

HEARTFAID medical ontology

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Abstract

Development of heart failure domain ontology was an important step in the realization of the HEARTFAID platform. The purpose of the ontology was to systematize and summarize in a hierarchy the vast medical knowledge related to the medical disorder of congestive heart failure. The ontology was implemented using OWL-DL language and Protégé environment. Terminological knowledge contained in the ontology forms the basis for the implementation of the explicit reasoning procedures designed to help doctors in examining, diagnosing and treating patients. A single, large ontology had been developed for this purpose. Knowledge had been gathered from various sources: medical experts, congestive heart failure guidelines, project's medical reports, Internet medical sites (UMLS, Mayo clinic, OpenClinical). The ontology contains a total of 200 different classes, 100 properties and relations between classes and about 2000 individual concepts. It is a precise, voluminous, portable, modular and upgradable representation of the heart failure domain.