

Design and Implementation of Open Source HL7

Version 3 for e-Health Services

Abstract- Semantic interoperability is a big challenge for healthcare information systems to integrate their data. In this paper, we describe an engineering approach to semantic interoperability to provide the exchange of meaningful clinical information among healthcare organizations. The tool is generic enough to be used between any medical information systems. For this purpose, we have initiated a project under the name of “Health Life Horizon: Design and Implementation of Open Source HL7 Version 3 for e-Health Services” at NUST SEECS, Pakistan. By this project, we intend to develop an open source tool to facilitate healthcare organization in deploying HL7 V3 compliant interfaces for their required messages. The tool will include HL7 V3 message parsing/generation component, V2 to V3 convertor component, generic database mapping component and transportation component. HL7 V3 has achieved semantic interoperability using conventional concepts definition for different vocabularies. We aim to provide the community with semantic-based HL7 solution using ontologies: a true semantics. Another important part of this project is the integration of SOA to HL7. We envision that our system will get global recognition in term of cost-effectiveness, world first semantic HL7 solution using ontology for the vocabularies, and service orientated HL7.

Reference:

Muhammad Afzal, Maqbool Hussain, Hafiz Farooq Ahmad and Arshad Ali “Design and Implementation of Open Source HL7 Version 3 for e-Health Services”, Proceedings of 9th International HL7 Interoperability Conference (IHIC), 2008, Crete, Greece.