

The international convergence of models and standards for health information

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Who is Jane Curry?

- Independent Information Architect
 - 30+ years turning data into information
 - 15+ years in the health industry
- Current Roles in Health Information Standards
 - HL7 Board Director at Large
 - HL7 Modeling and Methodology Technical Committee Co-chair
 - HL7 Architecture Review Board Member
 - ISO TC215 (Health Information) designated Canadian Expert

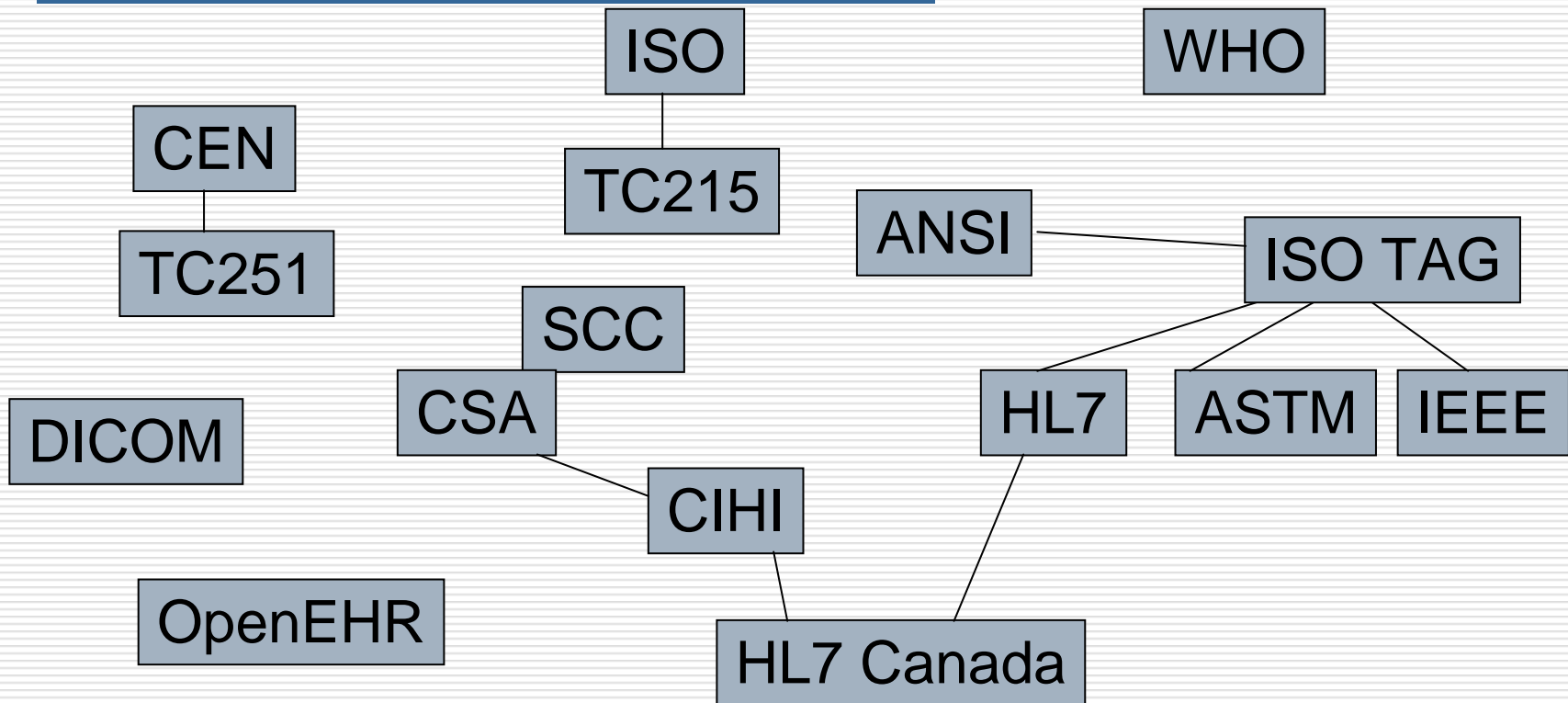
Outline

- Overview of Health Information Standards Organizations
- History of using models in standards specifications
- Types of models being used
- Collaboration of standards organizations
- Current State of convergence
- Global standard specifications?

Standards Organizations

- ❑ ISO TC215 – International SDO for Health Informatics
- ❑ SCC – Standards Council of Canada
- ❑ CSA – Canadian Standards Association
- ❑ CIHI – Canadian Institute of Health Information
- ❑ HL7 Inc. – Health Level Seven Inc.
- ❑ HL7 Canada – International Affiliate of HL7 Inc.
- ❑ ANSI – American National Standards Institute
- ❑ ASTM – Association for Standards and Technology Management
- ❑ DICOM – Diagnostic Imaging Communications
- ❑ CEN TC251 – European Standards for Health Informatics
- ❑ GEHR -> OpenEHR
- ❑ IEEE – Institute for Electrical and Electronics Engineers
- ❑ WHO – World Health Organization

Relationships among Standards Organizations



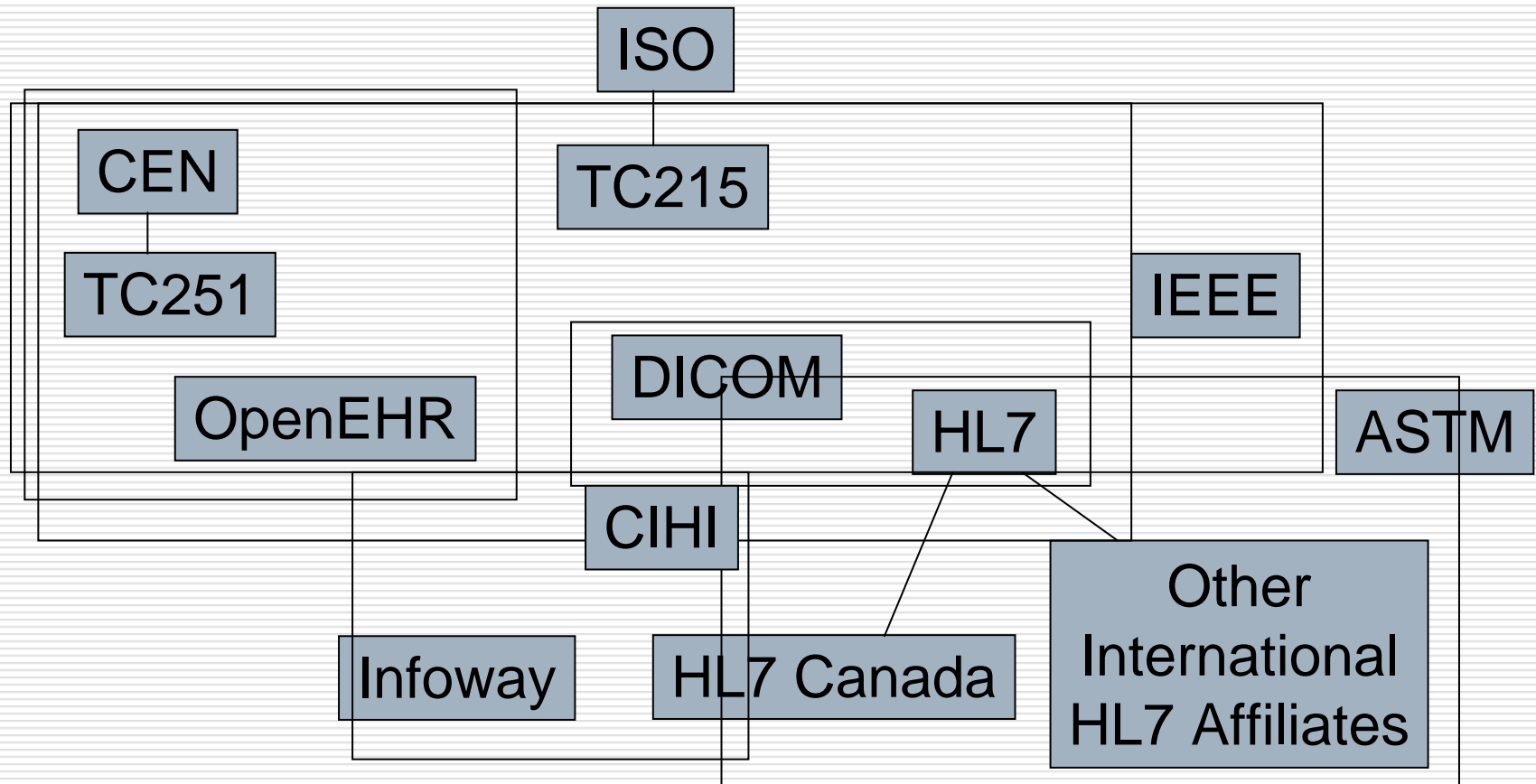
History of using Models in Health Informatics Standards

- IEEE – Medix – 1989
- CEN TC251 – 1990
- GEHR – 1994
- JWG – Common Data Model - 1994
- HL7 Reference Information Model -1996
- CIHI – Conceptual Health Data Model
1998
- HL7 RIM (2003)-> ISO TC215 2004

Models being used

- ❑ Conceptual Data Models
- ❑ Object Models
- ❑ Reference Information Models
- ❑ Terminology Models
- ❑ Archetype Models
- ❑ Structured Document Models
- ❑ UML Activity Diagrams, Interaction Diagrams, Use Case Diagrams
- ❑ Medical Logic Models

Collaboration of SDOs

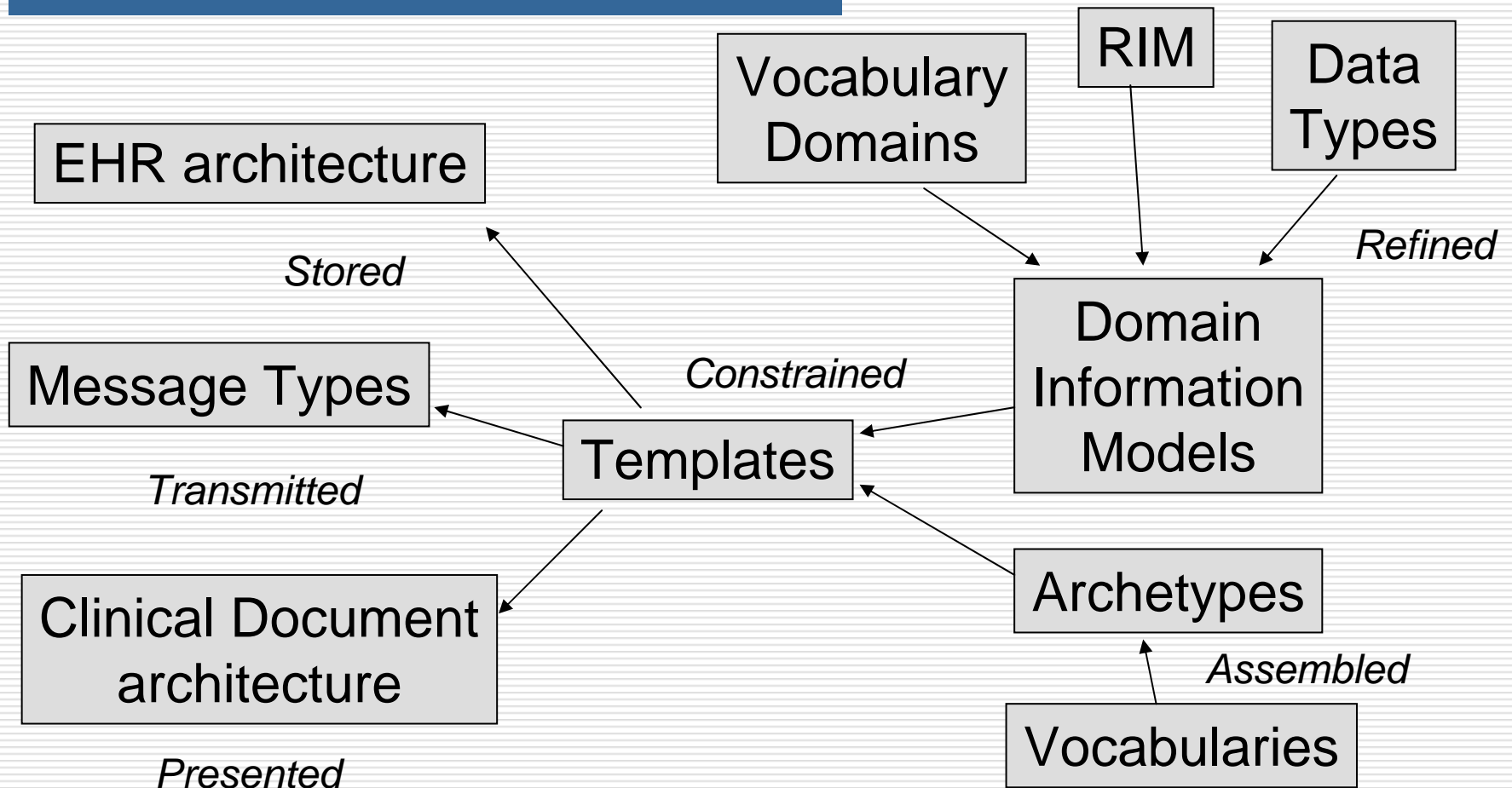


A lot of people participate in more than one SDO

Convergence of Models

- CEN has Domain Information Models
 - specifying information used in specific clinical and administrative domains of interest
 - Electronic Health Record architecture
- OpenEHR has Archetype models
 - specifying constrained terminology used to express specific clinical concepts
- HL7 has a Reference Information Model which was influenced by the Canadian Conceptual Health Data Model
 - specifying generic classes, attributes, vocabulary domains and data types
- Message Development Methodologies emphasize model driven approaches
- CEN, HL7, OpenEHR are actively working to align their various approaches to create semantic convergence

Moving toward convergence



Goal is to achieve common clinical semantics

Conclusions

- ❑ Health Information is complex and dynamic
- ❑ Health Information is fractal in nature
- ❑ Various SDOs have emphasized different areas of the problem space
- ❑ Standards specifications must be able to work together to achieve semantic interoperability
- ❑ Different jurisdictions work with different circumstances and must be able to adjust specifications to meet their needs
- ❑ Key design principles are to support variety within unity and to expect change