Enterprise Modelling: objectives, constructs and ontologies

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Abstract. Enterprise Modelling (EM) is the art of externalising and formalising structural and behavioural knowledge about how an organisation is organised, how it works and to some extent how it performs. EM equally applies to a single organisation, a networked organisation, or part of these. The aim is to build models to represent, analyse, design and simulate various facets of an organisation (e.g. functional, information, resource or decisional aspects) as well as various flows (e.g. control, information or material flows). Depending on their level of details and precision, these models can serve as the basis for enterprise/business reengineering, they can be shared among users as a means of communication or can support systems interoperability. They can even be used to control enterprise operations. EM is at the crossroads of several disciplines including systems engineering, organisation management, information systems engineering, control theory or enterprise sociology, to name a few.The aim of the tutorial is to address the modelling construct aspects of EM, leaving out issues dealing with modelling methodologies and model assessment metrics. After a brief panorama of EM methods and EM tools available to the users, an informal presentation of the essential modelling constructs will be made. This will cover constructs such as Process/Sub-process, Event, Activity, Enterprise Object/Object View, Resource, Capability Set, Organisation Unit/Cell. Then some more formal models will be presented (workflow models, Petri nets, state-diagrams...). The last part of the tutorial will cover ontological aspects of Enterprise Modelling. First, some ontology projects are reviewed (Enterprise Ontology, TOVE...) and secondly an ontological definition of CIMOSA constructs will be given.