A UML profile for perdurant ontology of domain interlocking institutional worlds

Abstract

Nowadays, almost all enterprises are supported by Information Systems (ISs). For a group of systems (ISs) to interoperate, the organisations responsible for the systems must first agree on what the words mean in the interoperation. This agreement is called an ontology, a description of the world shared by the participants. This paper presents a set of high-level concepts (upper ontology) for interoperating ISs taking into account not only the ontology of information objects but also the ontology of messages and the actions performed by the interoperating systems. It integrates an existing formal ontology for information objects with an upper ontology for messages and actions based on speech act theory, represented in a uniform way using UML profiles.