

Developments in Core Cadastral Domain Models

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In this paper we present the latest version of the FIG Core Cadastral Domain Model (CCDM). Important changes and extensions to the model are presented; most of them are the result of an international workshop devoted to standardisation in the cadastral domain. Also the relation with the FIG guidelines from Cadastre 2014 is discussed. Important extensions in this version of the model can be found in the legal and administrative part of model with new classes such as Appurtenance, Encumbrance, Obligation, MoneyProvider, Conveyor, Surveyor, and AdminParcelSet. In addition, several attributes have been added to existing classes such as useCode, taxAmount, salePrize, interest, ranking, timeSpec, computedArea, legalArea, etc. Further both the LegalDocument and the SurveyDocument are now modelled as specialisation of the abstract SourceDocument, which has several Date attributes: submission, registration and acceptance. More classes (attributes and relationships) will make the model look more complex, however the model now also captures more domain knowledge in a formal manner.

One should not look at all the classes at the same time, but one should only look at the relevant classes in a certain context. That is, one 'layer' at a time; e.g. ownership of an ApartmentUnit, restriction on a Parcel, public RestrictionArea crossing several parcels, ownership of a 3D VolumeProperty, and so on. Further, not all classes need to be used in every country. There is a kernel set of classes, which will be present in every country (including RealEstateObject, Person and RightRestrictionResponsibility). However, if more functionality is needed (e.g. 3D VolumeProperty), then the model specifies how this should be done in order to understand each other and being able to communicate. It has always been the intention of the FIG core cadastral model to be compliant with both OGC and ISO TC211 standards (including the geometry and topology). In this version we have putted the 'dot on the i' to make sure that this is indeed for 100% the case. Finally, it is shown how the UML class diagram can be converted into XML/GML schemas. This is the exact structure as will be used in the actual exchange.