HL7 Version 3: It’s Live, It’s Real

Health Level Seven Releases Long-Awaited Version 3 Normative Edition 2005

ANN ARBOR, Mich.—December 6, 2005 — Health Level Seven (HL7), one of the world’s most prolific healthcare standards developers, announced today that after more than a decade of hard work by scores of dedicated HL7 members worldwide, its long-awaited Version 3 (V3) Normative Edition 2005—a suite of dozens of specifications all based on HL7’s Reference Information Model (RIM)—has been released and is being distributed to all HL7 members.

“The publication of the first Version 3 Normative Edition is a major milestone for HL7,” said HL7 Chair Mark Shafarman. “It represents a significant contribution to solving the global problem of integrating healthcare information in a way that supports multiple goals, ranging from individual patient care to clinical research to public health.”

This edition represents the first publication of a complete suite of V3 specifications, each of which has received formal approval as either a Normative Standard or a Draft Standard for Trial Use. “This suite provides a single source that allows implementers of V3 specifications to work with the full set of messages, data types, and terminologies needed to build a complete implementation,” said Woody Beeler, HL7 Board member and co-chair of HL7’s Modeling and Methodology technical committee.

Throughout the course of V3 development, HL7 has focused on a few salient features that are its hallmarks. In brief, these are:

- A focus on semantic interoperability by specifying that information be presented in a complete clinical context that assures the sending and receiving systems share the meaning (semantics) of the information being exchanged;
- It’s designed for universal application so that the standards can have the broadest possible global impact and yet be adapted to meet local and regional requirements;
- Model-based specifications that provide consistent representation of data laterally across the various HL7 domains of interest and longitudinally over time as new requirements arise and new fields of clinical endeavor are addressed;
- Technology-neutral standards that allow HL7 and the implementers of HL7 standards to take advantage, at any point in time, of the latest and most effective implementation technologies available; and
- It’s founded on a development methodology and meta-model that assures consistent development and the ability to store and manipulate the specifications in robust data repositories rather than as word-processing documents.

(more)
Even though V3 specifications are just beginning to be implemented, Beeler says the value of these core features is already apparent. “The semantic integrity of the specifications has led to their adoption for major projects developing national health care record systems in several countries,” he said.

“Further, the focus on a defined methodology and meta-model is allowing HL7 to publish the standard in both human-readable and machine-processable forms that enable a more robust representation of the HL7 semantics within the program and data structures of the implementations,” Beeler said.

Beeler says that while the publication of the first Normative Edition represents a major milestone for HL7, as with all milestones it is only one step along the way. “The next major effort will be to assure the successful implementation of these specifications,” Beeler said. He says that within the US, jurisdictional agencies needing support for large-scale integration (e.g. CDC, FDA) have already adopted V3.

According to Beeler, major projects in several countries outside the U.S. are already underway using V3 specifications to support Electronic Health Records (EHRs) and clinical data interchange. Significant V3 national implementations already exist in the UK, the Netherlands, Canada, Mexico, Germany and Croatia. Beeler also says that major software vendors are well along in developing and providing the core computing infrastructure needed to support V3 implementations.

As each of these projects advances, HL7 will study them to learn what is right and what is wrong with the specifications; to determine the best practices and the risky practices used in implementation; and to spot the emergence of new requirements that the initial HL7 releases did not recognize. These observations will form the basis for issuing subsequent releases of the V3 specifications, and for creating detailed implementation guides to further simplify the implementation process.

**About Version 3**
The Version 3 project represents a new approach to clinical information exchange. It is built from the ground up around a single object model, the HL7 Reference Information Model (RIM), and a rigorous UML-based methodology that ties model to messages and finally to the message’s expression in XML syntax.

The V3 specification is built around subject domains, for each of which it provides storyboard descriptions, trigger events, interaction designs, domain object models derived from the RIM, hierarchical message descriptors (HMDs) and a prose description of each element. Implementation of these domains further depends upon a non-normative V3 Guide and normative specifications for: data types; the XML implementable technical specifications (ITS) or message wire format; message and control "wrappers;" and transport protocols.

Members logged in to the HL7 website may download V3 standards at: [http://www.hl7.org/memonly/downloads](http://www.hl7.org/memonly/downloads).
Version 3 Early Adopters Program

In support of Version 3, HL7 has initiated a V3 Early Adopters Program to gain user feedback that might help shape future releases of the standards.

“The HL7 Early Adopters Program is essential to establishing a solid communication path between the implementers who are building implementations of the new standards, and the HL7 Technical Committees who created the standards,” Beeler said. “It will allow HL7 to both assist the implementers and to use their experience to improve the standard.”

An example of a V3 early adopter is the National Health Service (NHS) National Programme for IT (NPfIT), which is responsible for major IT initiatives to support health care delivery in England. The NPfIT has chosen V3 as a base standard for its national and regional projects.

About HL7

Founded in 1987, Health Level Seven, Inc. (http://www.HL7.org/) is a not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services. HL7’s more than 2,000 members represent approximately 500 corporate members, including 90 percent of the largest information systems vendors serving healthcare.

HL7’s endeavors are sponsored, in part, by the support of its benefactors: Accenture; Centers for Disease Control and Prevention (CDC); Duke Clinical Research Institute (DCRI); Eclipsys Corporation; Eli Lilly & Company; Epic Systems Corporation; the Food and Drug Administration; GE Medical Systems; Guidant Corporation; IBM; IDX Systems Corporation; Intel Corporation; InterSystems Corporation; Kaiser Permanente; McKesson Provider Technologies; Microsoft Corporation; Misys Healthcare Systems; NHS Connecting for Health; NICTIZ National ICT Institute for Healthcare in The Netherlands; Oracle Corporation; Partners HealthCare System, Inc.; Pfizer, Inc.; Philips Medical Systems; Quest Diagnostics Inc.; Science Applications International Corporation; Siemens Medical Solutions Health Services; Solucient, LLC.; the U.S. Department of Defense, Military Health System; the U.S. Department of Veterans Affairs; and Wyeth Pharmaceuticals.

International affiliates have also been established in 25 countries throughout the globe including Argentina, Australia, Brazil, Canada, China, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, India, Ireland, Italy, Japan, Korea, Mexico, The Netherlands, New Zealand, Spain, Switzerland, Taiwan, Turkey and the United Kingdom. Recently, the HL7 Board approved the establishment of three new affiliates in Chile, Malaysia and Uruguay.

####