Code list management supported through a domain vocabulary

The Cadastre and Land Administration Thesaurus (CaLAThe)

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CaLAThe – Overview

- CaLAThe: Introduction and history
- CaLAThe: Structure and development
- CaLAThe: SKOS compliant and available
- Code lists and the alignment of standards
- CaLAThe: Tool for identification of semantic mess
- Code lists can be integrated in CaLAThe. Prof of concept succeeded
- Summary: Alignment of standards, also beyond Land administration

Links:
- CaLAThe: http://www.cadastralvocabulary.org/
- SKOS Play: http://labs.sparna.fr/skos-play/upload
- Code lists in CaLAThe: CodeListTest2008.rdf
Authors & Publications

Erik Stubkjær:
Professor 1977-2008 Cadastre, Land law
(https://vbn.aau.dk/en/persons/110612)

Volkan Çağdaş:
Assoc. Prof. 2014-, Cadastre and Land admin.
(https://avesis.yildiz.edu.tr/volkan)

• 2010: Domain Thesaurus for Spatial Data Infrastructures? Cf. EU’s INSPIRE
• 2011: Cadastre and Land Administration Thesaurus (CaLAThe) issued
• 2015: Core immovable property vocabulary for European linked land administration, Survey Review
• 2015: A SKOS vocabulary for Linked Land Administration: Cadastre and Land Administration Thesaurus, LUP
• et al 2018: International Code List Management – The Case of Land Administration, FIG LADM Workshop
SKOS is an area of work developing specifications and standards to support the use of knowledge organization systems (KOS) such as thesauri, classification schemes, subject heading systems and taxonomies within the framework of the Semantic Web. SKOS provides a standard way to represent knowledge organization systems using the Resource Description Framework (RDF).

- CaLaThe + Codelists – structured with two SKOS Concept Schemes
CaLAThe – Structure and development

- **Technology**: CaLAThe is presently based on a dedicated web server, drawing SKOS-structured content from a MySQL database by means of php code. GraphViz visualization software show term relations.

- **Content**: Land, Law, Documentation, Party, Activity

- **Versions**
  - 1. 2010 Based on draft LADM; some definitions; references to large thesauri: AGROVOC, GEMET (Environment), INSPIRE, STW Thesaurus for Economics
  - 2. 2012 Added procedures / activities (and some INSPIRE)
  - 3. 2019 Included most of part of LandInfra Part 7. ~ 200 terms
  - 4. 2019 Q4- with code lists and more definitions from LandInfra Part 6 Surveying

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Domain of cadastre and land administration:

• ISO 19152:2012 Land Administration Domain Model (LADM)
• OGC LandInfra, 2016; - InfraGML, 2017

Standards basically specifies classes and the relations among them. The richness of variations of the domain calls for code lists as a supplement.

Code lists are flexible, negotiable; hence potential for cooperation on use and development of standards

A domain thesaurus with code lists: Tool for cooperation
LADM in BIM and GIS Lifecycle
Where does LADM fit in?

LandInfra a connecting bridge between IFC and CityGML, but is conceptually, semantically, and geometrically closer to CityGML.
LandInfra / InfraGML Structure

- Split in 7 Parts (containing all 14 InfraGML Requirement Classes matching LandInfra RCs)
- Each part have its own (standard) document
- Encoding & Application could choose which parts it will support (with involving dependencies)
## Cadastre and Land Administration Thesaurus (CaLAThe)

### Introduction

This web site presents a Knowledge Organization System in terms of a thesaurus for the domain of cadastre and land administration. The main purpose is to create a semantic model, a controlled vocabulary, which may improve organization of knowledge, e.g. in terms of a formal ontology of all or parts of the domain. The Cadastre and Land Administration Thesaurus, in short CaLAThe, could also be used for information retrieval (i.e. tagging articles, projects) and for development or improvement of teaching material, especially in the context of e-learning. CaLAThe is encoded as a Simple Knowledge Organization System (SKOS), according to specifications developed by the World Wide Web Consortium (W3C). The SKOS representation of CaLAThe is available on request.

The term Cadastre is related to Venetian (1185) catastasce ("list of citizens possessing a taxable property"), which through 18th century French developments was adopted into English meaning 1. a public survey of land for the purpose of taxation, and 2. a register of such surveys, showing details of ownership and value. The term Land Administration appears in a 1973 Seminar on Land Administration in Kuala Lumpur, Malaysia [1]. The UN/ECE in 1996 published Land Administration Guidelines with special reference to countries in transition, and authors of a textbook on Land Information Management in 1999 issued a renewed version with the title Land Administration [2].

Scientific reflection of this domain resulted in 2002 in a proposal for the development of a standardized Cadastre Core Domain Model based on the geographic standards from ISO and OpenGIS (from 2004: Open Geospatial Consortium, OGC) and to be developed in cooperation with the International Federation of Surveyors, FIG [3,4]. The proposal was through further developments finally approved as the ISO 19152:2012 Land Administration Domain Model (LADM). The draft LADM standard made the base for preparation of the initial version of CaLAThe, which was related also to existing thesauri, primarily the GEOMET thesaurus, the AGROVOC thesaurus, and the STW Thesaurus for Economics, and issued September 2011.

The user can access the thesaurus through term search as well as an alphabetical listing, and through graphical overviews, which render the main groups: Activity, Documentation, Land, Law, and Party, respectively, in addition to graphical rendering of all thesaurum term relations. Finally, the development of CaLAThe is outlined in Version overviews.

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*Please contact: [wikidoc](https://www.opengeospatial.org) for suggestions and comments.

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Cadastre and Land Administration Thesaurus (CaLAThe)

Homepage
General overview
Alphabetical listing
Graphical overview
Query / Term search
Version overview:
Version 3 intro
Version 2 intro
Initial version
References
About us

http://www.cadastralvocabulary.org/
Ownership

Alternative label:
Freistand
Private ownership

Broader terms:
Real right

Narrower terms:
Individual ownership
Public ownership
Co-ownership
Adverse possession

Related terms:

Definition:
Collection of rights to use and enjoy property, including right to transmit it to others. The complete dominion, title, or proprietary right in a thing or claim (Source: Black, 1991). Possessive relationship with a title established between an owner and their property (Source: Legal Dictionary of Property in Canada, Ouayoun, 2013), includes the right to grant a lease, an easement, or a security interest and other lesser rights. Ownership in land includes buildings and fixture on the land parcel, unless lawful process is performed in terms of establishment of condominium units (Source: OGC Landinfo, 4.8.13)

Scope Note:
GEMET term
Identifier:
http://www.cadastralvocabulary.org/CalAThe/ownership

Exact match:
CaLATHe excerpt – Code lists are integrated
CaLAThe V4 – Survey more fully covered
LandInfra Survey UML Representation
Interoperability needs alignment of Standards (Example BIM)
Interoperability needs alignment of Standards (Example BIM)
IDBE – OGC/bSI Collaboration WG
(Integrated Digital Built Environment)

New Collaboration strategy and MOU launched in 2-day Workshop in Nov 2016
CaLAThe: A Tool for Alignment of Standards
• Interoperability is needed in LandAdministration Domain that request alignment of standards

• CaLAThe: Tool for the alignment of ISO LADM & OGC LandInfra and will be hosted by OGC end 2019

• BIM interoperability example provides a good solution and should also be applied in the LADM domain.

• Working party similar to the IDBE Colloberation Group should be established