HL7 INTERNATIONAL®

NEWS

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UNLOCKING THE POWER OF HEALTH INFORMATION

HL7 Takes a Leadership Position in the Era of Patient Empowerment

By Leslie Kelly Hall, Senior Vice President, Healthwise; Russell Leftwich, MD, Chair of HL7 Professional Engagement and Chief Medical Officer, Office of eHealth Initiatives; and Lisa R. Nelson, Consultant, LOTS, LLC

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The era of patient and consumer engagement in healthcare has dawned. The HIPAA Omnibus Rule and Stage II of the Meaningful Use EHR incentive program have created a new paradigm for an individual's access to their own healthcare information. The value of access will be complemented and magnified by the opportunity for individuals to contribute data and information to their own health records. This new paradigm offers the opportunity for two-way exchange of information between individuals and their healthcare providers, but it will require new tools to be created. To realize the full potential of this shift, interoperability standards have been updated so that data coming from individuals, their family, and community caregivers, as well as other data generating devices that the individuals operate, will be interoperable with existing healthcare IT systems. The 2013 update of the Consolidated Clinical Document Architecture (C-CDA) Implementation Guide includes the Patient Generated Document Header template. It provides implementers with a standard way to encode patient generated information in an interchangeable digital document that uses standards already adopted by Meaningful Use. The introduction of this critical element enables EHRs and other health information technology (HIT) systems to utilize documents generated by systems designed to interact directly with patients.

The new US Realm Header for Patient Generated Document template further constrains the US Realm General Header template for CDA® documents. It provides the needed guidance and specifications to encode the header information of a CDA document when a patient is the author. It addresses situations where a patient's family member or legal representative authors the document on the patient's behalf. It also addresses cases where a device operated by the patient is used to create a document with information to be shared with the patient's health record. This new header template does define a separate document type. When a document conforms to the Patient Generated Document Header it can contain structured or unstructured content using templates defined in the HL7 C-CDA.

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This header template is generalized to be used with any type of patient generated document which exists today, or may be specified in the future. Codes from the LOINC Document Ontology denote a patient authored document when the Method axis is Patient and the Scale axis is Doc or Nar. For example, LOINC code 5815-8 indicates a patient note that is generated by a patient. A document of this type includes sections and entries which conform to templates defined in C-CDA. To date, several other types of patient authored notes have been defined in the Document Ontology, such as a medical history screening form and several types of consent documents. Going forward, the Patient Generated Document Header template establishes standard implementation guidance for populating the header of all types of patient generated CDA documents.

The transformation of our healthcare system into a learning health system requires new and updated standards. In order to achieve transformation change, interoperable information is a necessity. It is needed not only across systems, but also across the patient-centered care teams which includes care professionals, patients, their families and their communities. HL7, as a standards development organization, is shaping the way healthcare technologies will meet the needs of all end users. Going forward, the end users for health information will include consumers as well as the many other stakeholders using HIT systems. In the new era of patient and consumer engagement in healthcare, HL7 is again leading the way toward greater interoperability for all.

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Nutrition Standards:
A Recipe for Clinician Involvement

By Margaret Dittloff, MS, RD, Product Manager, CBORD; Chair – Nutrition Informatics Sub-Committee, Interoperability & Standards, Academy of Nutrition and Dietetics

If you are actively involved in HL7 work groups, chances are you have heard someone mention including diet and nutrition in the context of ballot reconciliation, harmonization or new standards projects. Nutrition plays an integral role in individual and population health and yet HIT standards related to nutrition data are rather "deficient." As part of a multipronged approach, nutrition professionals representing the Academy of Nutrition and Dietetics (formerly the American Dietetic Association) became involved with HL7 just three short years ago to advocate and help define universal standards related to the exchange of diet and nutrition information across the continuum of care.

The HL7 jargon and process can be challenging for clinicians, but we need their knowledge and expertise to drive standards that improve patient care and efficiencies for the entire healthcare team. Our approach worked well. We brought forth a specific need and kept the project scope narrow enough to ensure that with each cycle we could reasonably accomplish our objectives. We started with a Domain Analysis Model and recruited subject matter experts in nutrition from various clinical settings and specialty areas of practice, including pediatrics and nutrition support teams. Then, we submitted a separate project to create the Version 3 messaging model derived from the DAM. Throughout the process, we worked to collaborate across multiple work groups, primarily with Orders and Observations, Pharmacy and Patient Care under the guidance of experienced HL7 leaders and facilitators. As a result, we were able to publish two draft standards for trial use (DSTUs) since submitting our first project scope statement in Sydney in January 2011: **HL7 Version 3 Domain Analysis Model: Diet and Nutrition Orders, Release 2 (DSTU)** as well as **HL7 Version 3 Standard: Orders; Diet and Nutrition, Release 1 (DSTU).** We'd like to thank everyone at HL7 who has helped make this possible. Of course, the point of standards is to use them, so we are actively working on how to test these orders and welcome anyone interested to join us. Please contact us and submit your comments on our DSTU nutrition standards (http://www.HL7.org/dstucomments/).

Margaret Dittloff, MS, RD

Update from Headquarters

Time Flies and Two Goodbyes

Mark McDougall

By Mark McDougall, Executive Director, HL7

A lot has changed throughout my 22 years with HL7. Heck, I remember one day when Wes Rishel came to our offices to help us understand how HL7 would use the internet, email and a website. A couple tidbits of HL7 operations during the pre-digital age include:

- Remember that we used to publish HL7 standards on paper in 3-ring binders?
- Remember the thick membership directory of HL7 members that we used to publish each year?
- During our working group meetings (WGMs) when the work groups would need hard copies of their chapters, we would make a lot of photocopies of the standards chapters that were under development. And I do mean a lot – about 100,000 photocopies at EACH WGM.
- Do you remember when we put all of the meeting minutes from the dozens of committees and special interest groups (not yet work groups) on floppy discs? We then burned copies of the floppy discs and distributed them to our members.

Wow, we were going high tech then! Back then the concept of video conferencing seemed unrealistic. Today, we can video conference with our family and friends by hitting one button on our phones. Yes, times have changed.

27th Plenary Meeting

This year's plenary meeting focused on the timely topic of Care Coordination and HL7's role in it. The slate of speakers and topics being covered was quite impressive.

Highlights include:

Keynote Speakers:

- The Next Generation of Interoperability by John Halamka, MD, MS, Chief Information Officer of the Beth Israel Deaconess Medical Center; Chief Information Officer and Dean for Technology at Harvard Medical School; Chair of the ONC Standards Committee.
- Evidence-Based Standards Development for Care Coordination, by Larry Garber, MD, Principal Investigator, IMPACT; Medical Director for Informatics, Reliant Medical Group

Panel Session on Care Coordination Challenges in the Aftermath of Disaster, such as:

- 2011 Tohoku Earthquake and Tsunami Tragedy, by Michio Kimura, MD, HL7 Japan,
- 2011 Christchurch Earthquake, by David Hay, MD, HL7 New Zealand
- Lessons Learned from the Boston Marathon Bombing for IT, by Jim Noga, CIO, Partners Healthcare
- Consumer Priorities for Health & Care Planning in an Electronic Environment, by Erin Mackay, Associate Director, Health IT Programs, National Partnership for Women & Families

Meeting Sponsors

We are pleased to recognize all of the organizations that sponsored key components of our 27th Annual Plenary & Working Group Meeting in Cambridge:

- AEGIS – Lodging room keys for attendees
- Beeler Consulting, LLC – Facilitator's Roundtable Dinner/Meeting
- Eastern Informatics – Saturday breakfast for FHIR Connectathon
- Furore – Saturday lunch for FHIR Connectathon
- Gordon Point Informatics– Wednesday cookie break
- Hi3 – Monday cookie break
- iNTERFACEWARE – Lanyards
- JP Systems – Tuesday cookie break
- SPARX Systems – Tooling challenge award

The 27th Annual Plenary & Working Group Meeting Sponsors with HL7 CEO Dr. Charles Jaffe

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

Benefactors and Supporters

We are thrilled to continue to attract impressive numbers of HL7 benefactors and supporters, who are listed on page 22. Their support of HL7 is very much needed and sincerely appreciated. Representatives from these organizations are pictured on this page. A special thank you is extended to those firms that represent our 2013 HL7 benefactors and supporters.

The 2013 HL7 Benefactors with HL7 CEO Dr. Charles Jaffe
Photo courtesy of Kai Heitmann, MD

Organizational Member Firms

As listed on pages 23-25, HL7 is pleased to report that there are 684 organizational member companies. We sincerely appreciate their ongoing support of HL7 via their organizational membership dues.

Board Election Results

During HL7's annual business meeting in Cambridge, we announced the results of the recent elections for the following HL7 Board of Director positions who will all serve a 2014-2015 term on the Board.

- **Treasurer:** Calvin Beebe, Technical Specialist, The Mayo Clinic
- **Director:** Pat Van Dyke, Delta Dental Plans Association
- **Director:** Austin Kreisler, SAIC
- **Affiliate Director:** Diego Kaminker, HL7 Argentina

It is also noteworthy that with Calvin's election to the Treasurer position, a vacancy occurred for Calvin's second year as Director on the board. Following the process described in the GOM, Board Chair Don Mon, PhD, appointed Hans Buitendijk of Siemens Healthcare, to fill the 2014 year of Calvin's Director position on the HL7 Board.

We are pleased to congratulate these individuals for their valued service to HL7 as members of the HL7 Board of Directors.

The 2013 HL7 Fellows, from Left to Right: Bert Kabbes (accepting for Robert Stegwee, PhD), Dave Shaver, Irma Jongeneel-de Haas, Vassil Peytchev, and HL7 CEO Dr. Charles Jaffe. Missing from photo: Robert Stegwee, PhD and Dan Pollock, MD.

HL7 Fellows Class of 2013

The HL7 Fellowship program recognizes individuals with outstanding commitment and sustained contribution to HL7 with at least 15 years of HL7 membership. Contributions to HL7 may be reflected through serving as a work group or committee co-chair, serving on the HL7 Board of Directors, receiving the W. Ed Hammond Volunteer of the Year Award, serving as an HL7 Ambassador, making presentations about HL7, publishing a paper about HL7, or other visible activity.

During HL7's 27th Plenary meeting, HL7 honored the following five well-deserving members with distinction as HL7 Fellows in the Class of 2013:

- Irma Jongeneel-de Haas, HL7 The Netherlands
- Vassil Peytchev, Epic
- Dan Pollock, MD, Centers for Disease Control and Prevention
- Dave Shaver, Corepoint Health
- Robert Stegwee, PhD, HL7 The Netherlands

Volunteers of the Year

We also were pleased to recognize two valuable volunteers for their dedicated service to HL7. This year marks the 17th year that we have recognized such individuals via the W. Ed Hammond, PhD HL7 Volunteer of the Year Awards. The recipients of the 2013 HL7 Volunteer of the Year Awards included:

continued on next page

- Ken Rubin, Healthcare Architect, EDS Civilian Government & DoD Healthcare Portfolio, Hewlett-Packard Enterprise Services
- Andy Stechishin, Chief Consultant, CANA Software & Services Ltd.

We are honored to recognize Andy and Ken as dedicated individuals who have made significant contributions on many fronts, including in specific HL7 work groups and throughout the larger HL7 global organization. Their efforts and contributions are sincerely appreciated and this recognition is certainly well-deserved. Please see the article on page 19 to read more about the impressive contributions that these dedicated volunteers have made to HL7.

Long-Term Members

Individuals with at least 10 years of membership in HL7 were recognized during slide shows occurring each morning and during lunches. HL7 has the following number of individuals who have been HL7 members for these number of years:

At least 10 years but less than 15 years: 163 members
At least 15 years but less than 20 years: 70 members

At least 20 years but less than 25 years: 29 members

At least 25 years: 5 members (Ed Hammond, Clem McDonald, John Quinn, Wes Rishel and Mark Shafarman)*

The list of individuals who have been HL7 members for at least 20 years is as follows:

Landen Bain
Woody Beeler, PhD
Bernd Blobel, MD
Hans Buitendijk
Jane Curry
Norman Daoust
Gary Dickinson
Albert Edwards
Danny Farley
Michael Fitzmaurice, PhD
Donald Gross
Ed Hammond, PhD*
Ed Jenkins
Bert Kabbes
Ted Klein
Virginia Lorenzi
Rodney Louk
Clement McDonald, MD*
Chuck Meyer
Douglass Pratt
John Quinn*
Larry Reis
Wes Rishel*
Mark Shafarman
AbdulMalik Shakir
Stu Solomon
Richard Stockell
Andrew Ury, MD
D. Mead Walker

In Closing

I would also like to acknowledge two HL7 family members who have recently passed away.

Samuel Schultz, II, PhD, served as HL7's founding Chairman of the HL7 Board of Directors in 1987. Sam helped lead the charge to form HL7 and to evangelize HL7 at every opportunity. Sam passed away on September 18, 2013, at his home in Greer, South Carolina. Sam grew up and lived much of his life in Michigan where his funeral occurred. I've known Sam a long time, but I was impressed to learn during his funeral service that he had built a linear particle accelerator as a high school science project.

Diana Stephens joined HL7 in January 2001 as our Director of Membership Services. Diana passed away on August 27, at the University of Michigan Medical Center in Ann Arbor. Most recently diagnosed with hemophagocytic lymphohistiocytosis, Diana had courageously battled leukemia for several years.

The 2013 Volunteer of the Year Award Recipients Ken Rubin (left) and Andy Stechishin (right) with HL7 CEO Dr. Charles Jaffe (center). Photo courtesy of Kai Heitmann, MD.

We will certainly miss Diana and Sam. Their passing also reminds me how important the HL7 community has become to all of us who have been involved with HL7 a long time.

You have become our extended family and we sincerely appreciate your role in sustaining HL7 and moving our organization forward. As simple as this sentence is, I'd like to say to each person who has ever been involved in HL7 and who has touched my life… thank you!!

With the holidays quickly approaching and on behalf of the HL7 staff, we extend to you and your loved ones best wishes for a holiday season and new year filled with good health, lots of hugs and much laughter.

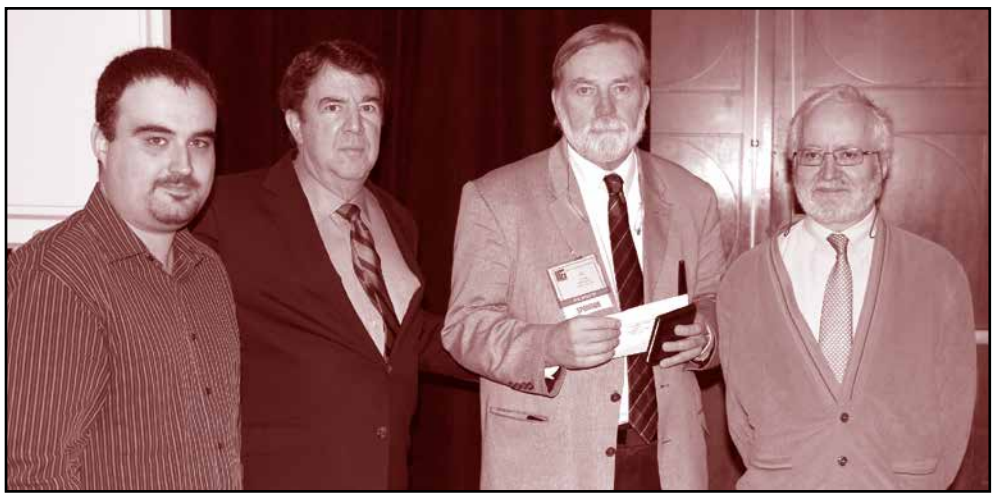
Mark L. McDougall

** Denotes a founding member of HL7*

HL7 and Sparx Systems Announce the Winners of the 2012-2013 Tooling Challenge

New implementation tool will enable commercial UML modeling tools to work with HL7 static models

HL7 and Sparx Systems, a leading vendor of modeling tools based on open standards, announced the winners of the 2012-2013 Tooling Challenge during the September Plenary & Working Group Meeting in Cambridge, MA. The challenge was to produce a Unified Modeling Language (UML) profile for HL7's Model Interchange Format (MIF) static models using Sparx Systems' Enterprise Architect that will enable commercial UML modeling tools to work with HL7 static models, which have features that extend the standard UML expressions.



From Left to right: Antonio Villega (tooling challenge winner), HL7 CEO Dr. Charles Jaffe, Sparx Systems representative JD Baker, and Professor Antoni Olivé (tooling challenge winner).
Photo courtesy of Kai Heitmann, MD.

The 2012-2013 HL7 Tooling Challenge winners are Antoni Olivé, professor of information systems and Antonio Villegas, PhD student in computing, both of the Universitat Politècnica de Catalunya Barcelona Tech in Barcelona, Spain. They were awarded the $4,000 prize at HL7's September Working Group Meeting in Cambridge, MA.

The Tooling Challenge, sponsored by Sparx Systems, required submitters to meet the following qualifications:

- Create a UML profile using Enterprise Architect that correctly describes MIF static models to the extent allowed by the UML language
- Document parts of MIF static models that were not or could not be expressed in UML Profile Language
- Use the submitted UML profile to adapt Sparx Systems' Enterprise Architect to express a proper HL7 static model as a proof of concept

Criteria used to determine the winning submission included:

- Assessment of the profile as a valid UML profile as defined by the Object Management Group (OMG)
- Assessment of the validity and degree with which the profile represents MIF static model constructs
- The ability to utilize the profile in Enterprise Architect to construct valid HL7 static models as defined in MIF
- The thoroughness of the profile documentation and the ability for HL7 Version 3 newcomers to understand and apply it
- Assessment of the extensibility of the profile and its agility with regard to changes in the methodology

HL7 CTO John Quinn stated, "The industry is in need of tooling solutions that will facilitate the implementation and adoption of standards and this challenge has successfully spurred the development of such solutions. We hope that future challenges will continue to address this need and provide developers with the ability to use more off-the-shelf tools."

"Sparx Systems was pleased to sponsor the HL7 Tooling Challenge, which has helped paved the way for future solutions and has set a best practice benchmark for HL7," said Ken Harkin, Business Development Manager for Sparx Systems. "This kind of collaboration opens opportunities for stakeholders within the global health sector and beyond. Sparx Systems looks forward to sponsoring future awards and new solutions to the challenges faced by the HL7 community and the global UML community as well as the healthcare industry overall."

HL7 and Sparx Systems plan to announce the next tooling challenge in early 2014. The goal of the upcoming challenge will be to define the requirements and approach for the development of a tooling project for HL7 for static models and the support of HL7-specialized diagramming syntax, moving away from the Visio-based modeling.

Terrence O'Malley, MD

Larry Garber, MD

Russell Leftwich, MD

Bridging the Healthcare Safety Chasm:

The 2013 Consolidated CDA Update

By Terrence O'Malley, MD, Medical Director, Non-Acute Care Services, Partners HealthCare System, Inc.; Larry Garber, MD, Medical Director for Informatics, Reliant Medical Group; and Russell Leftwich, MD, Chair of HL7 Professional Engagement and Chief Medical Officer, Office of eHealth Initiatives

Patients are at highest risk for many types of adverse events at the time of a transition of care from one site or clinical care team to another. Quality, safety and efficiency of care suffer if the receiving team does not have all of the information it needs, in a timely fashion, in a convenient format, and through an efficient process. For patients that receive care at multiple sites, the issues of poor transitions are compounded by the absence of a common care plan in place across all sites, and the failure to communicate existing care plans to the receiving site. The 2013 update of the Consolidated CDA (HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes (US Realm) Draft Standard for Trial Use Release 2) based on the HL7 Care Plan Domain Analysis Model (DAM) and the HL7 Long-Term Post-Acute Care (LTPAC) Summary lays the foundation for safer and more robust transitions of care and for the exchange of a longitudinal care plan.

Incomplete information often leads to delays or omissions of required care, initiation of inappropriate care, avoidable duplication of tests and procedures, and failure to initiate appropriate follow-up care. As examples, significant problems have been identified with two high volume transitions of care: at discharge from the hospital to any site of care, and transfers from any site to the Emergency Department (ED).

After hospital discharge, an estimated 1.5 million preventable adverse events occur annually in the US when discharge treatment plans are not exchanged or followed (Forster, et al., 2003). In another study, important information about the patient's care following a hospital discharge was missing 78% of the time (van Walraven, et al., 2002). Many of these failures contribute to the high preventable Medicare readmission rate in the US which costs $26B annually.

In one study (Patient Safety Institute, 2003), 14% of unplanned hospital admissions originating in the ED could have been avoided if the ED had outpatient information. For patients seen in the ED, important or critical information was missing nearly one third of the time (Stiell, et al., 2003). These omissions particularly impact the care of the 14% of Medicare beneficiaries who have six or more chronic conditions. 70% of them have one or more ED visits per year, 63% have one or more hospital admissions, and 41% go on to receive care in LTPAC sites. They account for 46% of all Medicare spending and 70% of all Medicare 30-day readmissions (2012 Medicare Chart Book).

Not only are these 14% of Medicare beneficiaries exposed to the risks of multiple transitions of care, the complexity of their care plans and follow-up care also puts them at risk for poorly coordinated and incomplete care even without frequent transitions. Poor care coordination increases the chance that a patient will suffer from a medication error or other health care mistake by 140% (Lu, et al., 2011). Communication failures between providers contribute to nearly 70% of medical errors and adverse healthcare events (Gandhi, et al., 2000). One study estimated that 150,000 preventable adverse drug events (ADEs) occur at the time of admission due to inadequate knowledge of outpatient medication history (Gandhi et al., 2003), costing $8 Billion in the US each year. This is a population that requires both tight transitions and overall coordination of care.

Prior to the 2013 Consolidated Clinical Document Architecture (C-CDA) update, there were significant gaps that made it difficult to provide receiving clinicians at acute care and LTPAC sites with complete, standardized and interoperable clinical data

at the time of a transition of care. The absence of templates and the means to adequately represent critical concepts such as goals of care, milestones, barriers and risks, prevented the exchange of a multi-disciplinary longitudinal care plan within and between provider teams.

In 2013, with the Consolidated CDA update, most of these gaps have been eliminated and will provide new US HL7 standards for transitions of care and care plans. The changes in the update are extensive. They include the following:

Three new document types:

- Referral Note (including referral to the ED)
- Transfer Summary (for use whenever there is a permanent transfer of care-taking responsibility from one site to another or from one care team to another.)
- Care Plan with Digital Signature (including support for the Home Health Plan of Care, AKA CMS-485)

Six new Section-Level templates:

- Physical Findings of Skin Section
- Mental Status Section
- Health Concerns Section
- Health Status Evaluations/Outcomes Section
- Nutrition Section
- Goals Section

Thirty new Entry-Level templates, including:

- Characteristics of Home Environment
- Cultural and Religious Observation
- Patient Priority Preference
- Provider Priority Preference

In collaboration with the HL7 Patient Care Work Group's Care Plan DAM, new constructs exist for: health risks and safety concerns; non-prescription interventions; patients' overarching goals; barriers, nutrition assessment and diet orders; more granular codification of all of the longitudinal care team members; representation of patient and provider priorities for health concerns; interventions and goals; a mechanism to demonstrate the "many-to-many" relationships that exist among and between these new components; and the ability to digitally sign a CDA document.

Ballot reconciliation of over 1,000 ballot comments is well underway with the expectation of publication in early 2014. More work remains to be done to further constrain vocabularies and value sets before seamless interoperability will be realized. However, with the new standards in the 2013 update in place, the foundation has been laid for the efficient exchange of essential clinical information at the time of a transition of care to and from all acute, behavioral health and LTPAC sites, as well the standards to exchange a longitudinal care plan. The Office of the National Coordinator (ONC) has issued a call for sites to pilot these new standards. Information can be found at http://wiki.siframework.org/LCC + Pilots + WG.

Improved transitions of care and the exchange of a longitudinal care plan as a result of the HL7 2013 Consolidated CDA Update create the bridge across the quality and safety chasm.

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PBS Metrics Update

By the PBS Metrics Team composed of HL7 International Staff Members Dave Hamill, Director, Project Management Office; Lynn Laakso, TSC Project Manager; Don Lloyd, PhD, Director of Technical Publications; and Karen Van Hentenryck, Associate Executive Director

Dave Hamill

Lynn Laakso

Don Lloyd, PhD

Karen Van Hentenryck

Ballot Process Changes Stemming from the ANSI Audit

As a result of the ANSI audit, there have been some modifications to the procedures for managing ballot projects:

- **Consensus group sign up** – Voters can now sign up for consensus groups from the time of ballot announcement through the end of the day prior to ballot opening. Previously, voters could join the consensus group up until the week before the ballot closed. ANSI now requires us to close the sign up before the ballot opens so that we can adequately check for balance of interest.
- **Elimination of proxy voting** – While ANSI does not prohibit proxy voting, it requires that we maintain a written statement from each voter which identifies the person to whom they are assigning their proxy for a particular ballot. The Governance and Operations Committee, along with staff, have tried to think of methods to enable proxy voting that can be applied uniformly across all organizations and which does not introduce undue administrative burden for our members and staff. Until we find a process that meets these criteria, proxy voting is not an option for us. The best workaround for proxy voting at this time is for work groups to complete their ballot reconciliation as quickly after the ballot period as possible.
- **Notification to TSC** of taking an existing project to normative ballot – Some documents, even those that are balloted as draft standards for trial use (DSTUs), will never go to normative ballot. This change allows us to ballot those items without being penalized by ANSI for not submitted the PINs form at the time the project was started. Once a work group alerts us that a document is going to be normative (until that time, the project is not considered one in which ANSI would have an interest), we will file the appropriate paperwork with ANSI and the work group has an 18 month window to pass their ballot. Once balloted, the Work Group has 12 months to complete reconciliation and publish the standard.

Ballot Project Lifecycle

The following is extracted from a recently published document which summarizes the lifecycle of ballot projects. It is intended to provide work group (WG) co-chairs with a high-level view of the major stages and waypoints involved in balloting any document or standard with the goal of publishing that document or standard. The full document is available at HL7.org > Resources > Tools and Resources > Project Management and Tracking Tools.

Project Initiation and Approval

Step 1 – Completion of a New Project Scope Statement (PSS) for Work Group Approval

The HL7 Project Scope Statement template is located at Resources > Templates > Project Scope Statement and Project Approval Process or http://www.HL7.org/permalink/?ProjectScopeStatement.

Step 2 – PSS Form Submission

Submit the WG-approved PSS to your WG's steering division (SD) co-chairs and the director of the HL7 Project Management Office via email: pmo@HL7.org.

Step 3 – Submission Acknowledgement

The director of the PMO will assign a new Project ID to the project, enter the project into Project Insight (online resource) and communicate project information to the director of technical publications.

Step 4 – Steering Division Approval of the PSS

The project facilitator attends the SD Conference Call which has the PSS review on its agenda so as to answer any questions/concerns. The SD will review and either approve the PSS, or return it to the WG with direction or considerations. Upon SD approval, the TSC project manager will provide the TSC the SD-Approved PSS

Step 5 – Technical Steering Division Approval of PSS

The project facilitator attends the TSC conference call which has the PSS review on its agenda so as to answer any questions/concerns. The TSC will review and either approve the PSS, or return it to the SD and WG with direction or considerations.

Step 6 – Project Approvals

The director of the PMO will update the SD and TSC approval dates appropriately in Project Insight as they occur. The TSC project manager will announce the project's approval in the weekly "Update from the TSC".

Ballot Initiation

Step 1 – Ballot Cycle Initiation
New PSS for the next ballot cycle submitted to PMO by deadline. Existing projects anticipating normative ballot submit scope update to TSC. The director of technical publications releases an email to the co-chairs list providing a calendar of the upcoming ballot cycle and indicates that the Notifications of Intent to Ballot form is available.

Step 2 – Notification of Intent to Ballot (NIB)
A WG co-chair completes NIB form for each of the WG-approved ballot project items the WG expects to take to ballot during the upcoming ballot cycle. Please note that several of the fields on this form are used in the completion of the ballot announcement, so a clear description of the ballot item (its intent and the expected contents, as well as any revisions from previous ballots) should be prepared beforehand.

Step 3 – Preparation of Draft Formation of Ballot Pools Announcement
The director of technical publications will prepare a draft of the formation of ballot pools announcement using information provided in the NIB form and provide this to the co-chair list serve for review by the WGs.

Step 4 – Review of Formation of Ballot Pools Announcement
At least one co-chair will review the ballot entries for that WG and reply back with any revisions or confirm that the entries for that WG are correct.

Step 5 – TSC Approval of Ballot Items
Many aspects of the ballot process, such as ballot level and item name, are subject to approval by the TSC. At some point between the release of the formation of ballot pools announcement and the opening of the ballot the TSC will approve those items and the names of the items permitted to ballot.

Step 6 – Formal Release of Ballot Announcement
At least 30 days prior to the scheduled ballot opening, the director of technical publications will release the Formation of Ballot Pool Openings. After this time, any change in the status of any ballot item should immediately be communicated by the WG to the director of technical publications.

Ballot Process

Step 1 – Preparation of Ballot Materials
The WG's publishing facilitator will submit all ballot materials requiring HQ preparation (i.e., Version 3 (V3)-related materials) to the director of technical publications according to the deadlines indicated in the V3 Ballot Countdown and review the posted materials for completeness and correctness. For non-V3 submissions, the materials will be prepared according to the WG's schedule and supplied to the director of technical publications on the agreed upon date before the ballot opening.

Step 2 – Final Submission and/or Review of Ballot Materials
A co-chair will indicate to the director of technical publications that the posted ballot materials are ready for ballot opening.

Step 3 – Announcement of Ballot Opening
The director of technical publications will release the ballot opening announcement indicating the formal beginning of the ballot period. There will be no changes to ballot materials after this point unless the WG petitions the Publishing WG for corrections to material and a patch release.

Step 4 – Ballot Close and Release of Ballot Results
At ballot close, the director of technical publications will review the ballot results (ensuring, for instance, that quorum has been met) and package and release the ballot results to the co-chairs.

Ballot Reconciliation

Step 1 – Review of Ballot Comments
A WG co-chair will consolidate the ballot comments for each WG ballot item in preparations for reconciliation.

Step 2 – Preparation of Reconciliation Spreadsheet
During reconciliation, the WG will use the amalgamated comments spreadsheet to track WG decisions regarding the ballot comments. When completed, a WG co-chair will post this final reconciliation spreadsheet to the ballot summary page on the Ballot Desktop.

Step 3 – Notification to Negative Balloters
Once the final reconciliation spreadsheet has been posted to the ballot summary page on the Ballot Desktop, a WG co-chair will send out the withdrawal request to negative voters using the email functionality on the Ballot Desktop.

Step 4 – Achievement of Ballot Approval Level
Following the posting of the final ballot reconciliation spreadsheet and the notification to negative voters, it should become clear that the ballot has either achieved the necessary approval level, or will fail to achieve this level.

Should the ballot achieve the necessary approval level, it is expected that the WG will move forward to publish the item. Normative publication must be completed within 12 months of the ballot to be eligible as an ANSI standard. If ten months has passed and the ballot has not published, the WG may request an extension from the associate executive director (karenvan@HL7.org).

If the ballot item is at the normative level and still has one or more outstanding negatives, it is expected that the WG will request a two-week recirculation ballot using the template located at Resources > Templates > Recirculation Request Template, and pending a successful conclusion to this ballot, move forward to publish the item.

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Member Spotlight on Mollie Ullman-Cullere

Mollie Ullman-Cullere has been a member of HL7 since 2006. She is a co-chair of the HL7 Clinical Genomics Work Group and serves as one of their subject matter experts for genetics/genomics/family history in clinical and translational medicine. In this role, she has co-authored several standards/implementation guides, including the HL7 Version 2.5.1 fully LOINC qualified IG's for reporting structured clinical genetic test results and interpretation, as well as cytogenetic reporting; Version 3 implementation guide for family history/pedigree; and the Version 3 CDA-based genetic test report. Mollie also serves as an HL7 liaison to outside organizations working on clinical genetic/genomic standards, including past senior advisor to the HHS/ONC personalized healthcare working group, the Human Variome Project, the College of American Pathologists Cancer Biomarker Reporting Committee, and the Federally mediated workgroup for the development of clinical-grade genomic data file formats (GVF and VCF).

Mollie has worked in genetics her entire life. Raised on a farm on Maui, she experimented with subsistence farming in the tropics. She earned an undergraduate degree in animal science at the University of Massachusetts at Amherst and masters in animal science with a minor developmental biology from Cornell University. After working at Massachusetts Institute of Technology for eight years creating genetically engineered mouse models for human diseases, Mollie became interested in software databases and standard terminologies. Wanting to move out of research and closer to patient care, she joined the Partners Center for Personalized Genetic Medicine (also known as Harvard-Partners). As a senior information architect supporting a clinical genetic testing laboratory for Partners Healthcare, Mollie needed to learn healthcare IT data standards and became involved with HL7 and the extended community of healthcare IT experts. In 2010, she made the decision to move even closer to clinical care, supporting a hospital pathology laboratory, so she transferred to the Dana-Farber/Brigham and Women's Cancer Center to help in their efforts to enable the Center for Advance Molecular Diagnostics to develop genome sequencing tests (and healthcare IT reporting) for care of cancer patients.

Mollie has increasingly come to understand the importance of business innovation both within a large academic medical center and HL7 and is currently enrolled in an evening MBA program at Babson College. She is married to a scientist from Barcelona, Spain, who also works in genetics although at the molecular function level in cells and animal models. They have two boys, now in college studying biomedical engineering and engineering.

PBS Metrics Update *continued from page 11*

Should the ballot NOT achieve the necessary approval level, it is expected that the WG assess the content and its likeli-hood of passing a future ballot, and then either revise and resubmit the item to a future ballot, or withdraw the item from consideration by indicating the withdrawal of the project using the template located at Resources > Templates > Notice of Withdrawal of Proposed ANS Template to the director of the PMO.

Publishing Final Document

Step 1 – Submission of Publishing Request Form
A WG co-chair will complete the publication request form located at Resources > Templates > Publication Request Template or http://www.HL7.org/permalink/?PublicationRequestTemplate, and submit it to the TSC project manager who will place it on the TSC agenda for approval.

Step 2 – TSC Approval of Publication Request
The TSC will review the publication request and either approve the request or return the request with direction or comments.

Step 3 – Document Publication
The director of technical publications will prepare the item for publishing, working with the co-chairs and/or publishing facilitator as needed to confirm the correct content and

Karen Van Hentenryck

Update from the Process Improvement Committee

By Karen Van Hentenryck, HL7 Associate Executive Director

The HL7 Process Improvement Committee (PIC) is the focal point within HL7 to identify, collect, track, and resolve issues pertaining to organizational process improvement. The committee serves as an open venue allowing HL7 members to voice ideas pertaining to improvement in organizational process or policy, and is the steward for issues pertaining to process improvement. Additionally, the Process Improvement Committee maintains primary responsibility to duly consider issues raised in an open, public forum; to mature those ideas into formal, actionable proposals; and to host and champion those proposals to the HL7 Technical Steering Committee and/or the HL7 Board of Directors, as appropriate.

Recurring Projects

After each working group meeting (WGM), PIC reviews the Post WGM Effectiveness Survey responses to determine if there are any issues preventing work groups from meeting their goals at the WGMs and if so, discuss how we might address them, and to recognize any trends. One of the trends PIC has noticed over time is that work groups spend less time at the WGMs engaged in ballot reconciliation and more time providing updates on existing projects and discussing new ones. Also, the number of joint meetings between two or more work groups has increased significantly since PIC has started tracking the results of the Post WGM Effectiveness Survey. Another project that PIC routinely undertakes is a review of comments/evaluations from the first-time meeting attendees to determine how we are meeting the needs and expectations of that audience. We've made several tweaks to the first-time attendee program based on feedback we have received and are always looking for ways to improve our interactions with them.

New PIC Projects

PIC is working on several new projects that have been suggested by the membership, including:

- Updating the Decision Making Practices (DMPs) – Specifically, we've had a request to standardize the process that work groups use to select the candidate for whom they place their vote for steering division chair. This was initially suggested as an update to the Governance and Operations Manual (GOM), but the Governance and Operations Committee, the committee responsible for updated the GOM, referred the item to PIC. In the past, the process was outlined in the announcements that are distributed to the co-chairs when announcing the nominations/election of steering division co-chairs. PIC is in the process of moving that process to the DMPs. To that end, we've created a wiki site where other changes to the DMPs can be suggested. Please use the following link to submit your suggested changes to the DMPs http://wiki.hl7.org/index.php?title=PIC:DMP
- Creating a check list for balloting – Several co-chairs have expressed a desire for a checklist of tasks needed to take a document from project proposal through publication. Many new co-chairs, for example, don't realize that a publication request form must be submitted in order for a document that has successfully been balloted to be published. PIC will be bringing that checklist forward for peer review in the very near future.
- Updating the ballot comment spreadsheet – PIC has added this as a recurring three-year project. It has been several years since the ballot comment spreadsheet has been updated, so it is due for a review. You can submit your suggested updates to the spreadsheet at: http://wiki.hl7.org/index.php?title=PIC:BCSM.

PIC Project being Closed

Occasionally, a PIC project that sounded like a great idea doesn't receive traction by the membership. The wiki job match site falls into this category. This site was originally created to match volunteers with work groups needing assistance. Volunteers were able to create a profile of their skills and availability and work groups were able to complete a "job posting" to advertise their needs. Unfortunately, no volunteers or work groups used the site in over-the 12 months it was open. Many people indicated that use of the site was not easy or intuitive, so we will no longer be promoting or working on that site. If HL7 members decide that they would still like some sort of job matching site, PIC will consider other ways to make this available to the membership.

Monthly Calls and WGM Meeting

PIC invites all HL7 members who have ideas or a process they would like to see improved to join PIC on its monthly calls. Typically, we meet the last Monday of each month. Refer to the HL7 Conference Calling Center for specific dates and dial in information. PIC also typically meets during Q1 on Thursdays at the Working Group Meeting (check the onsite guide for meeting room).

The Early History of HL7, Part1: University of California at San Francisco Level 7 Protocol

Rene Spronk

By Rene Spronk, Senior Consultant and Trainer, Ringholm; Co-Chair, HL7 Application Implementation and Design Work Group

HL7 was founded in 1987; the HL7 protocol does, however, date back to the mid-1970s when its precursor was developed at University of California at San Francisco (UCSF) Medical Center and first implemented in production in 1981. HL7 Version 1 (V1) and Version 2 (V2) are essentially refinements of the UCSF protocol.

Introduction

Mainframe based medical information systems were initially used in the early 1960s. In the 1970s as clinical support subsystems (minicomputers) evolved for the clinical laboratory, radiology, and for other clinical services, most developed their own separate databases. These created problems for hospitals which used mainframe technology for their financial and registration systems and, to a small extent, for order entry, results reporting, and some other clinical functions. The solution at that time was to connect a terminal from the nursing unit to each of the systems so that a user could use all of the systems by going from terminal device to terminal device.

Around 1979, the International Standards Organization (ISO) developed the Open Systems Interconnect (OSI) model and reference base for network systems that specified seven layers for the exchange of data between computers. In 1976, TCP/IP was already established at the Department of Defense, where work on the ARPANET (the precursor to the Internet) had begun in 1969. Microprocessors were introduced around 1975.

Data integration standards were in their infancy at the time: a few high level protocols were used in the context of the ARPANET, and ANSI X12 (used in finance and logistics) was developed in 1979. The American College of Radiology-National Electrical Manufacturers Association (ACR-NEMA) began its work on its standard for digital imaging and communications in medicine (DICOM) in 1983.

Project at UCSF

Efforts at the UCSF Medical Center—under the direction of Donald W. Simborg (CIO of UCSF), who worked with Steve Tolchin of Johns Hopkins University Applied Physics Laboratory (APL), led to the development of the first application-level data interchange protocol in healthcare in 1976.

When Don arrived at UCSF in 1976, the hospital did its billing systems on a mainframe computer owned by the University. Patient identification, ADT, and outpatient registration were paper-based processes. There was a clinical laboratory minicomputer, but paper forms were sent to the laboratory for entry of patient information and clinical laboratory orders and results from the laboratory were printed on paper and sent to the various clinical areas. There were no other computer systems for clinical activities.

Don Simborg, about the initial stages of the project (1976-1979):

> "In order to have a network up and running a lot of things had to happen. First, the basic decision to deviate from the 'single-vendor' mainframe-computer-based model had to have been conceived and discussed widely within the administration as this certainly represented a very risky approach. Then, the concept of integration somehow had to be conceived, which led to the notion of using a LAN and a level 7 protocol— again a risky approach given the fact that no hospital was using a LAN this way. Then we had to ensure the initial departments were on board with being the guinea pigs, find the vendors for those systems, help develop the specifications for the applications, acquire the systems, and implement them in the departments."

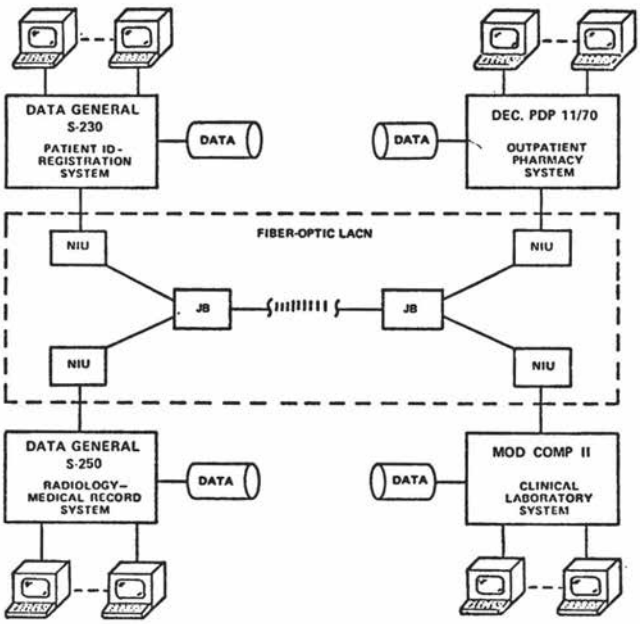

Figure 1. Schematic of UCSF Implementation

"Throughout all of this we had to conceive of the messages that we wanted to have flowing to and from these systems, detail their content, trigger events, error control, etc. (i.e. the Level 7 protocol). After securing funding for the projects we had to negotiate with each of the vendor's agreements to implement the protocols. Then we had to test them, modify them as needed, and re-test them. We had initial tests going as early as 1979. The working network took testing, re-working, re-testing, and re-design. More importantly, the Level 7 protocol wasn't somehow just delivered to UCSF by APL or anyone else. We had to decide what we needed to accomplish in order to integrate these distributed functions in order for the hospital to function. That took some years of design and specification."

In 1981, four minicomputers were connected to the network to exchange transactions between the UCSF registration systems, clinical laboratory, outpatient pharmacy and radiology systems – all built by different manufacturers. The UCSF project consisted of two key parts:

1. A fiber-optic Local Area Communications Network (LACN) developed by APL. The project used microprocessor-based network-integrating units (NIU) to perform the conversions of communications codes needed to exchange data.
2. An OSI Level 7 protocol developed by Don Simborg and his team at UCSF. The computers exchanged several core messages, including the synchronization of patient admission-discharge-transfer information, orders from clinical areas, and the display of textual results to the clinical areas.

Don Simborg, on the creation of the Level 7 protocol:

"My team specified the Level 7 protocol, which consisted of a broadcast message for ADT/Registration synchronization, and various query-response messages for order entry and results display (text results with the continuation protocol). The specifications included data level definitions and error control. This was the first Level 7 protocol ever used in healthcare to my knowledge. We continued to add computers to the UCSF network and refined the protocol over the years. Clinical uses of the network began during the second year of the project (1982)."

Mark Shafarman, who joined UCSF in 1980, describes the Level 7 protocol:

"They were text-oriented transmission, of something that looked not too different from what would later evolve into HL7. Essentially the computer would receive what we now call a text message, process it, and create a type of acknowledgement. The UCSF protocol was a delimited format; the delimiters were different from those ultimately used by HL7 Version 2. "

"The basic transactions look similar to those that can nowadays be found in HL7 V2, such as patient registration, acknowledgements, and report. From 1983 onward, structured reports were sent to a newly developed patient record system. Problems, results and labs were the main reports, and from those we would assemble a patient record."

In the initial year (1981), the network was used to synchronize key patient identification information and registration information among the four systems. Two types of transactions were used: a query/response transaction for demographic and registration information, and a broadcast to the network of demographic and registration information. Network support for these transactions included error checking, flow control, time-outs, matching of responses to queries, and other functions. Clinical uses of the network began during the second year of the project (1982/1983).

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Crossing Paradigms: Part I – The Information Dimension: *A Practical Approach for Information Exchange across Paradigms*


Alean Kirnak


Ken Lord


Stefano Lotti


Zoran Milosevic

By Alean Kirnak, Software Partners LLC; Ken Lord, SemantX, Inc, Object Management Group; Stefano Lotti, Invitalia, HL7 Italy; and Zoran Milosevic, Deontik Pty Ltd, Australia

Summary: The HL7 Cross Paradigm Interoperability Implementation Guide for Immunizations (X-Paradigm) project, sponsored by the Service Oriented Architecture Work Group, has been employing a Services Aware Interoperability Framework (SAIF)-based approach to interoperability in a complex environment of heterogeneous systems. As a product of its initial research, the X-Paradigm group has incorporated the OMG Model Driven Message Interoperability (MDMI) standard as a means of cross-referencing the data models of the multiple standards that are in play in the environment. The MDMI approach achieves this by empowering domain experts to develop mappings that yield machine computable semantic assets. This contrasts with what today is largely a hand-coding process requiring a software development team and paper based specifications. Resulting benefits include easier implementation, reduced complexity, long-term system sustainability, and enhanced standards compliance.

HL7 standards are produced for the real world, where interfaces conform to various HL7 versions and flavors, as well as non-HL7 standards and local and proprietary models. The challenge facing many organizations is that the real-world situation is complex, resulting from investment in different products over time. Implementers face a myriad of standards which are themselves often incompatible across implementations and versions. We should accept that the coexistence of different paradigms is, and will be, a reality. A concrete and practical standardization solution should address this fact. What is needed is a mechanism to normalize, manage and automate the integration among the various standard and non-standard paradigms.

The X-Paradigm project is scoped to produce an implementation guide based upon HL7's Services-Aware Interoperability Framework (SAIF). The project's goal is to assist organizations in achieving interoperability in an environment comprising multiple different data exchange paradigms – messages, documents and services. X-Paradigm will provide specific implementation guidance for the scoped immunizations domain and concrete methods for developing cross paradigm guides for other domains beyond immunizations. The first draft of the X Paradigm document went to HL7 Ballot in September 2012. In addressing the SAIF Information Dimension, data elements of relevant standards were mapped. The initial mapping cross referenced data elements in HL7 Version 2, HL7 Version 3 Continuity of Care Documents (CCD), and Immunization Content as profiled by Integrating the Healthcare Enterprise (IHE). To accomplish this, a brute force spreadsheet approach was used.

The spreadsheet approach became unwieldy and was difficult to maintain even in our small example. Based upon the comments received on the initial HL7 Ballot, the work group elected to test the OMG's Model Driven Message Interoperability (MDMI) standard to replace the spreadsheet approach.

The Use of MDMI

The MDMI standard allows semantic mapping of the data elements of one HL7 standard to another version by means of a Referent Index. The MDMI Referent Index leverages, and is compatible with, the RIM and HL7 vocabulary concepts, and enables the separation of the semantics from syntax for each paradigm.

The MDMI standard is a UML model that can generate computable artifacts and is extensible for any paradigm. For example, a single HL7 Version 3 MDMI map can exchange data with a HL7 Version 2 map, a Clinical Document Architecture (CDA®) based map, or a Fast Healthcare Interoperability Resources (FHIR®) map. Thus the X-Paradigm guide will be able to support varied versions of immunization messages and services. Moreover, the pattern is applicable to other domains as appropriate. Once successfully vetted and proven, it is hoped that MDMI will offer guidance on at least one way to apply the Information Dimension of SAIF to real-world deployments.

Another benefit of MDMI is that open source tooling has been built (See the Open Health Tools Model Driven Health Tools/MDMI Project) to make it easy to develop MDMI maps. Demonstrations of this approach were presented in May 2013 at the Atlanta Working Group Meeting.

X-Paradigm also represents the fruit of collaboration between OMG and HL7. Such collaboration is not new; the OMG Unified Modeling Language (UML) standard was used to develop HL7 Version 3. The Healthcare Services Specification Program (HSSP) is a joint effort of HL7 and the OMG that has produced such healthcare specifications as RLUS (Record Locate Update Service), CTS2 (Common Terminology Service), and hData Record Format.

Next Steps

Currently, the X-Paradigm information model is being updated to reflect developments in key targeted paradigms, specifically, the certification process for Meaningful Use Stage II immunization messages and the immunization FHIR resource included in the September 2013 ballot cycle. The transformation of paradigms using MDMI is also being further tested to a greater level of detail. Encouraged by the application of MDMI to the information dimension, the X Paradigm group is investigating the application of other standards to address mapping at the behavioral dimension.

Conclusion

So far, use of MDMI appears to both greatly improve the mapping methodology ("Information Dimension"), and to provide more rigorous traceability among the SAIF perspectives (Conceptual, Logical, and Implementable). The promise of MDMI is in translating the data elements of one message, document or service to another; and it helps in connecting requirements, models, and implementable standards in a rigorous way according to SAIF, ultimately producing machine-readable artifacts that can be used in an implementation as well.

Further information, including the Project Scope Statement, can be found at: http://hssp.wikispaces.com/Cross+Paradigm+Interoperability+Implementation+Guide+for+Immunization.

The Early History of HL7 *continued from page 15*

Don Simborg, on his subsequent activities at Simborg Systems:

> "In 1984, I approached Ralph Ungermann, the CEO of Ungermann-Bass to see if they would sponsor further research at UCSF. At the time, Ungermann-Bass was one of the most prominent commercial network companies based in Silicon Valley. Instead of funding research at UCSF, Ralph convinced me to start a company to try to commercialize what we had done at UCSF and he helped fund the company. This was the start of Simborg Systems, which marketed StatLAN, a network-based hospital information system. The StatLAN protocol was very similar to the UCSF protocol. We were a struggling start-up company and it became clear that in order to have commercial success there needed to be a non-proprietary standard for the Level 7 protocol. So in 1985, our board agreed to allow the StatLAN protocol to be somehow put in the public domain."

That decision led to the initial HL7 meeting in March 1987, and to the creation of HL7 on March 29-31, 1987.

This is the first part of a series of articles about the early history of HL7. This article is an abridged version of a creative commons article available at http://bit.ly/1e7KScz – you are referred to the full article for references. Please let us know should you have additional information about the UCSF/StatLAN protocols.

News from the PMO and Project Services Work Group


Dave Hamill


Rick Haddorf


Freida Hall

By Dave Hamill, Director, HL7 Project Management Office;
Rick Haddorff and Freida Hall, Co-Chairs Project Services Work Group

The Long and Winding Road of Project Management at HL7

At the May Working Group Meeting in Atlanta, Project Services was delighted to report that Project Number 1,000 was created within Project Insight. While not the most momentous milestone in HL7 lore, it does indicate tremendous progress of project management within HL7.

HL7 first utilized Project Insight in September 2006. After a year working with the various transition teams, the PMO began using it in earnest when the revised Technical Steering Committee (TSC) was put in place in January 2008. For the past six years, HL7 has refined its project submission and review processes in order to raise awareness and communication of the project work being done at HL7, avoid duplication of work, and track history and progress of HL7 projects.

Our work going forward will focus on feedback gathered from this past year's survey, which asked the membership to evaluate project management practices at HL7. The PMO has increased its presence during the steering division review process to ensure that work groups have the bandwidth to take on new projects and to catch any projects that may have slipped past the PMO's desk. The survey responses indicated a desire for more and better communication and education of HL7 project management processes and tools. Therefore, in the future, expect to see multiple 'mini webinars' focusing on HL7 Project Management tools, tips, tricks and processes.

The PMO and Project Services co-chairs would like to thank all the HL7 members in helping make project management at HL7 a success. Here's to the next 1,000 projects.

Updated Project Scope Statement Template for 2013

The HL7 Project Management Office and the Project Services Work Group released the 2014 version of the Project Scope Statement (PSS) template; a result of their annual updates to the template. As usual, our goal is to streamline and simplify the template so that it's easier to use by HL7 members and provides the most useful data to the membership.

Changes include:

- Align PSS project risk with the TSC's risk approach
- Indicate that any PSS planning to go to ballot in the same cycle must have a publishing facilitator identified
- Add a field to document a standard's 'common name'
- Add a 'lineage' field which allows explanation that if the project is a Release 2 or higher, is it supplanting, replacing, or coexisting with a previous release
- Add a field indicating that the TSC has received a Copyright/Distribution Agreement and that it's signed by both parties or that the TSC has been provided the verbiage that is outlined in the SOU
- Add a field to document external schedules that drive the project but are not readily known outside of the project team
- Add a field for co-sponsor approval date
- Add a field to address project that contain content which is already partially developed; these projects should be reviewed by the ArB

The 2013 W. Ed Hammond Volunteer of the Year Awards

HL7 honored two members with the 17th annual W. Edward Hammond, PhD Volunteer of the Year Award. Established in 1997, the award is named after Dr. Ed Hammond, one of HL7's most active volunteers and a founding member as well as past Board chair. The award recognizes individuals who have made significant contributions to HL7's success.

The 2013 recipients include:

- Ken Rubin, Healthcare Architect, EDS Civilian Government & DoD Healthcare Portfolio, Hewlett-Packard Enterprise Services
- Andy Stechishin, Chief Consultant, CANA Software & Services Ltd.

About the Recipients

Ken Rubin has been a member of HL7 since 1994 and has worked diligently over the years to promote and support standards adoption. He has served as a co-chair of the Services Oriented Architecture (SOA) Work Group since its inception and was instrumental in introducing service oriented thinking and processes to HL7. In addition, he facilitated the formation of the Healthcare Services Specification Project (HSSP), a standards development effort to create health industry SOA standards jointly sponsored by both HL7 and the Object Management Group (OMG). He continues to provide mentoring and leadership on services across a number of HL7 work groups. Ken also served as one of the inaugural chairs of the HL7 Process Improvement Committee (PIC) and helped establish PIC as a trusted and open forum advocate for HL7 work groups. He is also a professional photographer and has donated the photos he has taken at HL7 meetings free of charge.

Andy Stechishin has been a member of HL7 since 2008 and is very active in standards development. He currently serves in several leadership roles, including as the co-chair for four HL7 work groups: Publishing (since 2009), Tooling (since 2009), Implementable Technology Specification (since 2010) and Application Implementation and Design (AID), formerly known as RIMBAA (since 2012). In addition, Andy serves as a co-chair of the Technical and Support Services Steering Division of the Technical Steering Committee, the group responsible for overseeing the execution of standards development within HL7.

Photos courtesy of Kai Heitmann, MD

Congratulations

To the following people who passed the HL7 Certification Exams

Certified HL7 Version 2.x Chapter 2 Control Specialist

July 11, 2013
Ken K. Chen
Jeff Greenland
Saraswathi T. Gowda
Kevin Hill
Anand Raghavan
Scott C. Snow
Cheryl L. Sullivan
Sara L. Stewart
Shabbir Suterwala

September 26, 2013
Lori Dieterle
Anne Hegarty
Rajeev Krishnapillai

November 7, 2013
Jazmin Estrada
Hari Joshi

November 8, 2013
James H. Crout
Rodney E. Jenkins
Jennifer B. Lovvorn-Harris
Yahna D. Perry
Angela E. Wheatley

Computer Based Testing
Baskar Ramamoorthy
Bhargava Reddy
Venkata Krishna C Yarlagadda
Naga venkata s pudi
Thuppahi S De Silva

HL7 Canada

July 9, 2013
Milagros Lopez

HL7 India

June 22, 2013
Vinayak Hegde
Priya Mohan
Bhavna Ramani
Kandavel Sethumadhavan

September 21, 2013
Mohd. Ismail Ansari
Raviteja Annadanam
Suchitra K Bagalkoti
Divyen Bari
Ritesh Vijay Bhatkar
Mrunmayee Chogale
Ketaki Chopde
Anwesha Das
Chapel D'cunha
Neha H.Gogte
Jithin Jain
Prashant Deepak Kadam
Madhavi B. Karekar
Dipika Kewalramani
Shilpa Kharatmol
Rohini Khopar
Parikshit Krishna
Vikesh Kundar
Smita Mani
Pranali Matal
Sukriti Nandy Mazumdar
Neha Navale
Harshal Nawale
Prashant Nayak
Arundhati Pawaskar
Pratik Rane
Ritika Rawlani
Bhooshan Anand Sapre
Rahul Sharma
Amardeep D Singh
Kunal K Wadhwa

October 5, 2013
Shabina Abdul Kareem
Kavya Ambigapathy
Mamatha Atte
Shivakumar Deetur
Dr. Rekha Dhonde
Ramandeep Garg
Bincy George
Mahaboob Khan J
Shantha Kumar K N
Prashant Kulkarni
Anuradha Swamy
Shinu Kurian
Bharan Muppala
Sreejesh Niduvali
Minakshee Pandey
Spardha Smriti
Anuradha Swamy

HL7 Taiwan

August 10, 2013
Hsu Chih-Wei
Shih-Hao Ku
Sei-Peng-Corey Tu

October 24, 2013
Ming Chung
Hung-Wen Lin
Vance Yiu Cheong Lau

Certified HL7 CDA Specialist

July 1, 2013
Dwight D. Blubaugh
Junqiao Chen
Maria T. Esquela
Jeffery L. Garner
Michelle L. Hinterberg
Amir Hosinipur
Anna L. Langhans
Tiffany M. Livengood
Meredith E. Maddux
Kishore Metla

September 26, 2013
Jennifer Bessette
Derek Bush
Lauretta Carroll
Phil Cartagena
Ken Chen
Lars-Gunnar Hartveit
Erin Holt
Matthew Johnson
Thomas Ricciardi
Beatriz Rocha
Priyaranjan Tokachichu

November 7, 2013
Rebecca Angeles
Chakri V Abburi
Patrick Huber
Maxim Abramsky
Lauretta Carroll

Computer Based Testing
Peter Jordan
Mark Shortt

HL7 India

September 21, 2013
Jyoti Hemraj Moryani
Arpa Mukhopadhyay
Vidya Nadar
Pooja Nair
Mr. Harshad D. Patil
Pratyush Sharma
Anupriya Laxman Shiwarkar
Viral Solani

HL7 Spain

July 26, 2013
David Corrales Sánchez

Certified HL7 Version 3 RIM Specialist

July 11, 2013
Brenda Wood

September 26, 2013
Jeff Brown

Computer Based Testing
Preetha Balachandran

HL7 India

September 21, 2013
Ajay Nanubhai Parsana
Madhusudana Putta
Shardul M. Rane
Disha K. Vasant

Upcoming INTERNATIONAL EVENTS

HIMSS14
Orlando, FL
February 23–27, 2014
For more information, please visit
http://www.himssconference.org

HealthINF 2014 – 7th International Conference on Health Informatics
Eseo, Angers, Loire Valley, France
March 3–6, 2014
For more information, please visit
http://www.healthinf.biostec.org/

eHealth Week 2014
Nice, France
April 3–4, 2014
For more information, please visit
http://worldofhealthit.org/2014/

CDISC Europe Interchange 2014
Paris, France
April 7–11, 2014
For more information, please visit
http://www.cdisc.org/interchange

European Federation for Medical Informatics Special Topics Conference (EFMI STC 2014)
Budapest, Hungary
April 26–29, 2014
For more information, please visit
http://www.stc2014.org/

HL7 May Working Group Meeting
Phoenix, AZ
May 4–9, 2014
For more information, please visit
http://www.HL7.org/events/work-groupmeetings.cfm

eHealth 2014 (Austria)
Vienna, Austria
May 22–23, 2014
For more information, please visit
http://www.ehealth2014.at

eHealth 2014 (Canada)
Vancouver, BC, Canada
June 1–4, 2014
For more information, please visit
http://www.e-healthconference.com/

12th International Congress on Nursing Informatics (NI2014)
Taipei, Taiwan
June 21–25, 2014
For more information, please visit
http://www.e-healthconference.com/

MIE 2014
Istanbul, Turkey
August 31–September 3, 2014
For more information, please visit
http://www.mie2014.org/

SAVE THE DATE FOR HIMSS 2014

February 23 – 27, 2014
Orlando, FL

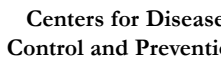
Join us in the HL7 Booth (#1265) at the HIMSS 2014 Exhibit

HL7 will once again offer a variety of education sessions covering HL7 standards and current industry topics such as Meaningful Use. Visit our booth to learn more about how HL7 and HL7 standards contribute to meaningful use and are helping change the face of healthcare IT.

HL7 CEO Dr. Charles Jaffe presents at the HL7 HIMSS exhibit.

www.himssconference.org

HL7 Benefactors
as of November 26, 2013



HL7 Welcomes New Staff Member

Pete Swanson, Web Developer

Pete joined the HL7 staff in October 2013 as the web developer. He has a varied background in web development, with a skill set that includes ColdFusion, SQL Server, and front end tools such as HTML, CSS, and Adobe Photoshop. He looks forward to using his design and functionality skills towards the enhancement and maintenance of the HL7 website.

Pete currently lives in Gilroy, CA. In his spare time, he enjoys sports, particularly running, hiking, and soccer.

HL7 ORGANIZATIONAL MEMBERS

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Allscripts
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Duke Translational Medicine Institute
Epic
Food and Drug Administration
GE Healthcare
GlaxoSmithKline
IBM
Intel Corporation, Digital Health Group
InterSystems
Kaiser Permanente
McKesson Provider Technologies
Microsoft Corporation
NICTIZ Nat.ICT.Inst.Healthc.Netherlands
Office of the National Coordinator for Health IT
Oracle Corporation - Healthcare
Partners HealthCare System, Inc.
Philips Healthcare
Quest Diagnostics, Incorporated
Siemens Healthcare
U.S. Department of Defense, Military Health System
U.S. Department of Veterans Affairs

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Rochester RHIO
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Sparx Systems
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Varian Medical Systems
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Healthcare Integration Technologies
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United Laboratory Network IPA, LLC
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General Interest

ASIP SANTE
Academy of Nutrition & Dietetics
ACLA
Advanced Medical Technology Association (AdvaMed)
Agency for Healthcare Research and Quality
Alabama Department of Public Health
American Assoc. of Veterinary Lab Diagnosticians
American College of Physicians
American College of Radiology
American Dental Association
American Health Information Management Association
American Immunization Registry Association (AIRA)
American Medical Association
American Psychiatric Association
American Society of Clinical Oncology
Arizona Department of Health Services
Arkansas Department of Health
Blue Cross Blue Shield Association
CA Department of Public Health
Cabinet for Health and Family Services
California Correctional Health Services
California Department of Health Care Services
California HealthCare Foundation
CalOptima
CDISC
Centers for Disease Control and Prevention/ CDC
Centers for Medicare & Medicaid Services
City of Houston
College of American Pathologists
College of Healthcare Information Mgmt. Executives
Colorado Regional Health Information Organization
Columbia University
Community Mental Health Center of Crawford County
Comprehensive Medical and Dental Program
Connecticut Department of Public Health
Contra Costa County Health Services
Council of Cooperative Health Insurance
Danish National eHealth Authority
Delaware Division of Public Health
Delta Dental Plans Association
Department of Developmental Services
Department of Health
DGS, Commonwealth of Virginia
Duke Translational Medicine Institute
ECRI Institute
Electronic Transactions Development Agency
Emory University, Research and Health Sciences IT
European Medicines Agency
Food and Drug Administration
Georgia Medical Care Foundation
Health Sciences South Carolina
HIMSS
ICCBBA, Inc.
IFPMA (as trustee for ICH)
Indian Health Service
Indiana Health Information Exchange
International Training & Education Center for Health
Iowa Department of Public Health
Japan Pharmaceutical Manufacturers Association
L.A. County Dept of Public Health
Louisiana Public Health Institute
Michigan Health Connect
Michigan Health Information Network
Ministry of Health - Slovenia
Minnesota Department of Health
Missouri Department of Health & Senior Services
NAACCR
National Association of Dental Plans
National Cancer Institute
National Center for Health Statistics/CDC
National Centre for Health Information Systems
National Council for Prescription Drug Programs
National eHealth Transition Authority (NEHTA)
National Institute of Standards and Technology
National Library of Medicine
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New Mexico Department of Health
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NICTIZ Nat.ICT.Inst.Healthc.Netherlands
NIH/CC
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North Carolina Health Information Exchange
OA-ITSD - Department of Mental Health
Office of the National Coordinator for Health IT
OFMQ
Oklahoma State Department of Health
Oregon Public Health Division
Pharmaceuticals & Medical Devices Agency
Phast
Primary Care Information Project, NYC Dept Health
Radiological Society of North America
Ramsey County Public Health
Region Sjaelland
Region Syddanmark
RTI International
SAMHSA
SC Dept. of Health & Environmental Control HS
Social Security Administration
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Technological University of Panama, CIDITIC
Telligen
Tennessee Department of Health
Texas Department of State Health Services
Texas Health Services Authority
The Joint Commission
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The National Council for BehavioralHealth
UC Davis School of Medicine
University HealthSystem Consortium
University of AL at Birmingham
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University of Texas Medical Branch at Galveston
University of Utah Pediatric Critical Care/ IICRC
UT Austin Health Information Technology Program
Utah Health Information Network
Virginia Department of Health

HL7 ORGANIZATIONAL MEMBERS, continued

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Wisconsin State Laboratory of Hygiene
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Blue Cross and Blue Shield of Alabama
Blue Cross Blue Shield of Arizona
Blue Cross Blue Shield of South Carolina
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Avalon Health Care
Barnabas Health
Blessing Hospital
Blount Memorial Hospital
Boston Children's Hospital
Butler Healthcare Providers
Carilion Services, Inc.
Cedars-Sinai Medical Center
Center for Life Management
CHI
Childrens Mercy Hospitals and Clinics
Children's of Alabama
Cincinnati Children's Hospital
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DESC
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Harris Corporation
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heartbase, inc.
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Infor
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Inofile
Inovalon
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Integrity Digital Soultions, LLC
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Intelligent Medical Objects (IMO)
INTELLIGENT RECORDS SYSTEMS & SERVICES
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Interfix, LLC
InterSystems
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MuleSoft
MZI HealthCare
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NexJ Systems Inc
NextGen Healthcare Information Systems, Inc.
Notable Solutions
NxTec Corporation
OA Systems, Inc.
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OMNICOM srl
Onco, Inc.
Optima Healthcare Solutions
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Summit Imaging, Inc.
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Surescripts
Surgical Information Systems
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Systematic Group
T System Inc
The CBORD Group Inc.
The Echo Group
The SSI Group, Inc.
Therap Services, LLC
Tiatros Inc.
TIBCO Software Inc.
Tietronix Software Inc.
Timeless Medical Systems Inc.
UBM Medica
Unibased Systems Architecture, Inc.
Uniform Data System for Medical Rehabilitation
Unlimited Systems
Valant Medical Solutions Inc.
Valley Hope Association - IMCSS
Varian Medical Systems
Versaworks, Inc.
VIP Medicine, LLC
Virtify
Visbion Ltd
Walgreens
WebMD Health Services
WellPoint, Inc.
Wells Applied Systems
Wellsoft Corporation
Wolters Kluwer Health
WorkAround Software, Inc.
Xerox State Healthcare, LLC
XIFIN, Inc.
XSUNT Corporation
Zoho Corp.
ZOLL
Zynx Health

2014 TECHNICAL STEERING COMMITTEE MEMBERS

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STEERING DIVISIONS

DOMAIN EXPERTS
Anatomic Pathology
Anesthesiology
Attachments
Child Health
Clinical Genomics
Clinical Interoperability Council
Clinical Quality Information
Community Based Collaborative Care
Emergency Care
Health Care Devices
Patient Care
Pharmacy
Public Health & Emergency Response
Regulated Clinical Research
Information Management

FOUNDATION & TECHNOLOGY
Application Implementation & Design
Conformance & Guidance for
Implementation/Testing
Implementable Technology Specifications
Infrastructure & Messaging
Modeling & Methodology
Security
Service Oriented Architecture
Templates
Vocabulary

TECHNICAL & SUPPORT SERVICES
Education
Electronic Services
International Mentoring Committee
Process Improvement Committee
Project Services
Publishing
Tooling

STRUCTURE & SEMANTIC DESIGN
Arden Syntax
Clinical Decision Support
Clinical Statement
Electronic Health Record
Financial Management
Imaging Integration
Mobile Health
Orders & Observations
Patient Administration
Structured Documents

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Architectural review Board

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Arden Syntax

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Attachments

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Blue Cross and Blue Shield of Alabama
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Child Health

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Clinical Decision Support

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HL7 Implementation Workshop

Gain real-world HL7 knowledge

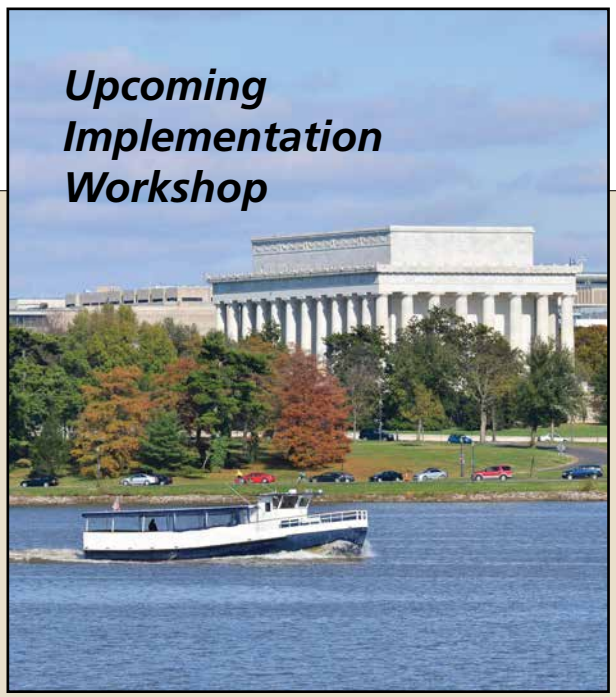
TODAY

that you can apply

TOMORROW

What is an Implementation Workshop?

An HL7 Implementation Workshop is a three-day hands-ons event focused on HL7-specific topics such as Version 2, Clinical Document Architecture (CDA®), and Fast Healthcare Interoperability Resources (FHIR®). It includes a combination of exercises and presentations to help attendees learn how to implement HL7 standards.



March 11–13, 2014
Meaningful Use and FHIR
Hilton Washington Dulles Airport
Washington, DC

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 Implementation Workshop are:

- **Efficiency**
  Concentrated 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**
  Become HL7 Certified: HL7 is the sole source for HL7 certification testing, now offering testing on Version 2.7, Clinical Document Architecture, and Version 3 RIM
- **Economical**
  A more economical alternative for companies who want the benefits of HL7's on-site training but have fewer employees to train

Upcoming WORKING GROUP MEETINGS

May 4 – 9, 2014

Working Group Meeting

Pointe Hilton Squaw Peak Resort
Phoenix, AZ

September 14 – 19, 2014

28th Annual Plenary & Working Group Meeting

Hilton Chicago Hotel, Chicago, IL

January 18 – 23, 2015

Working Group Meeting

Hyatt Regency on the Riverwalk
San Antonio, TX

May 10 – 15, 2015

Working Group Meeting

Hyatt Regency Paris –
Charles de Gaulle Hotel
Paris, France

October 4 – 9, 2015

29th Annual Plenary & Working Group Meeting

Sheraton Atlanta Hotel
Atlanta, GA