Legal independence, modularity and implementation of LADM using INTERLIS - case study of the Colombian ISO 19152 profile

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Decentralized

Colombia

IGAC
INSTITUTO GEOGRÁFICO
AGUSTÍN CODAZZI

Cadaster

SNR
SUPERINTENDENCIA
DE NOTARIADO
& REGISTRO
la guarda de la fe pública

Land Registry

Agencia de Implementación
bsf swissphoto

Proyecto
Modernización de la Administración de Tierras en Colombia
Timeline

- Disintegrated data
- Land Administration System
- Data integrity and interoperability

- Peace process
- ISO 19152:2012
- LADM_COL
Legal independence

• The administration of each legal spatial object is unique and supported by its own legal framework which requires that each theme can be managed in isolation to the legal needs of the others.
• This necessary legal and/or institutional independence requires that each institution assumes the responsibility for its own data and an adequate way to guarantee interoperability.
Modules of Colombian LADM profile
Cadaster-registry module

LA_BAUUnit: Predio

Types of Rights Vs Contracts

Rights

Restrictions

Limitations

Responsibilities

what is the origin?
Particularities of the cadaster-registry module

These alerts are recorded as informative and do not in themselves establish neither a restriction nor right nor responsibility.
Right: LA_RightType

Responsibility is directly associated with exactly one (1) party and exactly one (1) basic administrative unit (BAUnit).

Restrictions, these will be associated with zero or one (0..1) party, and exactly one BAUnit.

In practical life it is found that a BAUnit does not always have an associated responsibility or a restriction.
How to spatially represent different land rights in one BAUnit?

→ Eventually with additional relationship RR to spatial unit

Colombian ISO 19152 profile - suggestions
LADM Implementation same industry requirements

...same challenges
LADM Implementation using INTERLIS

Data model described in INTERLIS helps to create (semi-automatically) a fully Integrated Data Management System (MDA principle)

*All based on FOSS
Web Portal (security, validation, data exchange, reports)

Web Viewer

- Centralized Access point to Land Administration Info
- Bringing together all concerned institutions on one platform.
- Creates efficiency and transparency
Data Validation Service

On Error

Select your transfer files

Select your models files (Optional)

On Success

Select your transfer files

Select your models files (Optional)
Summary

The introduced “Modularity” of the LADM-COL helped to meet the required legal independence, an institutional reality in Colombia.

The LADM-COL Cadaster-Registry model finds a particularity in the class "Publicity" that goes beyond the RRR, defining a new type of relationship between parties and basic administrative units.

The use of the object-oriented INTERLIS language facilitates the implementation of the legal independence principle. The ecosystem of reliable INTERLIS tools now available, facilitates implementation of any LADM country profile.

The developed data validation service increases productivity by automatically and massively checking data against a given model as well as the defined validation rules.

The developed Data Reception System is easily deployable by administrations with limited resources (e.g. Municipalities) and can be considered as a generic information infrastructure of Land Administration, with LADM as the underlying model.
THANKS

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