

Modeling the UMLS Using an OODB

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Abstract

The Unified Medical Language System combines many well established authoritative medical informatics terminologies in one system. Such a resource is very valuable to the healthcare industry. However, the UMLS is very large and complex and poses serious comprehension problems for users and maintenance personnel. Furthermore, the sets of concepts of semantic types are not semantically uniform and thus are difficult to study. We describe a method to represent two components of the UMLS, the Metathesaurus (META) and the Semantic Network, as an OODB. The resulting UMLS OODB schema is deeper and more refined than the Semantic Network. It offers semantically uniform classes, which improves support for comprehension and navigation of META. The UMLS OODB also exposes problems in the semantic type classifications.

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