The HL7 Version 3 specifications are centered around a static conceptual model, called Reference Information Model (RIM) which covers all domains of the healthcare industry. The scope of RIM is global, which means it is inherited by all Version 3 complying healthcare institutes. In addition to the RIM, two local interrelated types of information models are the Domain Message Information Model (DMIM) and Refined Message Information Model (RMIM). The DMIM is a local model (a refined subset of the RIM) and is used for modelling a particular domain (e.g., Lab, Hospital Admin). The RMIM is a subset of a DMIM and is used to express the information content for a message or set of messages (e.g., Lab Observation Order Message). All three interrelated models use the same notation and have the same basic structure but differ from each other in their information content, scope (context), and intended use. The RMIM model is exported in XML Schema and an implementation technology like XML is used for the actual construction and exchange of clinical messages.

HL7 Version 3 coreSchemas are available in three categories: (i) Foundational Data Type (ii) Basic

Data Type and (iii) Vocabulary. Similarly, the Version 2 coreSchemas are also arranged in three categories: (i) Data Type (ii) Fields and (iii) Segments. Accordingly, Version 3 data types are divided

into two groups (Foundational and Basic), where foundational data types are designed to construct

the other data types. Basic data types are built by extending foundational data types and one used

to create complexTypes for clinical message construction. The semantics of Version 3 are expressed

using UML notions and any concrete implementation of the HL7 standard uses these built-in data

types for their implementation technology. With the UML semantic specification, an Implementable

Technology Specification (ITS) provides a mapping between the constructs of implementation technology and the HL7 Version 3 data type semantics. In Version 3, the separation of semantics from implementation technology aids in the consistent use of data types and vocabularies, irrespective of the implementation technology.

Figure 3.3 shows the PPEPR importing structure for HL7 ontologies arranged in global and local

spaces. In case of HL7 Version 3, Data Types, Vocabularies and RIM forms the global ontology.

DMIM and RMIM represent the local ontologies. In comparison to \_gure, RMIM represent the

message ontologies and DMIM represent the local domain covering several RMIM (message) ontologies.