

Terminology Services Glossary

The OpenHIE Terminology Services Glossary is a list of terms and definitions pertaining to terminology management for the OpenHIE health information exchange. The objective of the Glossary is to facilitate communication among members of the community.

Term	Definition
Ancestor	Any <i>Concept</i> that is located anywhere “above” a designated <i>Concept</i> in a <i>Hierarchy</i> . Compare to <i>Descendant</i> . See also <i>Generalization</i> , <i>Parent</i> , and <i>Superconcept</i> . Example: In SNOMED CT, cardiovascular disease is an Ancestor of myocardial infarction .
Attribute	A general term used to describe any functional or descriptive data element associated with an element in a Terminology.
Authority	The organization responsible for the creation and/or maintenance of a <i>Source Vocabulary</i> . Example: The International Health Terminology Standards Development organization (IHTSDO) is the <i>Authority</i> responsible for SNOMED CT.
Child	Any <i>Concept</i> that is located immediately “below” a designated <i>Concept</i> in a <i>Hierarchy</i> . Compare to <i>Parent</i> . See also <i>Generalization</i> , <i>Descendant</i> and <i>Subconcept</i> . Example: In SNOMED CT, myocardial infarction is a <i>Child</i> of myocardial disease .
Classification	The <i>Description Logic</i> process by which <i>Concepts</i> are compared and structured into <i>Hierarchies</i> .
Code	An identifier by which a <i>Concept</i> is known, or named, usually for computer processing. A <i>Concept</i> will typically have only one <i>Code</i> . Example: the SNOMED CT <i>Code</i> for myocardial infarction is 22298006.
Code Set	A list of <i>Terms</i> and their related <i>Codes</i> (machine readable identifiers) that have gained acceptance in a healthcare domain [Gartner]. Usually has an associated <i>Authority</i> for creation and maintenance. See <i>Vocabulary</i> and <i>Value Set</i> . Example: The AMA’s CPT is a <i>Code Set</i> .
Code System	A managed collection of <i>Concepts</i> and their associated <i>Attributes</i> [HL7]. See also <i>Code Set</i> , <i>Ontology</i> , <i>Terminology</i> and <i>Vocabulary</i> . Example: ICD-9-CM, LOINC, SNOMED CT.
Coordination /Composition	The process of creating a <i>Concept</i> by combining other (more elemental) <i>Concepts</i> . Some terminologies, e.g., SNOMED CT, may have specific rules under which coordination/composition may be applied. See also <i>Pre-coordination</i> and <i>Post-coordination</i> .
Concept	A unit of thought or meaning. A <i>Concept</i> represents the single meaning that encompasses the <i>Terms</i> used to express the meaning. <i>Concepts</i> are the base unit of representation in terminology <i>Source Vocabularies</i> .
Controlled Medical Vocabulary (CMV)	A standard <i>Code Set</i> and an associated <i>Semantic Network</i> that represents the information within a major domain of medicine. [Gartner] See <i>Structured Terminology</i> .
Descendant	Any <i>Concept</i> that is located anywhere “below” a designated <i>Concept</i> in a <i>Hierarchy</i> . Compare to <i>Ancestor</i> . See also <i>Generalization</i> , <i>Child</i> and <i>Subconcept</i> . Example: In SNOMED CT, myocardial infarction is a <i>Descendant</i> of cardiovascular disease .
Description Logic	A formal, mathematical knowledge representation language used to create descriptions within a <i>Structured Terminology</i> . <i>Description Logic</i> also provides inference mechanisms and algorithms for efficient <i>Classification</i> , retrieval, and comparisons of <i>Concepts</i> .
Exchange Terminology	A local organization is using a canonical terminology to map between interface and reference terminologies; working terminology used by an organization to exchange information; an <i>Exchange Terminology</i> may or may not be a <i>Reference Terminology</i> .
Extensional Definition	A methodology of specifying members of a <i>Value Set</i> (or other composite structure) by enumerating each of the structure’s members. See also <i>Intensional Definition</i> . Example: myocardial infarction + heart failure .
Generalization	A structural methodology by which concepts are arranged in hierarchies (trees) based on class or type characteristics (also known as “Is-A” relationships). Example: hepatitis is-a liver disease .
Hierarchy	A tree-like structure that groups <i>Concepts</i> according to <i>Relationships</i> . <i>Hierarchies</i> are found in <i>Taxonomies</i> , <i>Terminologies</i> , and <i>Structured Terminologies</i> . <i>Hierarchies</i> are generally thought of as “growing” down. Thus, <i>Parents</i> and <i>Ancestors</i> are typically spoken of as being located “above” their corresponding <i>Children</i> or <i>Descendants</i> . A <i>Polyhierarchy</i> is a <i>Hierarchy</i> in which a <i>Concept</i> is allowed to have more than one <i>Parent</i> . SNOMED CT is a <i>Polyhierarchy</i> .

Hierarchical Relationship	A <i>Relationship</i> that serves as the basis for arranging <i>Concepts</i> into a <i>Hierarchy</i> .
Inheritance	The process by which attributes of one <i>Concept</i> are associated with that <i>Concept's</i> subordinate (descendant/child) <i>Concepts</i> .
Intensional Definition	A methodology of specifying members of a <i>Value Set</i> (or other composite structure) by defining an algorithm which, when executed, yields the structure's members. See also <i>Extensional Definition</i> . Example: all the <i>Children</i> of myocardial infarction .
Interface Terminology	An <i>Interface Terminology</i> is a terminology, or simply a set of <i>Terms</i> , used by a clinical application to describe a domain of knowledge. These are terms or phrases which users want to see in the application. AKA "source terminology". These may include unique codes and descriptions, or just be terms. Interface terminologies can be used to present "surface" lexical forms to an end-user application such as an EHR, and may be the form exported in data exchange messages. An <i>Interface Terminology</i> may support "mappings" or relationships to <i>Reference Terminologies</i> .
Mapping	A type of <i>Relationship</i> that connects <i>Concepts</i> in two different <i>Source Vocabularies</i> . Usually designates some type of "equivalence" or computationally useful correspondence: a <i>Mapping</i> from an <i>Interface Terminology</i> to a <i>Reference Terminology</i> can facilitate <i>Subsumption Queries</i> for Decision Support and Analytics. Example: In SNOMED CT, Anemia maps to 285.9 – Anemia, unspecified in ICD-9-CM.
Modeler	A knowledge worker who participates in the creation and maintenance of a <i>Terminology</i> .
Ontology	An explicit, formal specification of <i>Concepts</i> and other entities within a domain, and the <i>Relationships</i> among them. Also known as <i>Structured Terminology</i> .
Parent	Any <i>Concept</i> that is located immediately "above" a designated <i>Concept</i> in a <i>Hierarchy</i> . Compare to <i>Child</i> . See <i>Generalization</i> , <i>Ancestor</i> and <i>Superconcept</i> . Example: myocardial disease is a <i>Parent</i> of myocardial infarction .
Partonomy	That <i>Relationship</i> (or Role) that designates one <i>Concept</i> is physically included in or "part-of" another <i>Concept</i> , e.g., the Mitral Value is-part-of the Heart . May also refer to the <i>Hierarchy</i> resulting from <i>Partonomy Relationships</i> .
Post-coordination	The creation of a new <i>Concept</i> <u>outside of</u> a <i>Terminology</i> by bringing together two or more existing <i>Concepts</i> from that <i>Terminology</i> .
Pre-coordination	The creation of a new <i>Concept</i> within a <i>Terminology</i> by bringing together two or more existing <i>Concepts</i> from that <i>Terminology</i> .
Reference Terminology	A <i>Reference Terminology</i> is a formal <i>Terminology</i> , usually created and maintained by a sanctioned Standards Development Organization (SDO), that can be used as the basis for <i>Semantic Interoperability</i> of information drawn from different data source systems. Each element in the <i>Terminology</i> usually includes a unique identifier (AKA Code) and a textual description (AKA Name). It may be concept-based (usually) or lexical-based. It may include <i>Relationships</i> between reference terms such as a <i>Hierarchy</i> .
Relationship	A named connection or correspondence (an <i>Attribute</i>) between <i>Concepts</i> or <i>Terms</i> .
Role	[IHSTDO] An <i>Attribute</i> defines a formal <i>Description Logic Relationship</i> between two <i>Concepts</i> . <i>Roles</i> are used in <i>Classification</i> . Example: in SNOMED CT, the <i>Role</i> "Finding site" connects Myocardial infarction with Myocardium structure .
Root (Concept)	A <i>Concept</i> in a <i>Source Vocabulary</i> that has no <i>Parent</i> .
Semantic Interoperability	A level of data interoperability that supports comparability and understanding by the "meaning", not just the format, of messages and data.
Semantic Network	A set of <i>Concepts</i> and a defined set of named <i>Relationships</i> designed to express the known or relevant interrelationships between <i>Concepts</i> in a domain of knowledge (or <i>Structured Terminology</i>).
Source Vocabulary	A set of <i>Concepts</i> all relating to a specific body of knowledge; informally, the name of the set of <i>Concepts</i> or the <i>Authority</i> for that set. Example: ICD-9-CM.
Structured Terminology	A <i>Terminology</i> based on well-defined, formal characteristics that consists of <i>Concepts</i> , <i>Attributes</i> , and a rich set of <i>Relationships</i> , aka an <i>Ontology</i> . Example: SNOMED CT.
Subconcept	A <i>Child Concept</i>

Superc concept	A <i>Parent Concept</i>
Subsu mption	The relationship between a <i>Superconcept</i> and its <i>Subconcepts</i> . Typically, a <i>Superconcept</i> is said to <u>subsume</u> a <i>Subconcept</i> , while a <i>Subconcept</i> is said to have an "Is-A" relationship to its <i>Superconcept(s)</i> . Subsumption is frequently used in decision support and analytics applications: acetaminophen is subsumed by (is an example of) an analgesic .
Subsu mption Query	A <i>Terminology</i> query which tests or queries the <i>Subsumption</i> relationship between <i>Concepts</i> : Is acetaminophen an analgesic ? What are the descendants of analgesic ?
Synonym	A <i>Term</i> by which a <i>Concept</i> is known, or named, usually for people. A <i>Concept</i> will often have multiple <i>Synonyms</i> . Example: <i>Synonyms</i> of Myocardial infarction include "MI", "heart attack", and "infarction of the myocardium".
Taxono my	A <i>Terminology</i> that consists of <i>Concepts</i> placed in a <i>Hierarchy of Generalization Relationships</i> (aka, <i>Generalization Hierarchy</i>). Example: ICD-9-CM.
Term	A word or phrase used to refer to a <i>Concept</i> . Sometimes used as an alternative to <i>Synonym</i> . A <i>Concept</i> will often have multiple <i>Terms</i> associated with it, and a <i>Term</i> , for example "cold", can be associated with multiple <i>Concepts</i> . <i>Terms</i> are called Descriptors in SNOMED CT.
Termin ology	A <i>Source Vocabulary</i> that consists of a set of <i>Concepts</i> and <i>Attributes</i> .
Termin ology Knowle dgebase	A database of terminology information consisting of one or more <i>Source Vocabularies</i> in a consistent structure.
Termin ology Services	A <i>Terminology Service</i> is a networked component of an HIE that centralizes terminology knowledge (e.g. interface and reference terminologies, mappings, etc.) for the HIE and provides terminology services to other HIE applications.
Value Set	A set of <i>Concepts</i> used to constrain permissible terminology content for a particular use [HL7]. <i>Value Set Concepts</i> may be drawn from multiple <i>Code Systems</i> . See <i>Extensional Definition</i> , <i>Intensional Definition</i> . Example: HL7's <i>Value Set</i> for Gender
Vocabu lary	A <i>Source Vocabulary</i> that consists of a set of (non-interrelated) <i>Concepts</i> or <i>Terms</i> .