Towards Semantic Process Interoperability

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Abstract-Ontology plays an important role in achieving semantic interoperability. Semantic interoperability can be seen from two perspectives: semantic data interoperability and semantic process interoperability. HL7 V3 provides semantic interoperability using common terminologies (semantic data interoperability) but semantic process interoperability is still a gray area. To achieve semantic process interoperability, we have developed rules and Interaction Ontology that is composed of process artifacts: application roles, interactions, message types and trigger events. We are assuming that ontologies like RIM Ontology, Message Content Ontology and Database Mapping Ontology are in place and we are relating them with our developed Interaction Ontology. This research work would result in providing the base for automation of the communication process of HL7 messages between different communicating components. It results in the solution to problems like overhead of mailing and phone call, delay in delivery of reports leading to patient dissatisfaction, lack of reliable delivery of reports, time consumption due to manual entry at the sender and receiver side.