More Than You Think

HLZ INTERNATIONAL

2013 ANNUAL REPORT

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More Than You Think

HL7® VISION

To create the best and most widely used standards in healthcare.

HL7® MISSION

HL7 provides standards for interoperability that improve care delivery, optimize workflow, reduce ambiguity and enhance knowledge transfer among all of our stakeholders, including healthcare providers, government agencies, the vendor community, fellow SDOs and patients. In all of our processes we exhibit timeliness, scientific rigor and technical expertise without compromising transparency, accountability, practicality, or our willingness to put the needs of our stakeholders first.

DONALD MON, PHD
HL7 International Chair

2013 CHAIR REPORT

...making licensed standards and selected intellectual property freely available to the industry was... **HL7's most significant achievement in 2013.**

Dear Colleagues,

I am deeply honored to have served as the chair of HL7 for the past two years. I am pleased to report that in 2013, the last year of my term, we again made significant moves to transform HL7 and further enhance our standing in the industry as a premier standards development organization.

Freely Available Licensed HL7 Standards & Selected Intellectual Property

Strategically, making licensed standards and selected intellectual property (IP) freely available to the industry was, of course, HL7's most significant achievement in 2013. This move has been extremely well received by the healthcare industry. It has reduced barriers of adoption, enabled some governments to specify HL7 standards for their countries without imposing a financial burden on their constituents, increased HL7's visibility in the healthcare industry, and enhanced the industry's perception of HL7. "Free IP" has greatly increased HL7's relevance in the industry.

Enhanced Membership and Business Models

Whether to make HL7's IP free or continue to tie it to membership was a decision that had to be made first, because it affects many other major issues, such as our membership structure and business model, including that of the affiliates. Under the excellent guidance from HL7's Chief Executive Officer and Membership Committee, an enhanced membership model—one that emphasizes equitability and increased value to the members—was developed and is now being implemented.

The decision to license our IP for free also caused us to think more innovatively about our business model than ever before. Again, thanks to the excellent work of the Membership Committee, as well as HL7's Director of Education and Director of Global Partnerships and Policy, our business model now includes an increased emphasis on supporting implementers through tools and user group meetings, increased

use of distance education as a way to train and support greater numbers of developers and implementers all over the world, and outreach to policy makers, among other things.

Growth and Revitalization

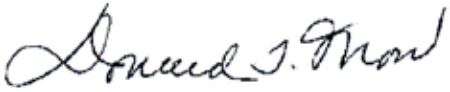
In addition, HL7 grew in a number of areas important to its mission, the healthcare industry, and to HL7's members. We launched a new Usability Work Group and revitalized our clinical research efforts through the Clinical Research-BRIDG Work Group. As with existing work groups, these will enable us to collaborate with new or different stakeholders as we jointly address the issues pertinent to usability and clinical research.

Succession Plan

A couple of years ago, HL7 celebrated its 25th anniversary. As we enter into our second 25 years, it is important to keep the energy, enthusiasm, and vitality of the organization moving forward through a succession plan. Thanks to their dedication, individuals who have never held such positions before have been elected to the Board of Directors, as co-chairs of various work groups, or volunteered to serve as members of committees and task forces. Our future will be shaped by this new set of leaders and volunteers.

Thank You for Your Support

As I complete my term as chair, I sincerely thank all of you for your support and for making these last two years some of the most professionally gratifying in my career. We've tackled some important issues together, and your support, collaboration, and professionalism helped make it all happen.



CHARLES JAFFE, MD, PHD
HL7 International
Chief Executive
Officer

2013 CEO REPORT

THE GROWTH OF HL7 WAS TRULY ORGANIC. NEW INVESTMENTS IN PEOPLE WERE REALIZED, INCLUDING A PERHAPS OVERDUE FOCUS ON THE GROWING DEMANDS OF THE IMPLEMENTATION COMMUNITY.

In no uncertain terms, 2013 has been a remarkable year for HL7. A single word or phrase would not adequately capture the metamorphosis of the organization. Of course, it has been different things to different people, all of whom shared in the accomplishments. It was a time when the wheels seemed to turn faster than ever, when the members came together in an unprecedented fashion, and yet the delicate balance that is a transparent and consensus-driven organization was somehow maintained.

A Year of Change

For HL7, 2013 was a year of change. After more than two decades, HL7 standards became freely available. And, that was just the start.

From some quarters, concerns were raised that HL7 was at risk to lose member organizations that found legal access to copyright material as the sole purpose for membership. On the contrary, electronic record vendors, academic medical centers, implementation organizations and government agencies on every continent embraced the change and provided even greater support.

As charitable benefactors and government agencies around the world praised the decision, a small but highly committed group of individuals, representing all of our stakeholder groups, began the arduous task of revising the business model. The response was swift and decisive, and a new array of member benefits was developed. By year's end, the impact of these innovative programs had helped to retain our traditional member base and foster growth in entirely new realms of participation.

The growth of HL7 was truly organic. New investments in people were realized, including a perhaps overdue focus on the growing demands of the implementation community. New work groups sprung to life, born from the demands that new stakeholders placed upon progressing toward interoperability. Well established disciplines, such as genomics, grew in interest and focus. Yet, the most significant change was an unprecedented resurgence of collaboration.

A Year of Collaboration

Yes, 2013 was the year of collaboration. As we moved closer to some old partners, the old and often unnoticed boundaries seemed to disappear. Nowhere was this more evident than our relationship with the Regenstrief Institute (developers of LOINC®) and the International Health Terminology Standards Development Organization (curators of SNOMED-CT®). The process was predicated on more than a memorandum of understanding. HL7 unveiled the *Vocabulary Authority* to better coordinate activities with these organizations, so critical to realizing interoperability.

Another remarkable step was taken when IHE (Integrating the Healthcare Enterprise) International agreed to a pilot, which for the first time, saw an IHE profile balloted in HL7. The agreement that led to this first step was several years in the making, but provided impetus for more challenging engagement. First announced at HIMSS 2013, the potential benefits of this effort were lost on no one.

Some realms of collaboration grew stronger. Certainly, epSOS, the European eHealth Project, was able to develop and enhance its implementation guide for the HL7 Clinical Document Architecture (CDA®), enabling the exchange of clinical summaries and electronic prescriptions across the borders of 27 European Union countries.

HL7 has also developed new international collaborations, and none is more vital than our relationship with the Pan-American Health Organization (PAHO) to foster eHealth technology and resource development among the countries of Latin America. In the US, we continue to work closely with the Centers for Disease Control and Prevention (CDC) to improve public health reporting and to enhance the immunization registry program.

During 2013, HL7 also moved closer to other US-based non-government organizations. Among these were the eHealth Initiative (eHI®) and the Bipartisan Policy Center, both of which are helping to drive healthcare information interoperability.

A Year of Innovation

If nothing else, 2013 was a year of innovation. Two truly notable projects have emerged from the HL7 Fresh Look program, designed to foster innovative approaches to standards and standards development. One of these, the Clinical Information Modeling Initiative (CIMI) is now supported by numerous organizations and standards development groups around the world. In the last year, it has grown in recognition and influence. Solution providers, implementers, and provider organizations have grown increasingly focused on the value this may bring to closing the interoperability gap.

At the same time, organizations around the world are anxiously awaiting the first Draft Standard of FHIR® (Fast Healthcare Interoperability Resources). The goal of FHIR is to greatly simplify implementation without sacrificing

CHARLES JAFFE, MD, PHD
HL7 International
Chief Executive
Officer

2013 CEO REPORT

FHIR DEVELOPMENT HAS PROVEN TO BE FASTER TO LEARN, FASTER TO DEVELOP AND FASTER TO IMPLEMENT.

information integrity. In its early stages, FHIR development has proven to be faster to learn, faster to develop and faster to implement. Even before the first draft is released, vendors and providers have begun to develop new implementations using the FHIR approach. Foremost among these are applications for healthcare data exchange in a mobile environment. In the coming year, many experts expect FHIR to be up to the challenge.

This year also saw the emergence and exceptional growth of a new work group focused on mobile health applications. At this time, new specifications are poised to bring greater interoperability to this realm. For HL7, mHealth is much more than electronic health record applications that can be ported to a mobile platform. Mobile health is about fostering interoperability of platforms and devices that bring data to far better use on remote platforms. This group also focuses on standards for security and privacy as well as supporting other initiatives, both with HL7 (such as FHIR) and with our global partners (including the mHealth Alliance and GS1®).

Within HL7, the critical role of education has taken center stage. The highly successful HL7 Fundamentals Course (formerly known as the e-Learning Program), which provides HL7 training around the world, is now available in four languages. At the same time, an entirely new resource, the Education Portal, has been born. From this site, HL7 members and non-members alike are able to access specific HL7 training programs and archived webinars, as well as enroll in HL7 online certification programs. The portal is expected to grow further to satisfy this global demand.

Less than a year old, the HL7 Policy effort has begun to accept the global challenges of providing a forum to share information and perspectives on healthcare information technology. In some sectors of the emerging global economy it may become transformative. This was brought to the fore in December, at which time the first Annual Policy Summit was held in Washington, DC. This two-day event brought together 45 experts and thought leaders from government, industry, education, and charitable organizations to a truly international

stage. Attendees were delighted by presentations from inspirational speakers, visionary government leaders, including the US National Coordinator for Healthcare IT, and from individuals with perspectives on healthcare and healthcare IT that spanned three or more decades. The 2014 Summit is expected to grow.

A Look Ahead to 2014

The emerging HL7 vision for standards implementation will be nurtured in 2014. This year saw the introduction of the HL7 Help Desk, which provided technical implementation guidance that enhanced utilization of HL7 specifications and in some cases drove down implementation time and costs. Next year will also see the birth of the HL7 User Group forum. As planned, user groups with specific needs and affinities will meet both virtually and in face-to-face settings. It is expected that User Group members will be able to share experiences and to exchange best practices.

In 2014, HL7 will begin a bold program in conformance testing. This program, developed in close collaboration with AEGIS, Inc., is designed from the ground up to be much more than a test once, then pass or fail program. The process is based upon the broadly deployed AEGIS DIL (Developers Integration Lab), which is a test environment that provides for asynchronous, 24/7, iterative testing and code enhancement. Industry and provider organizations do not want yet another test that drains hundreds of technical hours and achieve little more than another certificate for marketing purposes. The great promise of this program lies in the improved adherence to HL7 specifications, leading to significantly shortened implementation times and reduced development cost. By deploying the AEGIS platform, HealtheWay™, a public-private partnership supporting national eHealth Exchanges, has been able to realize saving in both the cost and time in the creation of interoperable networks.

From the HL7 Board of Directors to the volunteer members and from the Technical Steering Committee to the Advisory Council, all of us expect 2014 to be an even more remarkable year.

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JOHN QUINN

HL7 International
Chief Technology
Officer

2013 CTO REPORT

...OUR TECHNOLOGY PLAN AND INITIATIVES NEEDED TO CHANGE TO SUPPORT OUR NEW MEMBERSHIP MODEL.

Technology and Change at HL7

2013 was marked by a number of changes in a short period of time for all the reasons that our CEO Dr. Charles Jaffe has explained in his report. It should come as no surprise that the changes that have affected the availability of our intellectual property (IP), our membership model and our revenue model have also altered the demands on our organization for both the content of our IP and the technology that both our users and members want and need to use along with the IP.

Austin Kreisler

Two years ago, Austin stepped forward and volunteered to succeed Charlie McCay and take on the job as Technical Steering Committee (TSC) Chair. The role was relatively new in HL7 and is—in my opinion—the most demanding volunteer role in the organization. Austin did a wonderful job of extending the definition of this role and clearly succeeded in expanding the quality, timeliness and scope of HL7's TSC and its work groups. This extends also to the quality of our products and the timeliness of our ballots and publications for our users. I have been with HL7 for all of the almost 27 years that it has existed and I have never seen such rapid change and improved quality from the TSC. Thank you to Austin for a job well done. I also extend my gratitude to SAIC (now Leidos) for making Austin's time available to do this great work.

Ken McCaslin has stepped forward and as of January 1, 2014, taken over as our new TSC Chair. I see most of the same enthusiasm and energy in Ken that I also noticed early on with Austin. Quest Diagnostics has also agreed to support Ken as a volunteer in this role. The role of TSC Chair is critical to the organization, and the member occupying this role brings his or her experiences and energy in filling a key role that guides our volunteers.

Technology and Our Membership Benefit Model

As we neared the end of last year it became abundantly clear that our technology plan and initiatives needed to change to support our new membership model. The identification of these changes, and the planning of how to address them, is still in the beginning phases. In his report, Dr. Jaffe touched on one of our

initial projects to promote the availability of relevant certified conformance testing to our members. The first phase of work in this project is just completing now. Over the next few months we will evaluate the value provided by this initiative, including the value it brings to our members and to the usability of our IP by all of our users. I am hopeful that we will find delivery of new value to all by our growing and extending this offering.

Fast Healthcare Interoperability Resources (FHIR®—pronounced fire)

FHIR is a next generation standards framework created by HL7. It combines the best features of HL7's Version 2 (V2), Version 3 (V3) and Clinical Document Architecture (CDA®) product lines while leveraging the latest web standards and applying a tight focus on implementability.

FHIR is a standard for exchanging healthcare information electronically. HL7 has been addressing these challenges by producing healthcare data exchange and information modeling standards for over 26 years. It is a new specification based on emerging industry approaches, but informed by years of lessons around requirements, successes and challenges gained through defining and implementing HL7 V2, V3, the Reference Information Model (RIM), and CDA. FHIR can be used as a stand-alone data exchange standard, but can and will also be used in partnership with existing widely used standards (see *http://HL7.org/implement/standards/fhir/comparison.html*).

The aforementioned background information comes directly from the HL7 webpage dedicated to FHIR *(www.HL7.org/fhir)*. I encourage anyone reading this report to take the time and go explore this page to better understand what FHIR is and how it helps the use of HL7 standards over the Internet and other TCP/IP based networks.

Over the last ballot cycle the FHIR community has completed a Draft Standard for Trail Use (DSTU) that compiles all of the work that has occurred on FHIR over the last few years. We have also held connectathons during the last several HL7 working group meetings, demonstrating that vendors can take the FHIR specification and achieve a level of basic interoperability that meets the goals set out by the HL7 FHIR community. With the completion of the DSTU (and the report back that we get from the draft standards trial participants) we expect to move forward with specific bindings between FHIR and the widely used HL7 standards that also make up the core of many of the US ONC's meaningful use implementation guides.

I dedicate a significant part of this report to FHIR because so many others have decided that it is important. If we are to create interoperating electronic health record systems (EHRs) then we will also leverage the countless number of existing intra-organization and inter-organization HL7 interfaces that exist today. We will do this while making use of information technology resources such as TCP/IP networks and internet languages such as HTML, XML, etc.

JOHN QUINN

HL7 International
Chief Technology
Officer

2013 CTO REPORT

FOR MORE INFORMATION ON THE HTA PLEASE SEE:

HTTP://WWW.HL7.ORG/DOCUMENTCENTER/PUBLIC/WG/TERMAUTH/HL7%20TERMINOLOGY%20AUTHORITY.DOC

Industry feedback over the final quarter of 2013 suggests that it is important that we deliver FHIR as soon as possible and that we marry it to the HL7 V2, V3 and CDA standards which are vital for inter-organization healthcare interoperability. At a recent TSC meeting, it was determined that we have reached the critical point where FHIR is ready "enough" and stable enough in the DSTU state that the functional work groups in HL7 should start moving their existing widely used standards (e.g., lab orders and observations, transport of a CDA template (e.g., CCD), etc.) to the FHIR format.

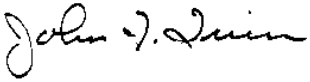
Terminology Authority

HL7 initiated the HL7 Terminology Authority (HTA) at the HL7 27th Annual Plenary & Working Group Meeting in September 2013. The charter for the Terminology Authority was approved by the HL7 Board of Directors at their May 2013 meeting.

The HTA, as a representative body of HL7 International, shall ensure that HL7 provides timely and high quality terminology products and services to meet its business needs. The HTA shall serve as the single point of contact with any external terminology standards development organizations (SDOs) with which HL7 has established, or in the future shall establish, formal relationships.

The Terminology Authority is required to support the Statement of Understanding (SOU) between the International Health Terminology Standards Development Organization (IHTSDO) and HL7. It will also be relevant to HL7's relationships with other terminology development organizations. The HTA will be concerned with the creation, implementation and management of HL7 processes for external terminology management. These processes will be informed by input from the existing Vocabulary Work Group and terminology practices within HL7. The activities of the Terminology Authority are intended to complement existing harmonization procedures.

The initial membership of the HTA includes: Heather Grain, Sandra Stuart, Jos Baptist, Jim Case, Jean Narcisi, Rob McClure and John Quinn.



COUNTRIES WITH HL7 AFFILIATES

Argentina
Australia
Austria
Bosnia & Herzegovina
Brazil
Canada
China
Colombia
Croatia
Czech Republic
Finland
France
Germany
Greece
Hong Kong
India
Italy
Japan
Korea
Luxembourg
The Netherlands
New Zealand
Norway
Pakistan
Puerto Rico
Romania
Russia
Singapore
Spain
Sweden
Switzerland
Taiwan
Turkey
United Kingdom
Uruguay

CALVIN BEEBE
HL7 International
Board Treasurer

2013 TREASURER REPORT

ALTHOUGH THE 2013 BUDGET HAD ORIGINALLY PROJECTED A NEED TO DIP INTO OUR RESERVES BY -$755K ...WE ACTUALLY OUT-PERFORMED THE BUDGET AND GENERATED +$248K NET INCOME.

2013 was a year of transition for HL7, as we licensed at no cost our primary standards and other select products. That single change will, in the long term, drive greater usage of our standards and the growth of the HL7 brand. However, in the short term, we are being challenged to adjust our business model, streamline our operations, and look for new opportunities and sources of revenue. The Finance Committee continues to closely monitor the trends in membership, but is encouraged by the new membership benefits that have been instituted as well as the success in the e-learning HL7 Fundamentals program, and the overall working group meeting attendance.

Although the 2013 Budget had originally projected a need to dip into our reserves by -$755K, I'm happy to announce that we actually out-performed the budget and generated +$248K net income. This leaves HL7 in a strong financial position with over 14 months of operating expenses in reserve, as we move forward with new initiatives to drive future growth and membership. The initiatives include:

- Help Desk pilot for members
- Establishment of policy conferences
- Establishment of HL7 Implementer User Groups
- Continued growth of online training and certification
- Establishment of testing and certification capabilities

A few notes:

- Only selected and significant revenues and expenses are noted in the tables below
- All figures are forecasted as of Dec. 16, 2013 in US dollars and are not yet audited
- All figures reflect HL7 International budgets and expenses only; Affiliate budgets and expenses are not included, other than the Affiliate Dues that Affiliates pay HL7 International as part of fulfilling the Affiliate Agreement

2013 REVENUES

Budget	Actuals	Difference	% Difference
Membership Dues			
$2.551M	$3.003M	+$452K	+18%
Affiliate Dues			
$194K	$232K	+$37K	+20%
Working Group Meetings			
$864K	$985K	+$120K	+14%
Implementation Workshops			
$242K	$204K	-$37K	-15%
Off-Site Workshops & Certification Testing			
$114K	$90K	-$24K	-21%
e-Learning Fundamentals			
$247K	$291K	+$44K	+18%
Webinar Series			
$50K	$59K	+$9K	+19%
Revenue Summary			
$4.383M	**$5.035M**	**+$652K**	**+15%**

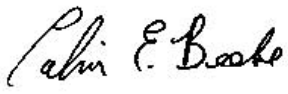
2013 EXPENSES

Budget	Actuals	Difference	% Difference
Staff (including HQ, CEO, CTO & attributable expenses)			
$2.389M	$2.235M	-$153K	-6%
Infrastructure &Tooling			
$378K	$372K	-$6K	-2%
Marketing & Communications			
$160K	$130K	-$30K	-19%
Investment/R&D/Innovation			
$50K	$0K	-$0K	-100%
Working Group Meetings			
$850K	$790K	-$59K	-7%
Implementation Workshops			
$135K	$117K	-$18K	-13%
e-Learning Fundamentals			
$75K	$129K	+$54K	+72%
Off-Site Workshops & Certification Testing			
$46K	$14K	-$31K	-68%
Other Events (e.g. HIMSS, MIE, Board Retreat, etc.)			
$203K	$199K	-$5K	-3%
Expense Summary			
$5.138M	**$4.787M**	**-$351K**	**-6.8%**

2013 NET INCOME AND CASH RESERVES

HL7 International maintains a policy of setting a six month cash reserve to cover operations of the organization. At the end of 2013, the pre-audited cash reserves were as follows.

Budget	Actuals	Difference	% Difference
Net Income			
-$755K	+$248K	+$1.003M	132%
Cash Reserves			
10.79 months	14.10 months	3.31 months	+30%



MARK MCDOUGALL
HL7 International
Executive Director

2013 EXECUTIVE DIRECTOR REPORT

IN THE FOURTH QUARTER, HL7 OFFICIALLY LAUNCHED AN EDUCATION PORTAL THAT PROVIDES A GATEWAY TO ON-DEMAND PROFESSIONAL DEVELOPMENT RESOURCES RELATED TO THE STANDARDS AND TO SPECIALIST CERTIFICATIONS.

MEMBERSHIP REPORT

HL7 had 1,973 members on December 31, 2013, as compared to 2,401 one year earlier. The decline equates to a net loss of 428 total members, or 17%. We currently have 24 benefactors and 25 supporters. HL7 attracted one new benefactor and two downgraded. There was an overall gain of 5 new supporter level members.

Individual Memberships

As of December 31, 2013, HL7 had a total of 309 individual members. This total reflects 240 new members joining or being re-instated during 2013, as compared to 269 new members joining during 2012. For the 2013 year, there was a net decline of 33 members, as compared to a net loss of 88 during 2012. Six of these individual members upgraded to organizational memberships during 2013.

Organizational Memberships

There were a total of 642 organizational member firms on December 31, 2013, as compared to 796 one year earlier. For organizational members in 2013, we had 295 new organizations joining or being re-instated as compared to 442 in 2012. For the year, there was a net decrease in organizational memberships of 154, which compares to a decrease of 27 members during 2012.

International Affiliate Members

During 2013, there were 35 countries with active HL7 affiliates, including Argentina, Australia, Austria, Bosnia & Herzegovina, Brazil, Canada, China, Colombia, Croatia, Czech Republic, Finland, France, Germany, Greece, Hong Kong, India, Italy, Japan, Korea, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Pakistan, Puerto Rico, Romania, Russia, Singapore, Spain, Sweden, Switzerland, Taiwan, Turkey, United Kingdom, and Uruguay. Two new affiliates, HL7 Malaysia and HL7 Philippines were approved in 2013 pending finalization of paperwork and payment of dues. They are expected to become active affiliates in 2014.

Membership Recognition

HL7 has been very fortunate to repeatedly attract incredibly talented and dedicated volunteers. In an attempt to recognize some of these dedicated individuals, during HL7's 27th Annual Plenary and Working Group Meeting in September, the 17th Annual W. Edward Hammond, PhD HL7 Volunteer of the Year Awards were presented to these well-deserving volunteers:

- **Ken Rubin,** healthcare architect, EDS Civilian Government & DoD Healthcare Portfolio, Hewlett-Packard Enterprise Services
- **Andy Stechishin,** chief consultant, CANA Software & Services Ltd.

HL7 also announced the names of the 2013 Class of HL7 Fellows. The HL7 Fellowship program recognizes individuals who have contributed significantly to HL7 and have held at least 15 years of continuous HL7 membership. HL7 is pleased to recognize and congratulate the following individuals as the 2013 class of HL7 Fellows:

- **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

MEETINGS & EDUCATION REPORT

January Meeting in Phoenix, Arizona

HL7 convened the January 2013 Working Group Meeting in Phoenix, Arizona. The meeting was productive for its 428 attendees who participated in over 40 work group meetings, 14 of which conducted co-chair elections. Attendees also took advantage of 31 tutorials and three certification tests that week.

May Meeting in Atlanta, Georgia

We served 369 attendees at our May Working Group Meeting held in Atlanta, Georgia, May 5-10, 2013. Over 40 HL7 work groups convened meetings in Atlanta, 18 of which conducted co-chair elections. Attendees also took advantage of 28 tutorials and three certification tests that week.

27th Annual Plenary Meeting in Cambridge, Massachusetts

HL7's 27th Annual Plenary and Working Group meeting convened September 22-27, 2013 at the Hyatt Regency Hotel in Cambridge. The 489 attendees participated in a week filled with the plenary meeting, 55 work group meetings, and 27 educational tutorials.

This year's plenary meeting focused on the timely topic of HL7's role in care coordination. The slate of speakers and topics covered were quite impressive.

Highlights include:

- *The Next Generation of Interoperability* by John Halamka, MD, MS is Chief Information Officer of the Beth Israel Deaconess Medical Center, Chief Information Officer and Dean for Technology at Harvard Medical School, and 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
- *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

WEBINAR REPORT

The HL7 Webinar Program had a successful year offering a total of twenty-two webinars. Many of these webinars were multi-part series. This year marked the addition of three Member Advantage webinars available free as a member benefit, and a series of fee-based Skill Building webinars aimed at expanding online training opportunities for certification and professional development worldwide. Topics included the following: Meaningful Use Stage 2, Clinical Document Architecture (CDA®), Version 2.7 and Version 3 Reference Information Model (RIM) exam preparation, Quality Reporting Document Architecture (QRDA), and the Continuity of Care Document (CCD®). Other subjects included: Clinical Genomics, Fast Healthcare Interoperability Resources (FHIR®), Health IT Policy Snapshots, the Help Desk Pilot and HL7 Member Benefits. Live attendees numbered 541 with revenue totaling $57,244. Each webinar was also recorded live and posted to the HL7 Education Portal for on-demand, fee-based or free downloads.

Education Portal

In the fourth quarter, HL7 officially launched an Education Portal that provides a gateway to on-demand professional development resources related to the standards and to specialist certifications. The web-based portal is designed to serve as a highly accessible central repository for both paid and free training and educational materials for HL7 constituents world-wide. It also includes a link to certification information and registration as well as an RSS feed announcing upcoming educational opportunities. The repository provides a range of recorded webinars available 24/7 on topics including Meaningful Use Stage 2, Skill Building for Certification Test Preparation, members-only webinars, and free webinars such as "How to Design & Deliver an HL7 Tutorial." The portal is for everyone, members and non-members alike, and supports payment tiers depending on membership status. Thus far, over 238 people have accessed the portal.

Remote/Distance Fundamentals Course

The HL7 Fundamentals Course (formerly known as e-Learning) is a web-based workshop which includes a set of guided exercises that teaches by practice and example. The course focuses on learning by doing. During 2013, HL7 produced eleven Fundamentals courses around the world that served 813 students. These courses were produced by HL7 International, HL7 Argentina, HL7 Austria, HL7 Brazil, HL7 Italy, HL7 Pakistan and HL7 Romania.

Computerized Certification Testing Program

With the launch of computer based testing (CBT) on July 1, HL7 expanded opportunities worldwide to those seeking certification in CDA®, Version 2.7 and Version 3 RIM. Further, test results and certificates are now available immediately. A robust web page centralizes information about certification specialties, training opportunities and resources for exam preparation, and provides a gateway to registration. HL7 partnered with Kryterion, a leader in test development and delivery, to administer its certification exams at over 400 High Stakes Online Secure Testing (HOST) Centers worldwide. In addition to HOST Centers, test-takers may opt for Online Proctored testing from their own computers anywhere in the world, provided they have Internet access and a qualified external webcam. HL7 is also able to set up its own testing network for on-site testing anywhere with Internet service and has done so at the September Working Group Meeting and the Implementation Workshop in Philadelphia. By year's end we expect that over 60 people will have used the system from countries including Argentina, Canada, India, New Zealand and the United States. Since paper and pencil testing expired at the end of 2013, everyone is now required to test using the CBT system.

Certification Testing Report for 2013

HL7's popular certification program continues to attract hundreds of individuals from around the globe each year. During 2013, 383 individuals passed the exam to become HL7 certified specialists. The worldwide number of Certified HL7 specialists by type of exam is provided below.

Certification Exam	# Certified in 2013	# CBT Certified (new in 2013)	Total # Certified
Version 2	257	12	3103
Clinical Document Architecture	81	18	603
Version 3 Reference Information Model (RIM)	14	2	342
Total Certified HL7 Specialists	352	32	4048

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HL7 COLLABORATES

HL7 formally collaborates with many organizations across the industry. The organization currently holds formal agreements with the following groups:

- Accredited Standards Committee X12 - ASC-X12
- America's Health Insurance Plans (AHIP)
- American Dental Association (ADA)
- American Society for Testing Materials (ASTM)
- BioPharma Association Associate - SAFE
- CEN/TC 251 (European Committee for Standardization)
- California HealthCare Foundation (CHCF)
- Cientis Technologies Inc.
- Clinical and Laboratory Standards Institute (CLSI)
- Clinical Data Interchange Standards Consortium (CDISC)
- Continua Health Alliance (CHA)
- Digital Imaging and Communication in Medicine (DICOM)
- eHealth Initiative, Inc. (eHI)
- GS1
- Implementation of Regulatory Information Submission Standards (IRISS)
- Institute for Electrical and Electronic Engineers (IEEE)
- Integrating the Healthcare Enterprise (IHE)
- International Conference on Harmonisation (ICH)
- International Health Terminology Standards Development Organisation (IHTSDO)
- International Organization for Standardization (ISO)
- Logical Observation Identifiers Names and Codes (LOINC)
- National Council for Prescription Drug Program (NCPDP)
- Object Management Group (OMG)
- Smart Open Services for European Patients (epSOS) – European eHealth Project
- The Health Story Project
- Workgroup for Electronic Data Interchange (WEDI)

HL7 2013 STANDARDS SNAPSHOT

HL7 STANDARDS RECEIVING ANSI APPROVAL IN 2013

- HL7 Version 3 Standard: Medication Statement and Administration Event, Release 1
  Date Approved: 2/20/2013
- HL7 Version 3 Standard: Care Provision; Care Transfer Topic, Release 1
  Date Approved: 2/20/2013
- HL7 Version 3 Standard: Care Provision; Queries Care Record Topic, Release 1
  Date Approved: 2/20/2013
- HL7 Version 3 Standard: Care Provision; Care Record Topic, Release 1
  Date Approved: 2/20/2013
- HL7 Version 3 Standard: Care Provision Domain Information Model, Release 1
  Date Approved: 2/20/2013
- HL7 Version 3 Standard: Reference Information Model, Release 5
  Date Approved: 3/7/2013
- Health Level Seven Arden Syntax for Medical Logic Systems, Version 2.9
  Date Approved: 3/14/2013
- HL7 Version 3 Standard: Immunization Messaging, Release 1
  Date Approved: 3/22/2013
- HL7 Version 3 Standard: Retrieve, Locate, and Update Service (RLUS), Release 1
  Date Approved: 3/22/2013
- HL7 Version 3 Standard: Infrastructure Management; Control Act, Query and Transmission, Release 1.1
  Date Approved: 4/24/2013
- HL7 V3 Standard: Common Message Element Types, Release 3
  Date Approved: 7/5/2013
- HL7 Version 3 Standard: Reference Information Model, Release 6
  Date Approved: 8/6/2013
- HL7 Implementation Guide for CDA® Release 2 – Level 3: Healthcare Associated Infection Reports, Release 1– US Realm
  Date Approved: 8/9/2013
- HL7 Version 3 Standard: XML Implementation Technology Specification - V3 Structures, Release 2
  Date Approved: 8/16/2013
- HL7 Version 3 Standard: XML Implementation Technology Specification R2; ISO-Harmonized Data Types, Release 1
  Date Approved: 8/30/2013
- HL7 Version 3 Standard: Abstract Transport Specification, Release 1
  Date Approved: 9/18/2013
- HL7 Version 3 Standard: Implantable Device Cardiac - Follow-up Device Summary, Release 2
  Date Approved: 10/11/2013

HL7 DRAFT STANDARDS FOR TRIAL USE (DSTUS) PUBLISHED IN 2013

- HL7 Implementation Guide for CDA® Release 2 - Level 3: Healthcare Associated Infection Reports, DSTU Release 9 - US Realm
- HL7 Implementation Guide for CDA® Release 2: CDA Framework for Questionnaire Assessments, DSTU Release 2
- HL7 Implementation Guide for CDA® Release 2: Genetic Testing Reports, DSTU Release 1
- HL7 Implementation Guide for CDA® Release 2: Long-Term Post-Acute Care Summary, DSTU Release 1
- HL7 Implementation Guide for CDA® Release 2: Exchange of Clinical Trial Subject Data; Patient Narratives, DSTU Release 1
- HL7 Version 3 Implementation Guide: Medication Statement Service Profile Using hData, Release 1
- HL7 Version 3 Standard: Context-Aware Knowledge Retrieval Application (Infobutton); Knowledge Request, Release 1
- HL7 Version 3 Standard: Blood, Tissue, Organ; Donation, Release 1
- HL7 Version 3 Domain Analysis Model: Diet and Nutrition Orders, Release 2
- HL7 Version 2.5.1 Implementation Guide: Birth and Fetal Death Reporting, Release 1 - US Realm
- HL7 Implementation Guide for CDA® Release 2: Clinical Oncology Treatment Plan and Summary, Release 1
- HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 2 - US Realm
- HL7 Version 2.5.1 Implementation Guide: S&I Framework Laboratory Test Compendium Framework, Release 2 - US Realm
- HL7 Version 2.5.1 Implementation Guide: S&I Framework Laboratory Orders from EHR, Release 1 - US Realm
- HL7 Version 2 Implementation Guide: Implementing the Virtual Medical Record for Clinical Decision Support (vMR-CDS), Release 1
- HL7 Version 3 Standard: Representation of the Health Quality Measures Format (eMeasure), DSTU Release 2
- HL7 Version 3 Domain Analysis Model: Laboratory Orders, Release 1

INFORMATIVE DOCUMENTS PUBLISHED IN 2013

- HL7 Version 2 Implementation Guide: Clinical Genomics; Fully LOINC-Qualified Genetic Variation Model, Release 2
- HL7 Version 3 Standard: XML Implementation Technology Specification R2 Guide, Release 1
- HL7 Version 3 Implementation Guide: Family History/Pedigree Interoperability, Release 1
- Cardiology Domain Analysis Mode, Release 2
- HL7 Version 3 Domain Analysis Model: Emergency Medical Services, Release 1 – US Realm
- HL7 Version 3 Domain Analysis Model: Preoperative Anesthesiology, Release 1

- HL7 Version 3 Standard: Emergency Medical Services Domain Information Model, Release 1
- HL7 CDA R2 Implementation Guide - Supplement to Consolidated CDA for Attachments, Release 1
- HL7 Version 3 Domain Analysis Model: Behavioral Health Assessment, Release 1 – US Realm
- HL7 Version 3 Allergy and Intolerance Domain Analysis Model, Release 1
- HL7 Version 3 Domain Analysis Model: Pressure Ulcer Prevention, Release 1
- HL7 Version 2.5.1 Implementation Guide: Height and Weight Report, Release 1 (US Realm)
- HL7 Implementation Guide for CDA® R2: Patient Generated Document Header Template, Release 1
- HL7 Version 3 Specification: Data Elements for Emergency Department Systems (DEEDS), Release 1 - US Realm
- HL7 Templates Registry Business Process Requirements Analysis, Release 1
- HL7 Implementation Guide for CDA® Release 2: HIV/AIDS Services Report, Release 1 - US Realm
- HL7 Virtual Medical Record for Clinical Decision Support (vMR-CDS) Templates, Release 1
- HL7 Virtual Medical Record for Clinical Decision Support (vMR-CDS) XML Implementation Guide, Release 1
- HL7 Virtual Medical Record for Clinical Decision Support (vMR-CDS) Logical Model, Release 2

HL7 WORK GROUPS

Anatomic Pathology
Anesthesia
Application Implementation and Design (formerly RIMBAA)
Architectural review Board
Arden Syntax
Attachments
Child Health
Clinical Decision Support
Clinical Genomics
Clinical Interoperability Council
Clinical Quality Information
Clinical Statement
Community Based Collaborative Care
Conformance & Guidance for Implementation/ Testing
Education
Electronic Health Records
Electronic Services
Emergency Care
Financial Management
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HEALTH LEVEL SEVEN® INTERNATIONAL

3300 WASHTENAW AVENUE, SUITE 227

ANN ARBOR, MI 48104 USA

(+1) 734-677-7777

(+1) 734-677-6622

HQ@HL7.ORG

WWW.HL7.ORG