prove that it will fly before you can introduce it to the world with the hope that everyone will want it and will use it.

HL7 has chosen to take the approach of creating Draft Standards as our design vehicle. We then subject the Draft Standard to a review ballot, our form of walk through, that gives those outside the design team an opportunity to review and comment on the proposed standard. Often the review ballot will produce valid improvements to the Draft Standard or recommendations, which although well intentioned and thought out, may not achieve the consensus of the design team necessary for adoption. Keep in mind that a review ballot is not subject to the stringent requirements for reconciliation required of a normative ballot. The intent is to ensure that the design of the Draft Standard does not contain any obvious faults or errors either of omission, commission, or oversight.

Typically the review will take only a single cycle; although should it result in identifying a substantive issue, the design team or responsible work group within HL7 is well within its rights to submit the revised Draft Standard to another review ballot. The work group also has the option of simply incorporating the revision and seeking approval to move on to the test or prototype stage if the review ballot was successful even though a substantive issue was identified. Remember, the intent of a second review is more to validate that the change was applied properly than to seek approval for any negative votes submitted during the first review.

The rationale for this is simple; the Draft Standard will be released for a trial use period during which it will be subjected to actual implementation. In some cases, this implementation will be in what might be considered a laboratory test between two controlled environments under the control of a single organization. In other situations, the prototype implementation may occur between disparate applications owned by separate organizations or

may be provided as a beta or test application by a vendor. In any case, the intent of the trial use period is to prove that the Draft Standard will fly and if not, what it will take to make it fly. The comments and experience gathered during the trial use period bring the Draft Standard to final form and provide the basis for the content of the normative ballot.

The responsible work group has significant leeway in how long it wishes to make the trial use period. Considerations might include the importance of timeliness to completion of an approved standard. While the trial use period is intended to prove the viability of the Draft Standard, before the standard can be "rolled out" as an American National Standard, it must be approved by a normative ballot and be presented to the American National Standards Institute (ANSI) for adoption. Given the need for a follow on normative ballot, the Governance and Operations Manual (GOM) suggests that the trial use period be no more than one year long with a plan to complete the normative ballot process in a year. Optimally a standard should be able to move from design to accreditation in two years; although it may well be accomplished in a shorter time with sufficient diligence and effort.

HL7 has not overlooked the commitment that comes with providing the implementation prototype of a Draft Standard. Given that the prototype represents proof of concept, implementation of Draft Standards are considered viable and "supported" by the Draft Standard through the normative ballot process and for up to six months following the publication of the approved American National Standard resulting from the Draft. At that point the implementations of the Draft Standard should be upgraded to compliance with the published American National Standard. Hopefully, this will not require a significant effort given that the approved standard was derived from the prototype implementations.

Although standards maintenance and reaction to mandated standards requirements may not lend themselves to the development of Draft Standards and their trial use, the process HL7 has adopted is both viable and efficient for creating our world-class informatics standards. Recent comments have indicated some confusion over certain aspects of the Draft Standard for Trial Use (DSTU). We hope that this article and the concurrent proposed revisions to GOM §13.02 undertaken by the Governance and Operations Committee will resolve any issues.

Modeling CDA with Standards-Based Tools

By Dave Carlson, Project Lead, Open Health Tools (OHT), UML Modeling Project;
Rich Rogers, Co-Chair, HL7 SOA Work Group, and IBM OHT board member;
and Sarah Knoop and John Timm, IBM Healthcare Systems Research



Dave Carlson

The Clinical Document Architecture (CDA) defines a general document structure for exchanging clinical information. The CDA information model is specified as a restriction of the HL7's Reference Information Model (RIM), although most designers and users work with the CDA XML schemas. CDA applications are often based on an implementation guide that defines a standard document structure using templates, usually contained within CDA document sections. One of the most widely used CDA implementation guides is the Continuity of Care Document (CCD), which is composed of more than 50 templates.

The tools include UML profile extensions with stereotypes for HL7 metadata and modeling style, plus XML schema generation for HL7 message models.

A new HL7 project has been proposed within the Structured Documents Work Group that will develop the approach and tooling requirements for specifying CDA templates and implementation guides using the Unified Modeling Language (UML). UML is a widely adopted standard for modeling software systems (www.uml.org). There is a thriving ecosystem of users, educational resources, and open source and commercial tools that support UML. The UML is often used in combination with the Object Constraint Language (OCL) that is capable of specifying semantic constraints such as those used in CDA templates.

This HL7 project will provide the requirements and analysis for new tools developed within an Open Health Tools (OHT) project, Modeling Tools for Healthcare (modeling-mdt.projects.open-healthtools.org). Open Health Tools is an organization with a mission to provide open source software for healthcare interoperability. HL7 is a member of the board of Open Health Tools.

This OHT modeling tools project was formed in April 2008 to build healthcare tools that are based on industry standard modeling languages, such as UML, OCL, and the Web Ontology Language (OWL). The tools include UML profile extensions with stereotypes for HL7 metadata and modeling style, plus XML schema generation for HL7 message models. We have formed a new OHT modeling subproject that is dedicated to supporting the creation and implementation of CDA implementation guides using UML models. Working together, we anticipate that three distinct groups in the user community will benefit from our project's tools: template authors, instance creators, and tool and application developers.

New CDA templates and implementation guides are authored by the HL7 Structured Documents Working Group, and may be further constrained by the Health Information Technology Standards Panel (HITSP) in the US Realm (e.g. C 32) and Integrating the Healthcare Enterprise (IHE), as well as by other organizations that need a well-defined clinical document structure for exchanging specific clinical content. It must be possible to validate that the templates are correctly defined as constraints on the CDA model or on a higher-level template. For example, the HITSP C 32 guide is a restriction of the CCD, which is a restriction of the CDA, which is a restriction of the RIM.

A second group of tool users are those who create high-quality CDA document instances. All CDA instances are XML documents that are governed by the general CDA schemas. However, most instances also must be valid with respect to all template constraints specified in the implementation guide that describes each class of instances. CDA modeling tools may be used in the development of graphical editors that are specialized for a particular implementation guide, such as the CCD. Or instances may be created by application developers as part of exporting clinical information from electronic health record systems. We expect that our modeling tools will enable generation of robust application programming utilities for automated processing of CDA instances.

A Breakthrough in Family Health History Information Exchange

By Amnon Shabo (Shvo), PhD, Co-Chair & Facilitator, Clinical Genomics Work Group; Co-Editor, CDA R2 & CCD; IBM Research Lab in Haifa

Kevin S. Hughes, MD, FACS, Co-Chair & Facilitator, Clinical Genomics Work Group; Surgical Director, Breast Screening and Co-Director, Avon Comprehensive Breast Evaluation Center, Massachusetts General Hospital, Partners Healthcare

W. Gregory Feero, MD, PhD, Chief, Genomic Healthcare Branch, National Human Genome Research Institute National Institutes of Health



Amnon Shabo, PhD



Kevin S. Hughes, PhD



W. Gregory Feero, MD, PhD

Summary

The domain of family health history is a challenging test case for healthcare information technologies as it requires the convergence of EHR, PHR and Genomics in a way that enables clinical decision support applications to run effectively, in particular when it comes to prevention and early detection of hereditary diseases. A breakthrough in EHR-PHR communication of family history data has been achieved: the new Surgeon General's web tool for family history, My Family Health Portrait, has adopted the HL7 Version 3 Pedigree model, and can communicate with professional tools compliant with HL7, such as Mass General's HughesRiskApps.

The HL7 Version 3 Pedigree specification was approved as a normative ANSI standard in 2007 and is now being balloted in ISO as well. The Health Information Technology Standards Panel (HITSP) has recently selected the Pedigree specification as the standard method of communication between EHR systems and decision support applications.

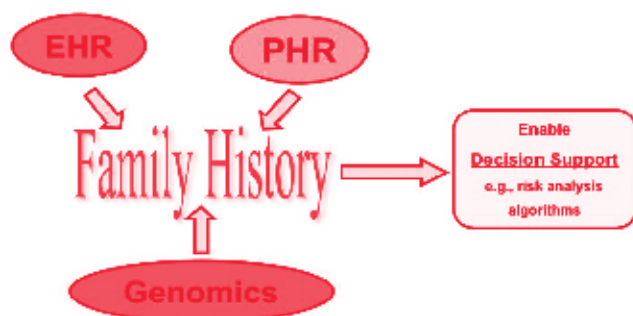


Figure 1

The Use Case

In the age of personalized medicine, it is critical that Electronic Health Records (EHRs) be able to store and share a complete family history, with sufficient detail that it can be used for Clinical decision Support (CDS), and drawing pedigrees (Please see Figure 1). This will allow clinicians to better identify patients at risk for hereditary diseases, and to better manage those patients.

To this end, the American Health Information Community (AHIC) has developed a core data set for family history which every EHR vendor should adopt. However, the presence of these data elements in the EHR in the absence of tools that can help the clinician better interpret the level of risk falls far short of the

promise of the computer age. Clinicians need to see the family history graphically, in a format known as a pedigree that can show family relationships, bloodlines, and modes of transmission within a family. In addition, clinicians need to be able to run computer algorithms that can predict the risk of disease and calculate the likelihood of carrying a mutation in a major susceptibility gene.

As it is highly unlikely that upwards of 10 separate EHR vendors can each independently create high quality tools of this type, AHIC has suggested that the EHR act as a repository of data, and that external plug-in tools be allowed to interact with that data to run analyses, draw pedigrees, and thus enhance quality of care. The scenario AHIC describes has been a driving force behind the Pedigree standard developed by the HL7 Clinical Genomics Work Group (CGWG). It is obvious that an HL7 message is the ideal intermediary between the EHR and this external CDS aid. One can envision data from an EHR being packed as the HL7 Pedigree message and sent to this external aid. The clinician is shown a pedigree and the results of the risk calculations, significantly improving his/her ability to make the right clinical decision. The results of the analysis are then packaged in the returning HL7 Pedigree message and deposited in the EHR.

The beauty of this scenario is that a single CDS system can now be implemented in any number of EHRs, markedly increasing the pace of improvement, to the benefit of our patients.

The HL7 CGWG has worked diligently to bring this vision to fruition. A robust model was created and approved by the HL7 membership and then approved by ANSI. HITSP has also recognized the HL7 Pedigree standard as the only message usable for genetic CDS. The model has been tested at multiple hospitals using a program called HughesRiskApps developed by one of the standard co-editors (Dr. Kevin Hughes) along with Sherwood Hughes, both at the Massachusetts General Hospital. HL7 translators for this message were created by John Sharko and Brian Drohan, and tested across multiple software packages used in cancer genetics (CAGENE, Progeny, My Family Health Portrait Version 1, HughesRiskApps). Please refer to Figure 2.

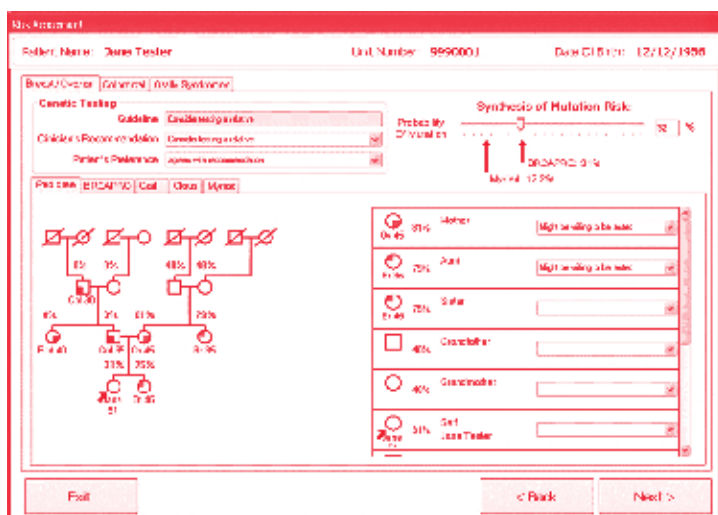


Figure 2

A breakthrough occurred when the Surgeon General decided to upgrade his website for collecting family history (My Family Health Portrait-See Figure 3). Understanding the importance of interoperability, he directed that the website, used by patients in their home, be modified in order that the data entered can be exported in the format of the HL7 Pedigree standard. Thus, any EHR that can collect and store the AHIC family history core data set, and is HL7 compatible, can import data entered at home by patients through My Family Health Portrait.

While no vendor yet has this capability, the Indian Health Service and the Veterans Administration are both adopting compatible approaches. It is hoped that other EHRs will follow soon. At the recent HL7 meeting in Orlando, the interoperability of My Family Health Portrait and HughesRiskApps was demonstrated by W. Gregory Feero, MD, PhD of the National Human Genome Research Institute of the NIH, Kevin Hughes, MD of

Massachusetts General Hospital and Amnon Shabo, PhD of IBM Research, Haifa. Data entered into My Family Health Portrait was saved in the HL7 Pedigree format. The HL7 message was imported into HughesRiskApps where it was used to draw a pedigree and was analyzed using several risk algorithms for breast cancer (BRCAPro, Myriad Model, Claus, and Gail) and a prototype algorithm used to identify a variety of other cancer syndromes. The data was then edited, updated, and used to draft letters to the patient and her physician describing the suggested care plan. The demonstration clearly showed the potential of the computer to improve clinical practice, and improve quality of care, while simultaneously decreasing the workload of the clinician.

Overall, we feel strongly that EHRs will help us to leverage the power of genetics to improve the care of patients. We seek vendors who share this vision to adopt the HL7 Pedigree standard and to bring their family history sections up to the AHIC requirements. Those interested in adopting this approach can contact Kevin Hughes at kshughes@partners.org or Amnon Shabo at shabo@il.ibm.com.



Figure 3

Co-Chair Election Results from the January Working Group Meeting

Congratulations to the following individuals who were elected as co-chairs at the January Working Group Meeting in Lake Buena Vista, FL.

- Anatomic Pathology – Victor Brodsky
- Child Health – David Classen and Joy Kuhl
- Clinical Genomics – Kevin Hughes and Mollie Ullman-Cullere
- Clinical Interoperability Council – Steve Bentley
- Clinical Statement – Hans Buitendijk, Rik Smithies, and Patrick Loyd
- Electronic Health Records – Don Mon and John Ritter
- Generation of Anesthesia – Alan Nicol
- Modeling & Methodology – Lloyd McKenzie
- Orders & Observations – Hans Buitendijk, Rob Hausam, Austin Kreisler and Patrick Loyd
- Patient Safety – Ali Rashidee
- Process Improvement Committee – June Rosploch
- Regulated Clinical Research Information Management – Ed Helton and David Iberson-Hurst
- Structured Documents – Keith Boone
- Vocabulary – Russ Hamm

A Fruitful Partnership – What the OMG Relationship Means to HL7 Members

By Richard Mark Soley, PhD, Chief Executive Officer, Object Management Group, Inc.; and
Ken Rubin, Chair, OMG Healthcare Domain Task Force; Co-Chair, HL7 SOA Work Group



Richard Mark Soley, PhD



Ken Rubin

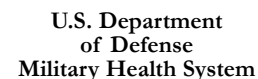
For many years, HL7 has differentiated itself within the healthcare standards community as a driving force and a leader establishing standards to promote the interoperability of health information across the industry. The Object Management Group (OMG) has a similar long-standing tradition. Founded twenty years ago, the OMG is a not-for-profit computer industry consortium focused on establishing standards in support of the platforms and vertical industries represented across its membership. Besides creating, owning and maintaining broad standards for modeling, middle-ware & embedded systems, most of OMG's work today is focused on modeling business processes in vertical markets like financial services, manufacturing, military communications, and health-care. The partnership of HL7's unparalleled success and depth of knowledge in healthcare, and OMG's similar long success in modeling business processes, makes both organizations stronger and will lead to very broad adoption of the results of this Healthcare

Services Specification Project (HSSP).

HL7 and the OMG have agreements between the Boards of Directors of both organizations, offering rights and privileges to members of either organization in the interest of fostering collaboration. This article is focused on clarifying what OMG is and what OMG collaboration means to the HL7 community.

- HL7 Members can attend OMG events at OMG member pricing. (Simply indicate your HL7 membership when signing up for events.)
- HL7 Members can receive access to OMG "Members-only" website access upon request.

HL7 Benefactors



- John Quinn, HL7's CTO, is formally representing HL7's interests in OMG Technology Adoption process (in the OMG Domain Technology Committee –the OMG equivalent of the TSC).
- Corporate-level collaborations are beginning. For instance, a monthly recurring call between CEOs and senior leadership has begun, and discussions are commencing about co-locating meetings to share costs and support further interaction between the groups.
- OMG and HL7 have been actively collaborating via the HL7 SOA Work Group under the Healthcare Services Specification Project (HSSP) since its inception.
- In addition to healthcare, OMG has work groups in Manufacturing, Aerospace, Finance, Green Computing, and so on. This creates opportunities for cross-pollination of ideas between and other industries.

Among the most notable and successful collaborations between HL7 and the OMG, the groups are again hosting a “SOA in Healthcare” conference building upon the success of last year's event. We believe that this has been tremendously successful because of the collaboration, and are looking forward to another opportunity to demonstrate our collective leadership in positively impacting the industry.

On behalf of the OMG, our membership, and our staff, I look forward to continued interactions with the HL7 community. I had the pleasure of joining you in Orlando at your last Working Group Meeting, and will see you in Kyoto. If there is anything personally I can do to help HL7-OMG relations, do not hesitate to ask. You can contact me at soley@omg.org or Ken Rubin at ken.rubin@eds.com.

SOA in Healthcare: Value in a Time of Change

Presented by OMG, HL7 and SOA Consortium

June 2-4, 2009 in Chicago, IL, USA

Service Oriented Architecture (SOA) adoption is viewed as a key enabler for the 21st century enterprise due to increased opportunity for productivity and integration, and requires significant changes for both business and IT executives. The goal of the conference, now in its second year, is to raise the dialogue about SOA and its use in healthcare, with a focus on its role as a transformation agent to add organizational value.

The focus of the SOA in Healthcare conference is to convey real-world experiences, assembling a community of peers to exchange ideas and discuss what has worked, what did not work, and review best practices for attendees to benefit from lessons learned faced in real implementations. Not a “tech industry” event, this conference is exclusively healthcare focused, and will highlight the challenges unique to healthcare organizations and emphasize cross-industry solutions that are viable within the healthcare domain.

A wide cross-section of the health industry will participate, including

healthcare providers, payers, public health organizations and vendors from both the public and private sector. In addition, a select number of international invitees will be presenting.

The conference will be experientially focused; with speakers bringing their personal and organizational experiences to what will be a presentation and discussion-oriented forum. The event will host three tracks:

- An “Executive Summit” targeting key decision-makers, CxO's, and technical leads
- A “Business Track” focused on the business rationale behind SOA, and organizational change to support it
- A “Technical Track” addressing how to succeed with SOA in a health setting

Topic areas will include:

- SOA and Business Value (such as Return-on-Investment, Enterprise Architecture, business-IT alignment, agility, etc.)

- Organizational Adoption and SOA use (such as SOA planning, program development, planning, business process management, stakeholder involvement, governance, oversight, etc.)
- Architecture (such as Enterprise Architecture, Integration Architecture, Product Architecture, Interoperability, and Design)
- Integration, Interoperability, and Legacy Enablement (such as legacy integration, refactoring, off-the-shelf package integration, custom software development, product development)

OMG, HL7 and the SOA Consortium invite everyone with an interest in SOA in healthcare to attend. This workshop is sponsored by Gold Sponsor EDS, an HP company; Silver Sponsors Appian and Intel. The early-bird registration discount is available until May 11, 2009. The registration cut-off for the Hyatt Regency O'Hare is May 11, 2009. Hotel and registration information is available at <http://www.omg.org/HL7-news>.

Congratulations** to the following people who passed the **HL7 Certification Exam

Certified HL7 V2.5 Chapter 2 Control Specialist

November 5, 2008

Venukmar Bachuwala
Heather M. Capel
Lee Jason Curley
Eric S. Frederickson
Preethi Jayasimhan
McKensie R. Kish
Jenny K. Morris
Gary P. Munger
Todd Reynolds
Amy R. Workman
Srinivas Velamuri
Arron J. Vickery

HL7 India

October 18, 2008

Kishore Kumar Jayaraman
Swathi Konduru
Brammaiah R. Prabu
Rajib Saha
Anjaneya Reddy Sanampudi
Bhavani Vanka
Malaimagal Vedachalam

November 29, 2008

Ranjeev Appukuttan
Manjari Bhadra
Gargi Biswas
Vidhyalakshmi Bose
Kavinmozhi Duraierasu
Venugopal Gondu
Preeti B. Jabbal
Chiranth H Kiran Kumar
Revathy Kumarasamy
Karthik K. Manjunath
Yogananda Nanjundaiah
Baskar Nallasivam
Ravi Chandra Jain
Phaneendrakumar
Charan Y. Puttaswamy

Revathi H. Raghunath
Chowdhury Rezaur Rahman
Parasmani Sethi
Prabhdeep Singh
Balaji Sukumaran
Bhushan Prasad Voovayya
Ritesh Yadava

December 6, 2008

Nisha Aggarwal
Parag Katare
Vishal Ranjan
Hemant Kumar Singh
Jagjeet Singh
Rakesh Kumar Singh
Shelly Srivastava

December 20, 2008

Krishnarjun Halder
Vijayalaxmi G. Patil
Sajid Salik
Praveen Thaku

HL7 Korea

December 20, 2008

Kichul Chung

HL7 Spain

December 18, 2008

Alfonso Tienda Braulio
Francisco Javier Arnau Roig
M^a José Moril López
Víctor Manuel Agulló Boix
Iago Lozano Núñez

Certified HL7 V2.5/2.6 Chapter 2 Control Specialist

January 15, 2009

Michael A. Alexander

Amarnath Reddy Alla Jaya
Kevin J. Carlin
Peter Gilbert
Dawn D. Harrison
Arlene L. Hopkins
Kim Humby
Anthony Julian

HL7 Spain

January 29, 2009

Diego J. Domínguez Carralero
Juan Pedro Pereira
Alfonso del Río Sánchez
Javier Corbín Sánchez
José Colomer Gómez
José Vergara Pérez
Joan Pau García Úbeda

Certified HL7 CDA Specialist

November 5, 2008

Chris Anderson

January 15, 2009

Rita A. Altamore
Ariel Guevara
Monica J. Haddox
Srinivas Velamuri
Michael van der Zel

HL7 Korea

December 1, 2008

Soon Hwa Han
Woon-Young Jung
Soon-Jeong Koh
Bina Lee
Sung Young Oh
Seung-Won Park

HL7 Spain

January 29, 2009

Álvaro Domínguez Bragado
Francisco Jesús Domingo Pastor
Antonio Jesús Dorado Ruiz
Ignacio Esteve Arrien
Álvaro Martínez Romero
Francisco Matas Albaladejo
Ma José Moril López
Pablo Francisco Viñas Nosedá
José Luis Bayo Monton
Vanesa Del Casar Huet
Sandra Leal González
David Moner Cano

Certified HL7 Version 3 RIM Specialist

November 5, 2008

Kevin M. Coonan
Tushar S. Kale

January 15, 2009

Dragana Lojpur

HL7 Canada

January 29, 2009

James E. Agnew
Duane R. Bender
Vasile Boitor
Claudiu Grecu
Rick Lambert
Alvaro Lemos
Sergei Maxunov
Ionut Mitrache
Jose Nunes
Tran H. Truong
Norman A. Ramirez

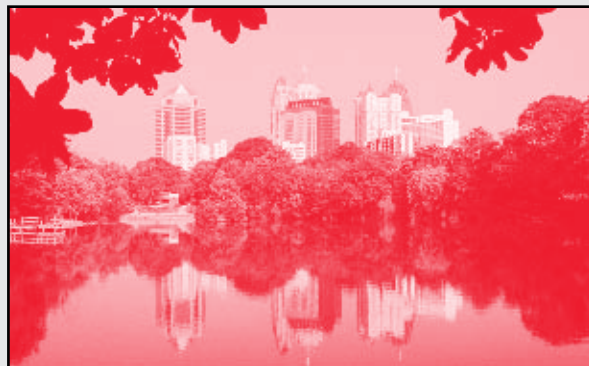
UPCOMING WORKING GROUP MEETINGS



May 10 – 15, 2009

Working Group Meeting

Kyoto International Conference Center
Kyoto, Japan



September 20 – 25, 2009

23rd Annual Plenary & Working Group Meeting

Sheraton Atlanta Hotel
Atlanta, GA



January 17 – 22, 2010

Working Group Meeting

Pointe Hilton at Squaw Peak Resort
Phoenix, AZ



May 16 – 21, 2010

Working Group Meeting

Windsor Barra Hotel & Congressos
Rio de Janeiro, Brazil

PLEASE BOOK YOUR ROOM AT THE HL7 MEETING HOTEL

HL7 urges all meeting attendees to secure their hotel reservations at the HL7 Working Group Meeting Host Hotel. In order to secure the required meeting space, HL7 has a contractual obligation to fill our sleeping room block. If you make reservations at a different hotel, HL7 risks falling short on our obligation and will incur additional costs in the form of penalties. Should this occur, HL7 will likely be forced to pass these costs on to our attendees through increased meeting registration fees.

Thank you for your cooperation!

HL7 EDUCATIONAL SUMMITS

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TODAY

that you can apply

TOMORROW

What is an Educational Summit?

The HL7 Educational Summit is a two-day schedule of tutorials focused on HL7-specific topics such as Version 2, Version 3 and Clinical Document Architecture. Educational sessions also cover general interest industry topics such as HIPAA Claims Attachments.

UPCOMING EDUCATIONAL SUMMITS



July 14 – 16, 2009
Doubletree Guest Suites
Boston, Massachusetts

November 10 – 12, 2009
Hilton Suites, Magnificent Mile
Chicago, Illinois

Why Should I Attend?

This is an invaluable educational opportunity for the healthcare IT community as it strives for greater interoperability among healthcare information systems. Our classes offer a wealth of information designed to benefit a wide range of HL7 users, from beginner to advanced.

Among the benefits of attending the HL7 Educational Summit are:

- **Efficiency**
Concentrated two-day format provides maximum training with minimal time investment
- **Learn Today, Apply Tomorrow**
A focused curriculum featuring real-world HL7 knowledge that you can apply immediately
- **Quality Education**
High-quality training in a “small classroom” setting promotes more one-on-one learning
- **Superior Instructors**
You’ll get HL7 training straight from the source: Our instructors. They are not only HL7 experts; they are the people who help produce the HL7 standards
- **Certification Testing**
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- **Economical**
A more economical alternative for companies who want the benefits of HL7’s on-site training but have fewer employees to train

Upcoming International Events

10th International HL7 Interoperability Conference

Kyoto, Japan

May 8 – 9, 2009

For more information, please visit
<http://www.hl7.jp/ihic2009/>

23rd Annual Plenary & Working Group Meeting

Atlanta, GA, USA

September 20 – 25, 2009

More information will be available on the HL7 website in the coming months. Please visit <http://www.HL7.org>

May Working Group Meeting

Kyoto, Japan

May 10 – 15, 2009

For more information, please visit
<http://www.regonline.com/HL7WGM052009>

8th Annual Asia-Pacific HL7 Conference

Taipei, Taiwan

October 2 – 4, 2009

For more information, please visit
www.HL7.org.tw

MIE 2009—Medical informatics Europe 2009 Conference and Exhibition

Sarajevo, Bosnia and Herzegovina

August 30 – September 2, 2009

For more information, please visit
<http://www.mie2009.org/>

eHealth 2009

Istanbul, Turkey

September 23 – 25, 2009

For more information, please visit
<http://www.electronic-health.org/cfp.shtml>

31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society

Minneapolis, MN, USA

September 2 – 6, 2009

For more information, please visit
<http://www.embc09.org/>

eChallenges e-2009 Conference

Istanbul, Turkey

October 21 – 23, 2009

For more information, please visit
<http://www.echallenges.org/e2009/>



Free Web-based HL7 Version 2.x Message Testing: Australian Healthcare Messaging Laboratory

By Jane Gilbert, Director of the AHML and Co-Chair of the Implementation and Conformance Work Group;
and Klaus Veil, Chair of HL7 Australia



The Australian Healthcare Messaging Laboratory (AHML) website at www.AHML.com.au provides online instant HL7 message testing to “diagnose” conformance with the HL7 Version

2.x (V2.x) standards as well as a number of other HL7 message specifications and profiles. This free service provides a means of easily testing messages for format and structure, and content and business rules in compliance with the HL7 V2.x standards.

The online HL7 Message testing process at www.AHML.com.au is simple and fast: Upload an HL7 V2.x message and seconds later you can view the message diagnostics report. The generated reports show three severity levels of non-compliance: alerts, warnings and errors. Detailed explanations of the reasons for non-compliance (with references to the relevant sections in the V2.x standards) are provided to assist in quickly fixing the problems. Please see Figure 1 for an example of a generated report.

The Australian Healthcare Messaging Laboratory is part of the University of Ballarat near Melbourne and was founded in 2001. Its mission is to promote and facilitate the adoption of compliant international healthcare messaging standards. AHML has developed a sophisticated and unique Message Testing Engine (MTE)

that allows web-based testing as well as offline bulk message evaluation. This feature is used by AHML staff to perform formal compliance testing and certification.

AHML holds accreditation with the National Association of Testing Authorities (NATA) to ISO/IEC 17025, an outcome that provides software developers and purchasers with the assurance that AHML supplies accurate and reliable testing results. AHML's accreditation is also recognized world-wide through NATA's mutual recognition arrangements with many International Accreditation Laboratories.

AHML also offers vendors and developers the formal certification of their product or interface to an HL7 V2.x standard. A controlled message sampling process is followed by exhaustive testing of a statistically relevant batch of messages. The results of the testing are then reviewed and a Certificate of Compliance is issued if the messages are error-free. The compliance certification is used by purchasers to identify software that safely handles electronic clinical messages.

The AHML message testing facilities are useful for organizations and individuals involved in the development and implementation of healthcare software with HL7 V2.x interfaces. AHML has more than 470 users from 38 countries (Please see Figure 2 for a breakdown of users by country).

- Software industry developers requiring conformance to recognized standards of message functionality in their products
- Government departments and agencies developing software systems that communicate with other parties in the health care system
- Private and public healthcare organizations requiring independent verification that messaging implementations conform to specified standards

AHML recently appointed Jane Gilbert as its new director. Prior to assuming this position, Jane worked as a senior software engineer for the organization. She has been actively involved

Summary of Message Analysis			
Message Type: ORU	Event Code: R01		Message Length: 9,1
Message Description: ORU^R01 - Unsolicited transmission of an observation message			
WARNING: VERSION ID SET IN MSH-12 DOES NOT MATCH THE CURRENT HL7 PROFILE See chapters 2.0.4.1 and 2.0.4.2			
Segment: MSH Occurrences: 1 MSH - Message Header Segment			
Element no: 7 Component no: 1	Description: timestamp	Data type: TS	
Value: 200705160200			
ERROR: INCORRECT FORMAT FOR TS(1) DATA TYPE -> MONTH IS INVALID See chapters 2.0.4.1			
Element no: 12 Component no: 1	Description: version ID	Data type: ID	
Value: 2.4			
ERROR: COMPONENT FAILED VALIDATION AGAINST TABLE -> TABLE ID: 896 - TABLE NAME: Version ID (CONDITION: ABSOLUTE) See chapters 2			
Element no: 13 Component no: 3	Description: name of coding system	Data type: SI	
Value: Component is empty			
ERROR: MANDATORY COMPONENT IS MISSING -> (CONDITION: OPTIONALITY IS 'R' IF (SUB)COMPONENT 1) See chapters 2.0.2			
Segment: PID Occurrences: 1 PID - Patient Identification Segment			
Element no: 7 Component no: 1	Description: timestamp	Data type: TS	
Value: 200705160200			
ALERT: FORMATTERS NOT FOLLOWING 7 STANDARD RECOMMENDATIONS -> IT IS RECOMMENDED THAT YOU INCLUDE THE [+/-TTTT] TIMEZONE OFFSET See chapters 2.0.4.4			
Element no: 11 Component no: 1	Description: street address	Data type: ST	
Value: Component is empty			
ERROR: MANDATORY COMPONENT IS MISSING -> (CONDITION: ABSOLUTE) See chapters 2.0.4.3			
Element no: 11 Component no: 2	Description: address type	Data type: ID	
Value: J001			
ERROR: COMPONENT FAILED VALIDATION AGAINST TABLE -> TABLE ID: 899 - TABLE NAME: Address type (CONDITION: ABSOLUTE) See chapters 2			
Element no: 15 Component no: 3	Description: name of coding system	Data type: SI	
Value: Component is empty			
ERROR: MANDATORY COMPONENT IS MISSING -> (CONDITION: OPTIONALITY IS 'R' IF (SUB)COMPONENT 1) See chapters 2.0.2			
Element no: 15 Component no: 3	Description: name of coding system	Data type: SI	
Value: Component is empty			
ERROR: MANDATORY COMPONENT IS MISSING -> (CONDITION: OPTIONALITY IS 'R' IF (SUB)COMPONENT 1) See chapters 2.0.2			

Figure 1: Message Diagnostic Report

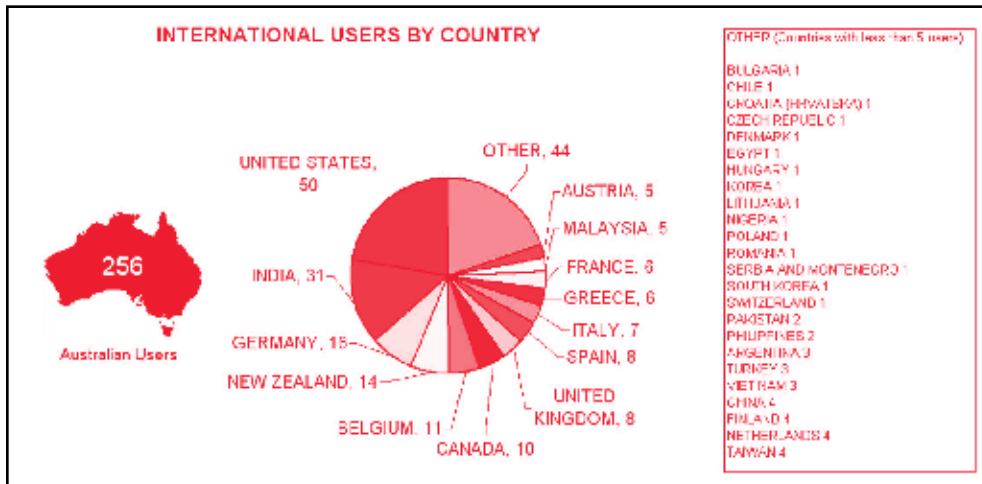


Figure 2: AHML International Users by Country

with several HL7-related projects and initiatives, is a co-chair of the HL7, Inc. Implementation and Conformance Work Group and serves on the board of HL7 Australia.

In 2009, AHML will provide message testing via web services and will implement new international testing profiles. AHML welcomes partnership opportunities to provide support for relevant international or national profiles.

For more information about AHML and to register for free, please visit: www.ahml.com.au.

Invitation to the 8th Asia-Pacific HL7 Conference in Taipei

By the HL7 Taiwan and Organizing Committee of 2009 Joint Conference on Medical Informatics in Taiwan

HL7 Taiwan is pleased to invite you to Taipei, Taiwan for the **8th Asia-Pacific HL7 Conference**, which will be held October 2-4, 2009 at Taipei Medical University.

HL7 Taiwan has undergone tremendous growth since June 2001. In the past eight years, HL7 Taiwan has made major contributions in the promotion of education/training, research, and application of HL7 exchange standards in Taiwan. From 2002 to 2008, we organized seven Asia-Pacific HL7 Conferences on Healthcare Information Standards, including one held jointly with the HL7 Affiliate Members Meeting in Taipei in 2005. For each Asia-Pacific HL7 Conference, we provided the most valuable opportunity to convene many experts, academics, industry representatives, government representatives, and vendors. We have always aimed to bring the significant progress of HL7 standards to Taiwan as well as in Asia-Pacific countries as well as highlight how HL7 standards are being implemented in the region.

For example at the 6th Asia-Pacific HL7 Conference we emphasized the importance of the "u-Health" concept and

how to provide "Efficient Healthcare with Integrated Information Standards," especially when faced with the growing healthcare demand of the aging society.

The 7th Asia-Pacific HL7 Conference on Healthcare Information Standards joined with MIST 2008, NIST 2008, and MISAT 2008 and was held on Nov 21-23, 2008 at National Yang-Ming University, Taipei. This 2008 Joint Conference on Medical Informatics in Taiwan (2008 JCMIT) attracted 230 participants, including fifteen international speakers and participants. Those who participated in the Gala Dinner on Nov 22, 2008 have fond memories of the happy hours spent on the cruise.

If you are interested in conference details and viewing photos, please visit this website at <http://mist2008.ym.edu.tw/index-e.php>.

Keynote speeches will be delivered by W. Ed Hammond, PhD (HL7 Chair, USA), Michio Kimura, MD (HL7 Japan Chair), and Yun Sik Kwak, MD, PhD (ISO TC215, Korea) covering diverse uses of the HL7 Clinical Document Architecture (CDA), Electronic Health Records (EHRs), large scale eHealth



deployment, and collaboration among SDOs for interoperable EHRs.

We are looking forward to welcoming you and to organizing unforgettable events for you and the HL7 Community. We intend to spoil and surprise you with all we have to offer and share the unsurpassed Taiwan hospitality with you. We truly hope you will join us in enjoying Taipei's beautiful, unique and safe atmosphere, while building relationships that will last for years to come.

Key Information

October 2-4, 2009 **The 8th Asia-Pacific HL7 Conference** and **2009 JCMIT**

The 8th Asia-Pacific HL7 Conference site: www.HL7.org.tw

For more information contact:

HL7taiwan@mail2000.com.tw



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