

Modeling and Integrating Terminologies into a French Multi-terminology Server

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The aim of the present work was: 1) to design a terminology meta-model (see its UML representation below) into which all terminology models can be integrated, 2) to design and to implement a process capable of integrating terminologies into a French-language health multi-terminology server, and 3) to map these terminologies.

This approach has the advantage of combining respect for each terminologies structure with a re-grouping of the meta-data inherent in each terminology. Each specific class defined for a given terminology corresponds to a class specialization in the meta-model. This ensures the coherence of the overall system and provides the essential platform rendering the terminologies interoperable. Mappings between terminologies are then built on the basis of the UMLS Metathesaurus and are entered into the server. The mapping method we used is inspired by SKOS definitions of mapping properties following

UMLS knowledge sources: *ExactMatch* (MRCONSO), *BroadNarrowMatch* (MRREL), and *CloseMatch* (MRMAP).

The method we adopted was as follows: 1) creation of an OWL representation of each terminology, 2) integration of each terminology into the platform database (ITM[®] from MONDECA) separately from the others, and 3) insertion of RDF files of mappings between the integrated terminologies.

The model of each terminology integrated into the system is a specialization of the meta-model. This is true not only for the classes of objects but also for the classes of relationships. This ensures the coherence of the overall system and provides the necessary foundation to enable terminologies interoperability.

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