

Introduction to HL7

Health Level Seven Inc.(HL7)

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Outline

- HL7 Mission Statement
- Defining Interoperability
- Scope of HL7 Standards
- HL7 Inc Organization
- Types of HL7 Standard Specifications
- HL7 Canada Organization
- Getting Involved

The mission of HL7 is:

To provide 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. Specifically, to create flexible, cost effective standards, guidelines, and methodologies to enable healthcare information system interoperability and sharing of electronic health records.

Interoperability

□ Main Entry: **in·ter·op·er·a·bil·i·ty**

Function: *noun*

Date: 1977

: ability of a system (as a weapons system) to use the parts or equipment of another system

Source: Merriam-Webster web site

□ **interoperability**

: ability of two or more systems or components and to use the information that has been exchanged.

Source: IEEE Standard Computer Dictionary: A Compilation of IEEE Standard Computer Glossaries, IEEE, 1990]

Semantic interoperability

Functional interoperability

What must be specified for communication to occur?

HL7 specifications

Nouns

Adjectives

Verbs

The semantics of the communication

The semantics convey the actual "meaning" of the message. The semantics is conveyed via a set of symbols contained within the communication. An external "dictionary", thesaurus, or terminology explains the meaning of the symbols as they occur.

A syntax for communication

The syntax defines the structure and layout of the communication. Common syntax representations include ASN.1, **XML**, X.12, HL7 v2.x, IDL, etc.

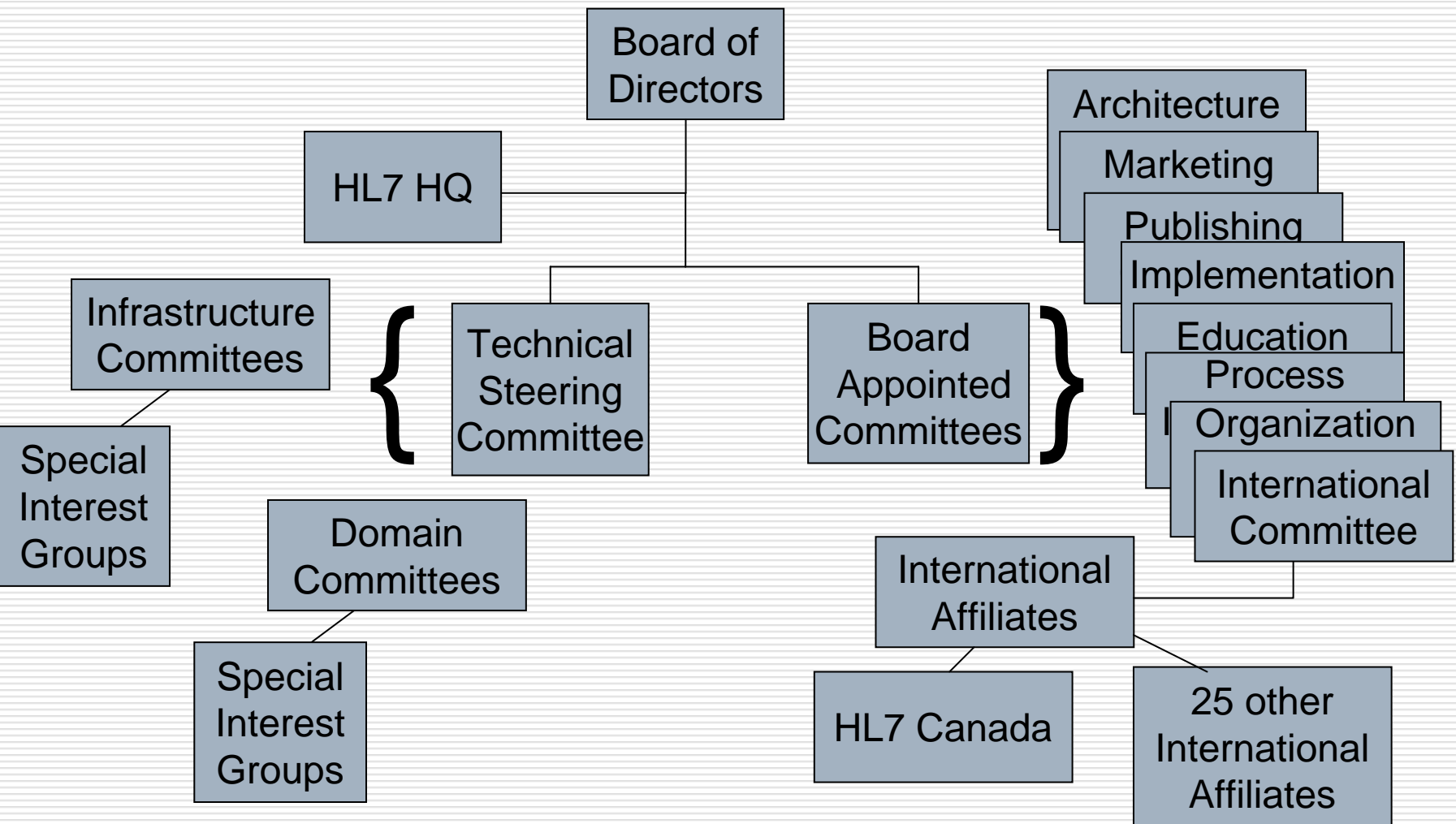
Services to accomplish the communication

Examples include the post office, a telephone switchboard, SMTP, FTP, Telnet, RPC, ORB services, etc.

A channel to carry the communication

Examples of channels include written documents, telephones, network connections, satellite links, etc.

How HL7 Inc. is Organized



Infrastructure Committees

- Control Query
 - Java SIG
 - Security and Accountability SIG
 - XML SIG
- Clinical Context Object Workgroup – CCOW
- Modeling and Methodology
 - Conformance SIG
 - Templates SIG
 - CMETS Project
 - V3 Tooling Task Force
- Vocabulary
- Structured Documents
 - XML SIG
- Clinical Decision Support
 - Arden Syntax SIG
 - Guidelines Interchange Format (GLIF) SIG
 - Electronic Health Records SIG

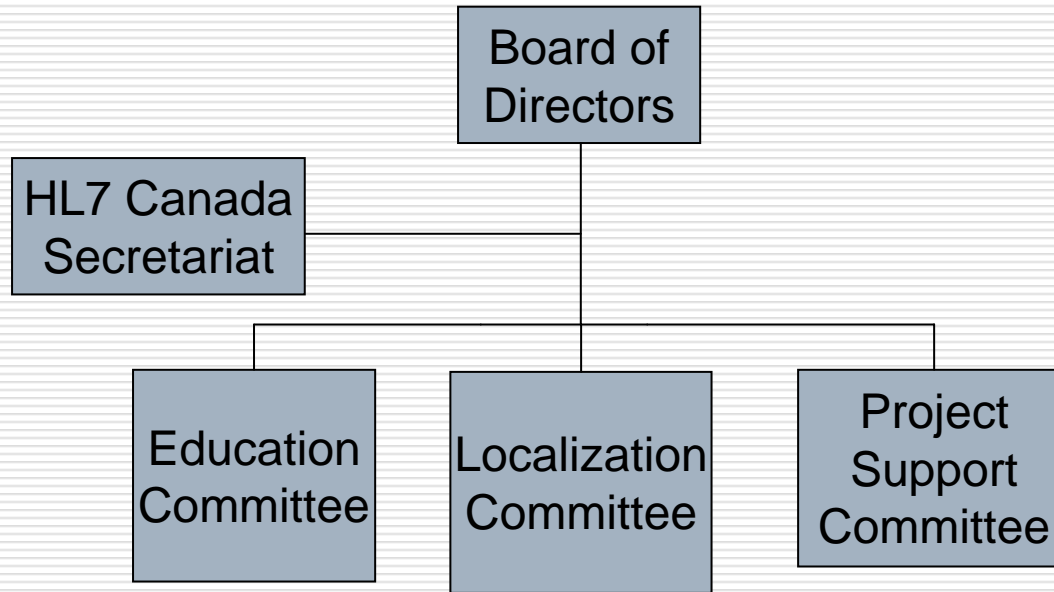
Domain Committees

- Patient Administration
- Financial Management
- Orders and Observations
 - Pharmacy SIG
 - Medication SIG
 - Laboratory SIG
 - Laboratory Automation, Testing and Point of Care SIG
 - Blood Bank SIG
 - Imaging Integration SIG
 - Clinical Genomics
 - Attachments
- Patient Care
 - Pediatrics SIG
 - Community Health SIG
- Personnel Management
- Scheduling and Logistics
- Medical Records and Information Management
- Regulated Clinical Research Information Management (RCRIM)
 - Patient Safety SIG
 - Public Health SIG

Types of HL7 Specifications

- Version 2.x messages
- Clinical Workstation Context Manager
- Version 3 messages
- Message Development Methodology
- Structured Documents
- Reference Information Model (RIM)
- Terminology Services
- Templates and Archetype Architecture
- EHR System Functional outline
- HL7 Value Sets and referenced Vocabularies

HL7 Canada Organization



Types of HL7 Canada Specifications

- Implementation Guides
- Canadian Vocabulary Code Schemes
- Localized HL7 specifications

Getting Involved

- Join HL7 Canada
 - (through www.CIHI.ca)
- Attend HL7 Canada Meetings
 - Next one is April 22-23 in Calgary
- Sign up to e-mail list serves
 - www.hl7.org
- Organize on-site training sessions
 - In depth training on V2 including certification testing
 - In depth V3 methodology and tool use