FHIR –
HL7’s Hottest New Standard

By Austin Kreisler, Chair, HL7 Technical Steering Committee
and Lloyd McKenzie, FHIR Project Coordinator

If you were at the May Working Group Meeting in Vancouver, you likely noticed the excitement about a new standard called FHIR. If you were not at that meeting, you may be somewhat puzzled about what FHIR is and why there is so much buzz about this new standard. First, the name FHIR stands for “Fast Healthcare Interoperability Resources.” FHIR is pronounced “Fire.” Let’s look at that name a little closer:

• Fast – it’s intended to be fast to develop and, more importantly, fast to implement
• Interoperability – it’s focused on being a standard for interoperability (no different from most HL7 standards)
• Healthcare – no surprise here, HL7 is about healthcare
• Resources – what the heck are those?

The introduction to FHIR states:

“These resources represent granular clinical concepts that can be exchanged in order to quickly and effectively solve problems in healthcare and related processes. The resources cover the basic elements of healthcare – patients, admissions, diagnostic reports, medications, and problem lists, with their typical participants, and also support a range of richer and more complex clinical models.”

A FHIR Resource is analogous to an HL7 Version 2.x “Segment” or a Version 3 “CMET” (Common Message Element Types). FHIR Resources are:

• Granular – they are the smallest unit of operation, and a transaction scope of their own
• Independent – the content of a resource can be understood without reference to other resources
• Simple – each resource is easy to understand and implement without needing tooling or infrastructure (though that can be used if desired)
• RESTful – resources are able to be used in a RESTful exchange context
• Flexible – resources can also be used in other contexts, such as messaging, document or SOA architectures, and moved in and out of RESTful paradigms as convenient
• Extensible – resources can be extended to cater for local requirements without impacting on interoperability
• Web Enabled – where possible or appropriate, open internet standards are used for data representation
• Free for use – the FHIR specification itself is open - anyone can implement FHIR or derive related specifications without any IP restrictions

You can find out a lot more about the technical details regarding FHIR at: http://www.hl7.org/fhir.

Continued on page 2
FHIR, continued from page 1

FHIR is built on the HL7 Reference Information Model (RIM), data types and vocabulary. FHIR hides the complexity of Version 3 (V3) from the implementer while leveraging the semantic strength of V3. FHIR also leverages the concept of extensions from HL7 2.x which has the capability of z-extensions. It will allow extensions, but does so in a controlled fashion that should avoid many of the issues with the 2.x extension mechanism.

FHIR is built on certain design premises. It’s designed for the 80%, not 100%, meaning it only includes data elements in the artifacts if 80% of all implementers of that artifact will use the data element. FHIR extensions allow sharing of those data elements expected to be used by fewer than 80% of implementers (“the 20%”). Unlike V3, FHIR focuses on documenting what the implementer needs, not what the modelers thought or designers need to remember. FHIR documentation strives to be concise; every word written is a word that must be read thousands of times. FHIR focuses on the physical wire format (XML), not an abstract implementable technology specification (ITS). FHIR also requires wire format stability from release to release. FHIR retains the semantic rigor of HL7 V3 but hides it from implementers. The V3 semantic richness is still there for implementers who want to leverage it.

The “Fast” aspect of FHIR is very important. Fast to develop means that the FHIR standard development is intended to be a rapid process. FHIR resources are documented in a spreadsheet format. Java tooling has already been developed to create the technical artifacts from these resource definitions. Fast to implement means that developing a FHIR based interface or application should be quick and simple. FHIR has been designed to utilize off the shelf tools to enable very rapid implementation. There are already a couple of FHIR test servers publically available as well as example applications using FHIR. Obviously, these are all based on what is currently the draft specification of FHIR.

One thing to understand about FHIR today is that it is under development as an HL7 Standard. Like any other HL7 Standard, it will go through the HL7 ballot process. The current plan is for FHIR to be balloted as draft for comment this summer. That ballot will cover the methodology for developing FHIR as well as a small set of draft resources. During the May Working Group Meeting in Vancouver, the FHIR team (Grahame Grieve, Ewout Kramer and Lloyd McKenzie) joined a number of work groups to discuss development of FHIR resources. One project for developing FHIR resources for Pharmacy has been approved and there are likely more projects being considered by other work groups. The first DSTU ballot for FHIR is expected to occur as part of the January 2013 ballot cycle.

How will HL7 be managing the development and balloting of the FHIR standard? As this article is being written, the Technical Steering Committee is considering how FHIR will be managed within the HL7 organization. The TSC is using another HL7 standard called SAIF (Service-Aware Interoperability Framework) to set up the FHIR governance, management and methodology within HL7. FHIR governance will define and oversee the boundaries of the FHIR standard and FHIR resources. FHIR management will be responsible for coordinating development of resources, ensuring that developers are following FHIR methodology, as well as performing quality assurance on the FHIR artifacts being developed. FHIR methodology will be responsible for defining guidelines, validation rules and best practices for use by work groups in constructing FHIR artifacts. At this point, the methodology group will likely be the Modeling and Methodology Work Group.

continued on page 9
Interoperability in healthcare IT in Europe is characterized by strong political support, increased awareness, and pockets of best practice. The European Union (EU) digital Agenda 2020 has recognized interoperability standards as one of the main pillars in its mission to achieve the triple win: sustainable healthcare systems, quality care, and innovative solutions that unlock market potential. EU-wide initiatives such as the European eHealth Project (epSOS), the Semantic Healthnet network of excellence, the European Interoperability Framework, the eHealth Governance Initiative (eHGI), and the eHealth Network address interoperability at the semantic, technical, organizational, and political levels in Europe. Thus, interoperability in healthcare IT is perceived as a driver to contain costs as well as improve patient safety and quality of care; but, more importantly, as an enabler to innovative eHealth solutions. In her speech, Nellie Croes, commissioner for the Digital Agenda, and vice president of the European Commission, said that in the future she will not need to worry about her health record, as it will be available in the cloud.

Although there is some awareness of the direct and indirect economic benefits of interoperability, the business models for interoperability need to be reworked to unlock the market potential. This was the topic of an HL7-organized panel at the recent eHealth Week & World of Health IT 2012 Congress in Copenhagen that highlighted the notion of incremental interoperability championed by HL7 CDA®.

Fredrik Linden, coordinator of the epSOS large scale pilot for cross-border ePrescription and Patient Summaries; Matic Megli, coordinator of the PAR-ENT joint action for patient registries; Rick Cnossen, from Intel; and myself participated in a panel moderated by HL7 CEO Charles Jaffe, MD, PhD, for a focused discussion on interoperability. In his talk, Fredrik Linden quoted Mark Bertolini from AETNA pointing out that the “future lays in uncommon connections” and comparing paper records with electronic health records, noted the environmental impact from savings in paper (estimated 1,000 tons a week), as well as savings in accessibility (time spend searching for missing documents), sharing of records, and organization of care (savings in time).

Rick Cnossen outlined the keys to successful product interoperability strategy that leads from requirements to viable products: market viable use cases, standards to enable the requirements, business conditions that support interoperability, interoperability guidelines, interoperability compliance testing, and promotion (marketing, education, conferences), presenting WiFi as a successful model.

Matic Megli focused on the public health and research perspective, noting the tremendous effort lost in merging data from different clinical or population registries, resulting frequently in data of poor quality that does not add enough value and could mislead policy makers. Starting from Porter’s five forces view of healthcare IT, Matic moved on to reflect that healthcare providers as purchasers are mostly frustrated due to IT vendor lock-in, creating low buying power and discouragement for new entrants. However, with interoperability, a different landscape is gradually forced. This results in reduced entry barriers, reduced lock-in, and new (XAAS, plug-and-play) business models where once deemed impossible: business intelligence, clinical decision support, business rules and process management. He concluded that healthcare providers need to be aware of the financial value of reduced lock-in risk when choosing interoperable solutions.

Figure 1: Innovation prizes at the eHealth Week

Economics of Interoperability

Report from an HL7-organized panel at the eHealth Week/World of Health IT, Copenhagen, May 7-9, 2012

by Catherine Chronaki, Affiliate Director, HL7 Board of Directors

continued on page 7
This year London hosts the 2012 Summer Olympic Games, officially the Games of the XXX Olympiad. When thinking of all of the Olympic events and the participants from around the globe, I was reminded of a few similarities to the HL7 organization and activities – albeit on a smaller scale and somewhat a stretch.

The 2012 Summer Olympics are expecting athletes from 204 countries. HL7 has members from 58 countries – a very impressive number.

The Olympic record for weightlifting (“clean & jerk”) is 263 kg (580 pounds). HL7 has an incredibly valuable group of people that do the heavy lifting for HL7: the 146 co-chairs of our work groups who serve as the back bone of the HL7 organization and lead the effort to produce our standards.

The Olympic record for running the marathon (42.195 km, or 26 miles and 385 yards) is 2 hours, 6 minutes and 32 seconds. HL7 members collectively participate in marathon conference calls routinely. Just last month, HL7 members logged 104,427 minutes of HL7 related conference calls. Yes, that was all within one month.

A total of 4,700 medals for the 2012 Olympic and Paralympic Games have been produced. HL7 has awarded 64 Volunteer of the Year Award recipients and 30 HL7 Fellows to-date. For a complete list of these well deserving HL7 award winners, please go to HL7’s website at these URLs.
http://www.hl7.org/about/hl7volunteers.cfm
http://www.hl7.org/about/hl7fellows.cfm

Vancouver Welcomes HL7 Again
For its second time, Vancouver welcomed HL7 for another productive and enjoyable HL7 May Working Group Meeting – this time during the week of May 13, 2012. Situated along British Colombia’s coastline and majestic mountains, Vancouver was one of the most beautiful cities that ever hosted an HL7 meeting. We produced 30 tutorials and hosted over 60 work groups and committee meetings in Vancouver.

On behalf of the HL7 staff and board, I extend a warm thank you to the members of HL7 Canada and their WGM Planning Committee for their invaluable guidance and support that helped make this recent meeting a big success. I would also like to single out these individuals for going above and beyond the call of duty. Their guidance and dedication were instrumental to the success of this meeting:
• Michael van Campen
• Melva Peters
• Rajan Rai

The 2012 HL7 Board of Directors. First row from left: Catherine Chronaki; W. Ed Hammond, PhD; Becky Kush, PhD; Jill Kaufman, PhD; Diego Kaminker; and Michael van Campen. Second row, from left: Don Mon, PhD; Mark McDougall; Doug Frisina, MD, PhD; Charles Jaffe, MD, PhD; and Keith Boone. Top row, from left: Austin Kreisler; Ed Tripp; Richard Dixon Hughes; James Ferguson; and Bob Dolin, MD
We are pleased to also recognize all of the organizations that sponsored key components of our recent Working Group meeting in Vancouver, Canada. Thanks in part to the generous sponsorship by GPI, our Wednesday evening networking reception was a Vancouver harbor cruise on the Queen of Diamonds ship. The additional sponsorship support provided by these organizations contributes heavily to HL7’s meeting budget and is much appreciated.

- Beeler Consulting – MnM Facilitators Roundtable dinner meeting
- Gordon Point Informatics – Networking reception co-sponsor
- INTERFACEWARE – Lanyards
- LINKMED – Morning coffee break all week
- Sparx Systems – Co-Chair Dinner Meeting

**Plenary Meeting**

We encourage you to join us in Baltimore, Maryland for HL7’s 26th annual Plenary Meeting on September 10, 2012. The theme will be HL7 in the Era of Patient Empowerment. Presentations will cover a wide range of topics, such as:

- Engaging Patients with Standards: how the HIT standards professional can transform healthcare by enabling patients to be informed and informing; bridging the legacy and innovative technologies; harmonizing EHR and patient facing system

*continued on page 6*
Update, continued from page 4

interactions; maximizing the data to improve quality.

• The Rise of e-Patients: Three technology revolutions in the last generation have changed the way patients care for themselves and interact with doctors and peers: 1) the internet/broadband revolution; 2) the mobile revolution; 3) the social networks revolution. Discuss how patients and caregivers use these technologies to inform themselves, deal with medical providers, and share their stories with fellow patients and their loved ones.

• Panel discussion featuring presentations from different stakeholders in the mobile health space on how they view the future of mobile health and HL7’s potential role in this evolving arena

For more details on the HL7 Plenary meeting, please see the schedule on pages 12-13 or go to the www.HL7.org website.

Care Connected by HL7 Campaign

HL7 recently launched a membership outreach campaign through an HTML email promoting our new “Care Connected by HL7” logo with a sports theme encouraging industry stakeholders to “Get in the game”. These logos were initially intended to be used on HL7 members’ splash screens when their applications are started. We are pleased to report that this campaign has received quite a bit of attention. This logo has also been used on HL7 member websites as well.

In an effort to address the needs of our HL7 Affiliates, we also made the original files available to our HL7 Affiliates for them to modify, translate and tailor to meet the needs of their specific audience. We hope that this new “Care Connected by HL7” logo will be appearing on your desktop soon.

The concept for this campaign originated from HL7’s Advisory Council who is comprised of industry “big shots”. I would like to thank the members of the Advisory Council for this great idea, and to extend a special thanks to Carl Dvorak and the Epic marketing team for their tremendous contributions to developing the logo for this new program.

In Closing

What does the “Olympic spirit” mean? Pierre de Coubertin’s statement that “The important thing is not to win, but to take part”, and the view of athletes who try their best but finish last are often epitomized as the “Olympic spirit”.

We are very appreciative of everyone who contributes to HL7 in so many different ways. Some roles get the limelight, and other roles are much less glamorous and receive little recognition or thanks.

In this time of the 2012 Olympics, please allow me to extend a heartfelt thank you to each and every HL7 member for their ongoing support and contributions at any level, big or small.

Best wishes to you and your loved ones.

Fernando Campos, Melva Peters and Iryna Roy at the Wednesday evening Networking Reception Cruise
I elaborated on the notion of iterative, incremental interoperability as introduced by HL7 CDA, a standard widely adopted for health information exchange by many governments worldwide. I also described the Trifolia Workbench tool, which provides reusable components for the creation of clinical documents in HL7 CDA, and highlighted the emerging trend toward interoperability standards that are delivered through online tools that enable their consistent implementation accelerating development of interoperable solutions.

I closed my presentation with a call for commitment to interoperability standards, recognizing interoperability as enabler of affordable innovation for the health sector.

In a highly interactive discussion, the participants and the audience reflected on investments in interoperability recognizing misconceptions, unrealistic expectations, and schedules. In a question inquiring whether the Cloud will solve the interoperability problem, Dr. Jaffe responded that we will still need data and transport standards to disambiguate health information. Tom Jones, a member of the audience, noted that eHealth interoperability calls for long-term investment as concrete savings may take up to 10 years to be realized. Miroslav Koncar also noted that the stakeholders need to realize that interoperability involves an iterative incremental process associated with milestones and investment cycles, and should be dealt with, at least in the beginning, separately for each use case.

Recognizing the importance of focused interoperability efforts linked to investment cycles, alleviating the fear to change course, even small vendors can create robust resilient interoperable solutions at an affordable cost. At the same time, patients will enjoy better care and health systems will save money through business intelligence and agile decision making.

In an aging society hampered by chronic disease that is faced with an urgent need to contain healthcare costs, interoperability is a cost-saving investment that triggers innovation, creates a bridge from clinical research to patient care, and enables agile policy development.

Beyond the benefits to individual stakeholders, interoperability combined with technological development can benefit our society by enhancing its ability to respond to epidemics and emerging diseases much more rapidly than in the past. Such insights in population health can also help the treatment of a patient making available information on his genetic profile as well as “similar” patient trajectories as part of advanced clinical decision support.

Helpful Links:
- Continua: http://www.continuaalliance.org
- Parent Joint Action: http://www.patientregistries.eu/
- epSOS: http://www.epsos.eu
- Economics of interoperability: http://www.hl7.org/events/EconomicsofInteroperability201205/

Save The Date For HIMSS 2013

March 3 – 7, 2013
New Orleans, LA

Join us in the HL7 Booth (#4325) at the HIMSS 2013 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.
In late August 2012, HL7 International and GS1 join forces again at Medical Informatics Europe 2012 in Pisa, for the latest in a successful series of joint workshops, including STC2010 in Iceland, STC2011 in Slovenia, and MIE2011 in Norway. The focus of this joint HL7-GS1 synergy workshop is on addressing core challenges of quality and safety information exchange to support the well-being of elderly people through integrated care provision. Taking the scenario of an elderly lady living alone, the workshop will focus on the adoption of interoperability standards, bridging the supply chain world and the clinically oriented healthcare world. The expected outcome of this workshop is to increase clarity in the actions needed to accelerate the adoption of interoperability standards for high quality and efficient information exchange.

Plug-n-play interoperability is a major aspect of, and a challenge to, quality for health information exchange particularly when leveraging standards from different worlds. Launched in 1987, the mission of HL7 is to provide standards for interoperability that improve care delivery, optimize workflow, reduce ambiguity and enhance knowledge transfer among all healthcare stakeholders, exhibiting timeliness, scientific rigor and technical expertise without compromising transparency, accountability, or practicality. The vision of GS1 is a world where things and related information move efficiently and securely for traceability that benefits businesses and helps improve people’s lives, every day and everywhere.

The concept of this HL7-GS1 workshop started from a long list of questions associated with collaborative sharing of meaningful information in a scenario of an elderly woman requiring health and social care services that cross the world of healthcare and that of the supply chain. This taps into the value proposition of synergies between HL7 and GS1. Some of the relevant questions were:

- What is the most important information needed to support integrated care, e.g. emergency care, public health, emergency, and social care? For example, how can GS1 and HL7 standards be leveraged to document and retrieve medication in a way that upholds quality and safety?
- What are the GS1 and HL7 standards that support integrated care and what is the state of their adoption and interrelation? For example, how do we leverage GS1 and HL7 standards to support core processes related to transfer of care?
- How can the quality of information exchange be secured? What about privacy, protection and maintained confidentiality?

Starting from the story of a health-challenged elderly woman that highlights how health information exchange are a requisite to meet her care needs introduced by Anne
Moen, short presentations by Christian Hay, Dr. Charles Jaffe and myself will address interoperability challenges in bridging information from the clinical and supply chain worlds:

- **Supply Chain World:** By concentrating on the information exchange along Mrs. Erkel’s health journey from home to hospital, the presentation will highlight selected elements from both GS1 and HL7, which document the sequence of encounters. Unique identifiers according to the GS1 system of standards will be used along the envisioned journey or trajectory of care, with selected encounters being used as examples of supply chain achievements. The shift from GS1 messaging to HL7 messaging will further be drawn with the purpose to illustrate continuity of information from automatic identification data capture to data processing, and some guidance will be provided on how to understand the benefits of unique identification in the clinical environment.

- **Patient Summaries for Health and Social-Care:** Beginning with the patient scenario, the potentialities of patient summaries in bridging the worlds of emergency, health and social care will be presented, building on current initiatives. Current limitations will be highlighted and the role of interoperability standards in amending them will be introduced as part of the presented best practices.

- **Quality of Information Exchange:** Misinformation is worse than no information at all. Starting from the patient scenario, HL7 standards that uphold quality and safety at different stages of information exchange will be presented.

Inspired by the presentations, the discussion aims to gain insight about the added value of GS1 and HL7 joint efforts, the challenges, and steps ahead toward even more effective collaboration. The moderated discussion will be targeted toward implementation priorities, benefits of implementations, privacy and security challenges, quality and safety, etc. In this way, challenges for the innovative interplay of current and future standards will be identified to strengthen collaboration and commitment to wide adoption. The workshop will be moderated by Bernd Blobel, PhD, and Ulrike Kreysa.

Links:
- [http://www.HL7.org](http://www.HL7.org)
- [http://www.gs1.org](http://www.gs1.org)
- [http://www.mie2012.it](http://www.mie2012.it)

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**FHIR, continued from page 2**

Initially, the FHIR governance and management groups will be organized under the TSC.

One question that keeps cropping up regarding FHIR is whether HL7 will continue to support the Version 2, Version 3 and CDA standards alongside of FHIR. The answer to that question is “Yes!” HL7 will continue to support all those standards as long as members continue to use them. We expect V2.x, V3 and CDA to be with us for a long time. That being said, we also expect there will interest from some users of HL7 standards to migrate toward FHIR from these earlier standards. On the other hand, we expect that FHIR will appeal to entirely new markets where V2.x and V3 have poor adoption, such as the mobile health market where FHIR seems particularly well suited. FHIR is built for the future, but today it’s a “bleeding edge” HL7 standard. As such, many implementers will shy away from it simply because it is too new. Other implementers will be attracted to FHIR because it is bleeding edge.

In conclusion, we are trying to set up FHIR to be a successful HL7 standard. We are building FHIR using lessons learned from the development and implementation of other major HL7 standards. We are trying to avoid mistakes we have made in the past while leveraging the goodness to be found in those earlier standards. Only time will tell how successful we are in lighting this new FHIR!
News from the PMO and Project Services Work Group

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

FHIR Project Scope Statement (PSS)

At the May 2012 WGM in Vancouver, Project Services worked with the TSC and Modeling and Methodology Work Group to create a Project Scope Statement template that supports FHIR (Fast Healthcare Interoperability Resources).

The FHIR PSS is pre-filled with verbiage that provides the ability to identify and define the initial set of key FHIR resources related to the specified domain. These resources will be defined using the available FHIR tooling, and in accordance with documented quality guidelines and balloted as part of the initial FHIR specification.

Interim Release of the 2012 Project Scope Statement Template

The HL7 Project Management Office and the Project Services Work Group have released updates to the 2012 version of the Project Scope Statement (PSS) template. This mid-year release included the following changes:

- Added the Conformance Facilitator Role for Implementation Guide projects
- Added a section to identify Project Requirements in order to enable requirements traceability
- Included a reference to the TSC’s Guidance on Ballot Levels to assist project managers in determining their ballot strategy
- Included a reference to the PBS Metric Guidance for Steering Division Co-Chairs to assist SD co-chairs evaluate work group capacity to undertake new effort.
- Created a “Read Me” file pointing to the FHIR PSS template and included it in the .zip file that contains the Project Scope Statement templates and Project Approval Processes

Come join us for the Project Management Roundtable

Every Working Group Meeting, Project Services hosts an informal gathering at lunchtime on Wednesday called the Project Management Roundtable. Look for the tent card with “Project Managers” on it in the general session/lunch ballroom.

The forum is open, so please come forward with any project questions, concerns or ideas. We’d love to have you join us!

Webinar Recording: HL7 Project Management Tool Overview for HL7 Project Facilitators

In case you didn’t know, the HL7 PMO recorded a webinar which provides an overview of the various HL7 Project Management tools. To view the 38 minute webinar recording, go to www.HL7.org > Resources > Webinar Recordings.

This session, targeted for co-chairs and those leading HL7 projects (i.e. project facilitators), demonstrates HL7 project tools including Project Insight (HL7’s primary project repository), the HL7 Searchable Project Database, GForge, as well as a review of HL7 project processes and methodologies.

If you would like the PMO to present this webinar at one of your Steering Division or work group conference calls, please contact Dave Hamill at pmo@HL7.org to schedule a day and time.

HL7 Project Tracking Tools

All of HL7’s project tools, including the Searchable Project Database, GForge and Project Insight, are available on www.HL7.org via Participate > Tools & Resources > Project Tracking Tools.
HL7 recently announced a pilot membership program and webpage to encourage clinician caregivers to participate in the process of developing standards for electronic health records (EHRs).

“We have always valued the contributions of caregivers—the physicians, nurses, pharmacist, and others in the healthcare continuum. These clinicians are best suited to provide input about the usability, interface design, and workflow demands of electronic health records,” said Charles Jaffe, MD, PhD, CEO of HL7. “Yet, for several years, the HL7 leadership has voiced its concerns about the typical first encounter with the standards development process. We are now in a better position to translate the practical clinical expertise of these caregivers into tangible improvements in the interaction with the health record technology.”

Caregiver membership is open to physicians, nurses, pharmacists and others who are involved in direct patient care. The annual membership is $100. More information is available at www.HL7.org/caregivers or by visiting HL7.org and clicking on “Join HL7.”

“My participation in HL7 has allowed me to make a tangible impact on how technology is used in healthcare. I reap the benefits in a very practical way as I apply technology within my institution,” said Feliciano Yu, MD, a practicing pediatrician and chief medical information officer at St. Louis Children’s Hospital, and co-chair of the HL7 Child Health Work Group.

With an HL7 Caregiver Membership, clinicians can:

• Help ensure that standards adopted for healthcare IT (HIT) offer real and practical value in supporting the information exchange between health providers that is essential to coordinating patient care.
• Improve the quality and usability of the HIT standards developed by HL7 and, ultimately, the EHR products that use them.
• Network with HL7 members who are nationally recognized experts in HIT.
• Share knowledge and gain insight on how the use of data standards affects clinical practice in supporting patient care and improving quality and efficiency.
• Have the information they need to make informed decisions in EHR purchases, and know what to request from vendors.

“HL7 standards are the most widely used in the industry,” said Don Mon, PhD, chair, HL7 board of directors. “Caregiver members will not only gain first-hand exposure to the standards and technology that drive clinical summaries, laboratory results, prescriptions, and public health and quality data, they will have a direct channel to influence the clinical technology requirements that support an increasingly patient-centered healthcare system.”

Standards development projects currently under way that will benefit from caregiver input include HL7:

• Electronic Health Records System Functional Model, Release 2
• Preoperative Domain Analysis Model (DAM)
• Emergency Medical System DAM
• Neonatal Functional Profile
• Cardiovascular DAM

Functional models and profiles describe requirements for EHR system capabilities. DAMs describe workflow and data requirements within specific domains of care.
26th Annual Plenary Meeting

HL7 in the Era of Patient Empowerment

Monday, September 10, 2012
Hyatt Regency Baltimore, Baltimore, MD

8:30 – 8:45 am  Welcoming Comments
  Don Mon, PhD, Chair, HL7 Board of Directors

8:45 – 9:15 a.m.  Keynote Session 1: Engaging Patients with Standards
  Topics covered will include how the HIT standards professional can transform healthcare by
  • Enabling patients to be informed and informing
  • Bridging the legacy and innovative technologies
  • Harmonizing EHR and patient facing system interactions
  • Maximizing the data to improve quality.

  Leslie Kelly Hall, Senior Vice President, Healthwise

9:15 – 9:50 a.m  Keynote Session 2: The Rise of e-Patients
  Three technology revolutions in the last generation have changed the way patients care for themselves and interact with doctors and peers:
  1. The internet/broadband revolution
  2. The mobile revolution
  3. The social networks revolution.
  Lee Rainie will describe how patients and caregivers use these technologies to inform themselves, deal with medical providers, and share their stories with fellow patients and their loved ones.

  Lee Rainie, Director, Pew Research Center's Internet & American Life Project, and formerly the managing editor of the news magazine U.S. News & World Report

9:50 – 10:15 a.m.  Keynote Session 3: The Consumer Empowerment Paradox
  Policy makers, professionals and technologists paradoxically believe that homogeneous health information technology standards can empower clinically heterogeneous healthcare consumers. This paradox underlies a 2004 presidential order for a Nationwide Health Information Network and a National Coordinator of Health Information Technology. Since then, HL7, HITSP, IHE, and the Standards & Interoperability Framework have acted on this paradox, developing consumer standards for patient portals, personal health records (PHRs), care coordination, transitions of care, data segmentation, telehealth, mobile devices and direct encrypted email. Evidence that few consumers use free portals threatens belief in the paradox, development of consumer standards and citizen support for healthcare reform.

  The consumer empowerment paradox appears to accurately represent longstanding, top-down vs. bottom-up contradictions in health care yet needs empirical testing. Paradox testing, in turn, requires a logic model that traces paths from keystone standards for clinical summary exchange to the potential empowerment of diverse consumers and
the frustration of diverse providers. Test results are likely to reveal gaps in policy and standards that obstruct meaningful health IT use among consumers and providers alike.

Elaine A. Blechman, PhD, Professor Emerita, University of Colorado-Boulder and President, Prosocial Applications

10:15 – 10:50 a.m. Break

11:15 – 12:20 p.m Panel discussion featuring presentations on how different stakeholders in the mobile health space view the future of mobile health and HL7’s potential role in this evolving arena

Moderated by Doug Fridsma, MD, PhD, Director, Office of Standards and Interoperability, Office of the National Coordinator for Health IT

• 10:55-11:10 Chuck Parker, President, Continua Health Alliance
• 11:10-11:25 Christoph Lehmann, MD, Professor of Pediatrics and Biomedical Informatics, Vanderbilt University, will discuss empowering families of children
• 11:25-11:40 Jim St. Clair, Senior Director, Interoperability and Standards, HIMSS
• 11:40-11:55 Lonnie Smith, Policy Analyst, U.S. Food and Drug Administration (FDA), will discuss mobile applications of SPL
• 11:55-12:10 Heather Grain, Standards Australia
• 12:10-12:20 Questions and Answers for panelists

12:20 – 12:30 p.m. Closing Comments and a vision for HL7’s Future

Charles Jaffe, MD, PhD, CEO, Health Level Seven International

HL7 Tooling Challenge

By Jane Curry, Co-Chair, HL7 Tooling Work Group

Sparx Systems is sponsoring an HL7 Tooling Challenge to encourage more people to help leverage UML in the Tooling infrastructure for HL7. Sparx is the vendor of Enterprise Architect, the UML modeling software used by many of HL7’s Working Groups for requirements documentation. The HL7 Tooling Challenge will be announced at the Baltimore Working Group Meeting and will accept competing entries through the May 2013 Work Group Meeting. Details of the challenge are laid out at http://wiki.hl7.org/index.php?title=HL7_Tooling_Challenge
The award of $4,000 for the successful entry will be announced at the 2013 Plenary Meeting.
Fernando Campos is an information systems engineer. He is completing a master’s degree in strategic direction of software engineering. Fernando is responsible for the definition of software architectures, design patterns, and development standards as the software engineering department chief at the Hospital Italiano de Buenos Aires where he has worked for more than 12 years. He was elected in April 2012 as the HL7 Argentina Chair.

Fernando began using HL7 in 2000 and has been a member of HL7 Argentina since 2001. He is a Certified HL7 V2.x Control Specialist, Certified HL7 CDA R2 Specialist, a Certified HL7 V3 RIM Specialist and also a member of the HL7 Education Work Group. In 2011, he received the “HL7 Volunteer of the Year” award for his contributions to the HL7 online e-Learning course (ELC). He redesigned the course modules to partially automate assignment feedback to students, augmenting the course capacity from 100 to 500+ students per session while maintaining the same number of personal tutors.

As a volunteer, Fernando co-authored HL7 ELC educational materials. He has given on-site HL7 courses in Spanish in Argentina and in other Latin-American countries such as Chile and Brazil. He is active in CDA R2 implementations and participated in the design of the implementation guide for the Hospital Italiano de Buenos Aires and several organizations in Chile.

Fernando is proud to have participated in all sessions of the ELC as a tutor, course coordinator and creator of learning material and activities for these courses. He also assists other affiliates to fulfill course/tutor coordination duties and with the e-learning platform technical details. These editions of the ELC were adopted by HL7 India, HL7 Romania, HL7 Canada, HL7 Pakistan, HL7 New Zealand, HL7 Singapore and HL7 Austria and are also being translated to Japanese and Portuguese. He puts not only his time, but heart and soul to help students and tutors to get through the course, understand the materials and implement their acquired knowledge in real life.

Grant Wood is the senior IT strategist for Intermountain Healthcare’s Clinical Genetics Institute. He is based in Salt Lake City, Utah, and is responsible for creating computer systems that will support healthcare providers in delivering genetics-based clinical care. He is a member of the HL7 Clinical Genomics Work Group and a co-chair of the HL7 Marketing Council, where he leads the HL7 Ambassador program. Grant also serves on the board of two non-profit organizations: Alphanet, which provides free disease management services to those with Alpha-1 Antitrypsin deficiency, and the Mountain States Genetics Foundation, which provides educational events for healthcare providers and patients on genetic topics. During his career, Grant has authored 10 papers and articles on varying topics including the role of the healthcare CIO, the patient healthcare encounter of the future, family health history and economic development in the state of Utah.

Grant grew up in southern California and Arizona. He lived in the Netherlands for two years while performing missionary service for his church. Although fluent at one time, he admits he could use some help from his HL7 Dutch friends to practice the language. He states “Mijn Nederlands is heel slecht.”

Grant is the second of eight children. He is close with his extended family, which includes an impressive 7 siblings, 64 first cousins and 38 nieces and nephews. Grant credits his dad’s career in hospital administration as the reason why he works in the healthcare field today.

In addition to spending time with family, Grant enjoys attending musical concerts (Rock-n-Roll, Symphony, Christmas), and sporting events for both professional and college teams. He also enjoys the travel opportunities that he has had through his work with HL7. Last November he was able to spend time with Amnon Shabo at this home in Haifa, Israel. One final interesting fact, Grant shares his name—but no relation—with the famous American painter, so if you want to Google him, be sure to use his middle initial “M”.

Member Spotlight on Grant Wood
News from the PBS Metrics Team

By 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

HL7 Strategic Initiatives Dashboard
The PBS Metrics Team has created a dashboard to track HL7 Strategic Initiatives which the TSC is responsible for managing. Metrics for the dashboard include:

• Effectiveness of working group meetings
• Advancement of realm specifications to international specifications
• Continuing improvement of product quality
• Enablement of requirements traceability
• Reduction of cross-artifact inconsistencies
• Demonstration of industry responsiveness through the timely development and maintenance of key standards
• Improved ease of HL7 standards implementation
• Development of an HL7 education plan

The Strategic Initiatives Dashboard is located on the TSC Wiki at http://hl7tsc.org/wiki/index.php?title=Strategic_Initiatives_TSC_Dashboard

PBS Metrics Reports and Dashboard
The PBS Metrics reporting and dashboards are easily accessible via the Reports link on your work group’s HL7.org page. This link directs you to GForge, where the report resides within the TSC’s File area (http://gforge.hl7.org/gf/project/tsc/frs/?action=FrsReleaseBrowse&frs_package_id = 169).

As a reminder, the PBS Metrics reporting and dashboards reflect the following criteria for each work group:

1. Idle Ballots – Items that haven’t balloted in a year, and are still “open” (haven’t successfully completed their ballot)
2. No Recon Package – Items that have not had a reconciliation package posted.
3. Non-Advancing Ballots – Items that have gone through 3 or more ballots
4. Expired DSTUs – Expired DSTUs that have not proceeded to normative or some other ballot level
5. Unpublished CMETs – CMETs that are Finished (passed by numbers and Recon is complete) but Unpublished (waiting for the CMET clean-up work to be completed by Andy Stechishin and Dave Hamill)
6. Unpublished Ballots – Items that are “finished” (passed by numbers and reconciliation is complete) but unpublished (not in Normative Edition or on HL7 Standards page)
7. Projects in Project Insight that are behind more than 120 Days
8. Projects in Project Insight with an ‘Unknown’ status
9. Work Groups that do not have any 3-Year Plan Items in Project Insight

The PBS Metrics Report was created to support the HL7 strategic initiative to “streamline the HL7 standards development process”. It is intended to be a tool to assist work groups with managing ballots in addition to cleaning up projects and old data. By reviewing the reports, work groups can identify potential issues before they get out of hand as well as move items through balloting to a final document or standard state.

If you have any questions or comments, please direct them to any PBS Metrics team member: Dave Hamill (dhamill@HL7.org), Lynn Laakso (lynn@HL7.org), Don Lloyd (dllloyd@HL7.org) and Karen Van Hentenryck (karenvan@HL7.org).
Congratulations

To the following people who recently passed the HL7 Certification Exams

Certified HL7 Version 2.x Chapter 2 Control Specialist

May 17, 2012
Marla C. Albitz
Chao Chih Ko
Sarah A. McGree

June 9, 2012
Sam Agner
Jackie S. Churchill
Major B. Ehnstrom
Linda D. Hudson
LeeAnn Lawson
James L. Lenon

HL7 India

March 10, 2012
Arabinda Behera R
Praveen Shivaprasad
Sadhana Shree Shivashanker
Swapna Kintali

March 31, 2012
Latif Abdul
Prachi Agrawal
Vikram Bethu
Dipti Chavali
Sanchita Gutili
Ranjiy Iyer
Mohan Kalathi
Rohit Mars
Seema Rathni
Deepika Singh
Sumit Singhal

April 21, 2012
Catherine Berkmans
Sajeev Chand. A
Venkatesan Govindarajan

May 19, 2012
Komal Gulati
Manikonda Sai Ram Sagar
Lakshmi Rajasekaran
Kumar Satyam
K. V. Prema

June 9, 2012
Sharon Christabel
Srinivasarendra G
Iyyappan Iyer
Premalatha Karunamurthi
Shailesh Kotkundwar
Raghuraman Murugaiyan
Kalidass Murugesan
Meiyappan Rangeathan
Sethuramalingam Sundaram
Anita Josephine Wilfred
Lakshmi Kalyani Yakkala

HL7 Korea

April 21, 2012
Sungchul Bae

HL7 Spain

March 15, 2012
Jose Carlos Arcenegui
Marta Bonilla
Manuel Cortés Martín
Juan Pedro Díaz García

May 3, 2012
Jorge Cabañuz Biarge
Juan José Gracia Roche
Beatriz Herreras Domínguez
Raquel López Alarcón
Patricia López Monteagudo
Antonio Martínez Moreno

May 8, 2012
Patricia Andrés Díaz
José Fernández Enigo
Francisco Medina Gámiz

June 28, 2012
Miguel Angel Tercero García
Laura Tino Ramos
Álvar Torres de la Hera

June 29, 2012
Gonzalo Altuna López
Alicia Martínez García
Daniel Mejías Pinto
Amanda Muñoz Domínguez
María Palomino Franco
Dolores
Claudia Real Barrios
José Manuel Sivianes Rubio

Certified HL7 CDA Specialist

May 17, 2012
Beau Bannerman
Jeffrey R. Brown
Christof Gessner
Iqbal Sian
Helen Stevens-Love
Tessa van Stijn

HL7 India

February 11, 2012
Akash Gupta
Mayank Kapoor
Kanchan Sanjay Kokal
Pankaj Kumar R. Mishra
Manali Mannur
Sandeep K. Patil
Santosh Gopi Pillai
Ritu Shukla
Ankur R. Tripathi

HL7 Spain

May 3, 2012
Carlos Mendoza Hernandez

May 8, 2012
David Alaber Toro
Florencio Llanos Ruiz
June 28, 2012
Víctor Martínez Sánchez

June 29, 2012
Juan Pedro Díaz García
Juan Manuel Fuentes
Jorge García Naz
David Wenceslao González Sojo
Laura Martínez González

July 6, 2012
Joan Casals Alonso
Mario Rabasseda

Certified HL7 Version 3 RIM Specialist
May 17, 2012
Bob Milius
Christopher M. Millet
Wei Wang

HL7 Canada
April 10, 2012
Jeesun Park
May 15, 2012
Kuan Fan
May 22, 2012
Han Ming Zhou

HL7 India
May 19, 2012
Rawlani Ritika Pradeep

HL7 Benefactors as of August 13, 2012

Booz | Allen | Hamilton
Centers for Disease Control and Prevention

HL7 Benefactors as of August 13, 2012
HL7 Welcomes New Director of Education Sharon Chaplock, PhD

Sharon Kayne Chaplock, PhD, has been working in the field of instructional technology for more than 25 years, both in the academic and non-profit sectors. Her recent experience includes the planning, development and deployment of distance learning programs for clinical data managers for the Society for Clinical Data Management, and continuing education programs for clinicians and researchers associated with the Society for the Immunotherapy of Cancer. Prior to that, she was a project administrator for two major US Department of Education grants at Marquette University’s College of Education focused on technology integration and extending teacher certification online to adult, post-baccalaureate students.

Sharon was also a staff member of Marquette’s Center for Teaching and Learning where she consulted with faculty to provide pedagogical and instructional design support for online, hybrid and web-enhanced courses. During this time she earned her PhD in Educational Policy and Leadership with a concentration in online learning. Her dissertation explored the efficacy of virtual study groups in preparing participants for certification exams. Since the time she introduced videodiscs to the exhibit floor of the Milwaukee Public Museum (where she worked as Director of the Audiovisual Center), Sharon has been passionate about opportunities afforded by technology supported learning, and believes that learners are served best by engaging the right technology in the right setting for the right outcomes.

Upcoming INTERNATIONAL EVENTS

MIE 2012: Quality of Life through Quality of Information
Pisa, Italy
August 26 - 29, 2012
For more information, please visit http://www.mie2012.it

HIMSS AsiaPac 2012
Marina Bay Sands, Singapore
September 17 - 19, 2012
For more information, please visit http://www.himssasiapac.org

13th International HL7 Interoperability Conference
Vienna, Austria
September 28 - 29, 2012
For more information, please visit http://ihic2012.hl7.at/

eChallenges 2012 e-2012 Conference
Lisbon, Portugal
October 17 - 19, 2012
For more information, please visit http://www.echallenges.org/e2012/
HL7 ORGANIZATIONAL MEMBERS

Benefactors
Abbott
Accenture
Alpharetta
Booz Allen Hamilton
Centers for Disease Control and Prevention/CDC
Duke Translational Medicine Institute
Epic
European Medicines Agency
Food and Drug Administration
GE Healthcare IT
GlaxoSmithKline
Hospital Corporation of America (HCA)
IBM
Intel Corporation, Digital Health Group
InterSystems
Kaiser Permanente
McKesson Provider Technologies
Microsoft Corporation
NICTIZ Nat. ICT Inst.
Novartis
Oracle Corporation - Healthcare Partners
Phillips Healthcare
Quest Diagnostics, Incorporated
Siemens Healthcare
Thomson Reuters
US Department of Defense, Military Health System
US Department of Veterans Affairs

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Ennomedics intercentras
Gamma-Dynacare Medical Laboratories
INTERFACEDWARE, Inc.
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LiveProcess
MedSure
Socrates Healthcare Ltd.
Standing Stone, Inc.
VIP Medicine, LLC

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AIHS - St. John Providence Health
Alleron Consulting LLC
Anasan Identity Services, Equifax
Booz Allen Hamilton
Boveda
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Cagenermente Government Solutions LLC
CentriHealth
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Hitreb Technologies Consulting
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eiHR.eu
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LMI
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newMentor
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OfTech, Inc.
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Pragmatic Data LLC
Professional Laboratory Management, Inc.
Raven Tech LLC
Ray Beath, LLC
Rob Savage Consulting
SabiaNet Inc.
Shafarman Consulting
Sea Software Inc.
Society of Chest Pain Centers
Staff: Tech-Time, Inc.
Strategic Solutions Group, LLC
The Andugy Group, LLC
The Diebold Company of Canada
The St. John Group, LLC
United Laboratory Network IPA, LLC
Vangent, Inc.
Virginia Beihl
Westat

General Interest
Aarhus University, Dept of Computer Science
Advanced Medical Technology Association (AdvaMed)
Agency for Healthcare Research and Quality
AGH University of Science and Technology
Alabama Department of Public Health
Alliance for Pediatric Quality
American Assoc. of Veterinary Lab
Diagnosticians
American College of Cardiology Foundation
American College of Surgeons, NTDB
American Dental Association
American Diabetic Association
American Health Information Management Association
American Immunization Registry Association (AIRA)
American Medical Association
Arizona Department of Health Services
ASIP SANTE
Blue Cross Blue Shield Association
Brigham Young University
CA Department of Public Health
Cabinet for Health and Family Services
Carolina Department of Health Care Services
California HealthCare Foundation
CalOptima
CDISC
Center for Elders' Independence
Centers for Disease Control and Prevention/CDC
Centers for Medicare & Medicaid Services
City of Houston
College of American Pathologists
College of Healthcare Information Management Executives
Colorado Regional Health Information Organization
CompDrug
Connecticut Department of Public Health
Contra Costa County Health Services
COPE Community Services, Inc
Council of Cooperative Health Insurance
Council of State and Territorial Epidemiologists
Delaware Division of Public Health
Delta Dental Plans Association
Department of Developmental Services
Department of Health
Department of Human-Computer Interaction
DHS, Commonwealth of Virginia
Duke Translational Medicine Institute
EHR Institute
eHealth Platform
Emory University, Research and Health Sciences IT
Estonian eHealth Foundation
European Medicines Agency
Food and Drug Administration
Georgia Department of Technology
Georgia Institute of Technology
Georgia Medical Care Foundation
HIMSS
HIMCR, Inc.
Illinois Department of Public Health
Illinois Office of Health Information Programs
Indian Health Service
Indiana State Department of Health
Interior Health Authority
Iowa Department of Public Health
Japan Pharmaceutical Manufacturers Association
Association
Kansas Department of Health & Environment
Kongouk National Univ. MIPT
LGC Research
Maine Center for Disease Control and Prevention
Medical University of South Carolina
Michigan Department of Community Health
Lab
Ministerio de Salud Publica del Ecuador
Ministry of Health - Slovenia
Minnesota Department of Health
Missouri Department of Health & Senior Services
NAAOCR
NANDA International
National Association of Dental Plans
National Center for Health Statistics/CDC
National Council for Prescription Drug Programs
National eHealth Transition Authority (NEHTA)
National Health Service
National Institute of Standards and Technology
National Library of Medicine
National Marrow Donor Program
National Quality Forum
NATO Consultation, Command and Control Agency
NQQA
New Mexico Department of Health
New York State Department of Health
NICTIZ Nat. ICT Inst.
Novartis
NYU Department of Clinical Research Informatics
OADC - Department of Mental Health
Oak Ridge Associated Universities
Office of the National Coordinator for Health IT
Ohio Department of Health
OHIO DEPT. OF JOB AND FAMILY SERVICES
Oklahoma State Department of Health
Oregon Health & Science University
Oregon Public Health Division
Pennsylvania Dept of Health
Bureau of Information
Pharmaceuticals & Medical Devices Agency
Phast
Philadelphia Department of Public Health
Public Health Data Standards Consortium
Radiological Society of North America
Region Syd Dannmark
RHI International
SAMHSA
SC Dept. of Health & Environmental Control
Social Security Administration
South Dakota Department of Health
State Hygienic Laboratory at University of Iowa
State of Montana DPHHS
Telligen
Tennessee Department of Health
Texas Department of State Health Services
The Joint Commission
The MITRE Corporation
U.S. Army Institute of Surgical Research
University HealthSystem Consortium
University of AL at Birmingham
University of Kansas Medical Center
University of Minnesota
University of Oregon
University of Pennsylvania
University of Texas Medical Branch at Galveston
University of Utah Pediatric Critical Care/ICU
UPC
USDA APHIS VS CIO
Utah Department of Health
Utah Health Information Network
Utah State Developmental Center
Vermont Department of Health
Virginia Department of Health
Virginia Information Technologies Agency
Washington State Department of Health
WW HealthLink
WorldVista

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Blue Cross and Blue Shield of Florida
Blue Cross Blue Shield of Arizona
Blue Cross Blue Shield of North Carolina
CIGNA
CompliantDRG
MetLife, Inc.
Neighborhood Health Plan
Premera Blue Cross
TRiWest Healthcare Alliance
UnitedHealth Group
Valence Health
Wisconsin Physicians Service Ins. Corp.
HL7 ORGANIZATIONAL MEMBERS, continued

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- Bristol-Myers Squibb
- Crescendo Bioscience
- Eli Lilly and Company
- GlaxoSmithKline
- Merck & Co. Inc.
- Novartis
- Pharmaxo Pharmacy Services
- Sanofi-Aventis R&D

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- Advanced Biological Laboratories (ABL) SA
- Advantage Dental
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- Alaska Native Tribal Health Consortium
- Albany Medical Center
- Albany Medical Center Hospital
- Angel MEDICAL CENTER
- ARUP Laboratories, Inc.
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- Athens Regional Health Services, Inc.
- Avalon Health Care
- Avir, Inc.
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- BayCare HomeCare
- BJHCareHealth
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- Bloomington Hospital & Healthcare Systems
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- Butler Healthcare Providers
- Cape Regional Medical Center
- Carlton Clinic
- Cedars-Sinai Medical Center
- Center for Life Management
- Central Illinois Radiological Associates
- CHI
- Children's Hospital Medical Center of Akron
- Children's Mercy Hospitals and Clinics
- Cincinnati Children's Hospital
- City of Hope National Medical Center
- Cleveland Clinic Health System
- Concentra
- Consolidated Medical Bio-Analysis, Inc.
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- Diagnostic Laboratory Services
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- Emory Healthcare
- Geisinger Health System
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- Holy Name Medical Center
- Hospital Corporation of America (HCA)
- Human Service Agency
- Imagine Health Centers
- Inland Northwest Health Services
- Iowa Jules Bordet
- Integrated Telemedical Solutions
- Intermountain Healthcare
- Intrepid Laboratory
- Johns Hopkins Hospital
- Kaiser Permanente
- Kernodle Clinic, Inc.
- KMH Cardiology & Diagnostic Centers
- Laboratory Corporation of America
- Lakeview Clinic
- Lakeland Regional Medical Center
- Lexington Medical Center
- Life Labs
- Loyola University Health System

**Lucile Packard Children's Hospital**
- Lux Med
- Mayo Clinic
- McDonough District Hospital
- Mediscor
- Meridian Health
- Milton S. Hershey Medical Center
- MinuteClinic
- MultiCare Health System
- National Cancer Institute
- New York-Presbyterian Hospital
- North Carolina Baptist Hospitals, Inc.
- North Health and Hospital Corporation
- Oregon Providence Health & Service
- Park Nicolle
- Partners HealthCare System, Inc.
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- Pathology Associates Medical Laboratories
- Patient First
- Quest Diagnostics, Incorporated
- Radiology Center of Memphis
- Rady Children's Hospital and Health Center
- Regenstrief Institute, Inc.
- Regional Medical Center at Memphis
- Rheumatology and Dermatology Associates PC
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- Rockingham Memorial Hospital
- SA Taru University Clinic
- Saint Francis Care
- Saudi Aramco - Healthcare Applications Division
- Seneca Family of Agencies
- Sharp Healthcare Information Systems
- South Bend Medical Foundation, Inc.
- Spectrum Health
- St. Charles Health System
- St. Joseph Health
- Steven Porter, MD
- Seward Health Care
- Summa Health System
- Texas Health Resources
- The Children's Hospital of Philadelphia
- Trinity Health
- TuSimple Healthcare System
- U.S. Department of Defense, Military Health System
- U.S. Department of Veterans Affairs
- UKHealthCare
- UNC Healthcare
- University of Chicago Medical Center
- University of Nebraska Medical Center
- University of Pittsburgh Medical Center
- University of Utah Health Care
- University of Virginia Health System
- University Physicians, Inc.
- UT M.D. Anderson Cancer Center
- UW Medicine, IT Services
- Vanguard Health Systems
- VUMC
- West Virginia University Hospitals
- Wheaton Franciscan Healthcare
- Winchester Hospital

**Vendors**
- /SOS/Corporation
- 4Medica
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- A.J. Boggs & Company
- Abbott
- ABEISoft Inc.
- ABILITY Network
- Accsent on Integration
- Accumbent Computer Systems, Inc.
- ADP AdvancedMD, Inc.
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- Affiliated Computer Services, Inc.
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- Alert Life Sciences Computing, Inc.
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- Allscripts
- AlphaCom, Inc
- Alois Solutions, Inc
- Altova GmbH
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- American Data Network
- American Health Care Software
- AmericanEagleHealth, Inc.
- Amebris/Bergen Specialty Group
- Amelco
- Angel Care
- Angel Systems, Inc.
- ANXBusiness
- Apelon, Inc.
- Argility Healthcare
- ARGO Data Resource Corporation
- Askesis Development Group
- Astera Software
- Attrix Medical Systems
- Atwell, LLC
- Aventura HQ, Inc.
- Aversan Inc
- Aveco, Inc.
- Axial Exchange
- Axess Healthcare Consult
- Aym Technologies
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- Beijing TPHD Technology Development Co., Ltd.
- Benchmark Systems
- Bostech Corporation
- Bottomline Technologies
- Bradoc Data Management, Inc
- CALC2AL Corporation
- CANON INDIA PVT LTD
- CareCamin Innovations
- Carefx Corporation
- carepaths, inc
- Carestream Health, Inc.
- CareTech Solutions, Inc.
- Caristix
- Cedaron Medical, Inc.
- Center for Clinical Innovation
- Corner Corporation
- Certify Data Systems
- Cetrea A/S
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- ChartWise Medical Systems, Inc.
- ChemWare
- Chilisolsoft Solutions
- Clear EMR
- Clinical Software Solutions
- ClinicTree
- Clinix Medical Information Services, LLC
- CMR
- CNIPS, LLC
- CNS
- CodeSmart Inc.
- Cognosante, LLC
- Gognovant, Inc
- Community Computer Service, Inc.
- Compania de Informatica Aplicata
- Complete Medical Solutions
- Computa Care ALP, Inc.
- Computer Technology Corporation
- Computrion, Inc.
- COMS Interactive, LLC
- Consillience Software
- Cored Sound Imaging, Inc.
- Corepoint Health
- Cortex Medical Management Systems, Inc.
- Covisint
- CPSI
- Crowdcare, S.A.
- CSC Healthcare
- CTS, Inc.
- Caruspan Healthgroup, Inc.
- Cyberpulse LLC
- Dansk Medicinsk Datacenter ApS
- Data Information System Solutions LLC
- Data Innovations, LLC
- Data Services
- Data Tech Info
- DATALINK SOFTWARE DEVELOPMENT INC
- Datuix, LLC
- Dawn Technologies, Inc.
- dbHealthcare Services Inc.
- Defran Systems
- Dejarnette Research Systems, Inc.
- Del Boini
- Delta Health Technologies, LLC
- Digital Infusion, Inc.
- Digital Medical Merge, Inc.
- Doctor Evidence
- DoctorOnCall
- DocuTrac, Inc.
- Dolbey & Company
- EASTALK MD LLC
- EBM Technologies Inc.
- eCareSoft Inc.
- echoBase
- eHana LLC
- efhealth Data Solutions, LLC
- efhealthCare Systems, Inc.
- Electronic Medical Exchange Holdings LLC
- Electronic Medical Solutions, LLC
- ELEKTA
- eManual System Sdn Bhd
- Embedded Wireless Labs
- Endoeast, LLC
- eMedology LLC
- Emerging Systems
- Epic
- ESH
- Emonedius intercentrales
transXas, Inc.
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- Exploryx
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- ezEMRs
- e-Zest Solutions Ltd.
- F5 Networks
- Falcon LLC
- Fifth Light Technology
- First Medical Solutions
- Fluidnet Corporation
- FoodSolutions Technology
- Forte Holdings
- Fresenius Medical Care
- Gamma-Dynacare Medical Laboratories
- GE Healthcare
- Genesis Systems, Inc.
- GenomeQuest, Inc.
- GlobalOne Information Technologies, LLC
- gloStream, Inc.
- Greenway Medical Technologies, Inc.
- GrowICMS
- Grupo Postigo - Alba Electronica, S.L.
- Haemometrics Corporation
- Hallpharm, Inc.
- Harris Corporation
- HarrisLOGiC, Inc.
- Health Care 2000, Inc
- Health Care Software, Inc.
- Health Companion, Inc.
**HL7 ORGANIZATIONAL MEMBERS, continued**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>Health Data Services, Inc.</td>
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<td>Health Informatics Intl</td>
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<td>Health Intersections Pty Ltd</td>
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<td>Health Language, Inc</td>
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<td>Health Plan Systems, Inc.</td>
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<td>Health Records for Everyone</td>
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<td>Healthcare Management Systems, Inc.</td>
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<td>HEALTHSTATE</td>
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<td>HealthFusion</td>
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<td>Healthland</td>
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<td>HealthTrac, LLC</td>
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<td>Healthwise, Inc.</td>
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<td>Healthy Panacea Network, LLC</td>
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<td>heartbase, Inc.</td>
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<td>Hello Health</td>
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<td>Hewlett-Packard Enterprises Services</td>
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<td>Hill Associates</td>
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<td>Hi-Tech Software, Inc.</td>
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Anesthesiology
Attachments
Child Health
Clinical Genomics
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Community Based Collaborative Care
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HL7 EDUCATIONAL SUMMITS

Gain real-world HL7 knowledge TODAY that you can apply TOMORROW

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

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

Among the benefits of attending the HL7 Educational Summit are:

- **Efficiency**
  Concentrated two-day format provides maximum training with minimal time investment

- **Learn Today, Apply Tomorrow**
  A focused curriculum featuring real-world HL7 knowledge that you can apply immediately

- **Quality Education**
  High-quality training in a “small classroom” setting promotes more one-on-one learning

- **Superior Instructors**
  You’ll get HL7 training straight from the source: Our instructors. They are not only HL7 experts; they are the people who help produce the HL7 standards

- **Certification Testing**
  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 EDUCATIONAL SUMMITS

November 13-15, 2012
San Francisco Marriott
Fisherman’s Wharf

SEPTEMBER 2012
Upcoming WORKING GROUP MEETINGS

January 13 – 18, 2013
Working Group Meeting
Pointe Hilton Squaw Peak Resort
Phoenix, AZ

May 5 – 10, 2013
Working Group Meeting
Sheraton Atlanta Hotel
Atlanta, GA

September 22 – 27, 2013
27th Annual Plenary & Working Group Meeting
Hyatt Regency Cambridge
Cambridge, MA

January 12 – 17, 2014
Working Group Meeting
Hilton in the Walt Disney World Resort®

October 4-9, 2015
29th Annual Plenary & Working Group Meeting
Sheraton Atlanta Hotel
Atlanta, GA