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An implementation Tool

for LADM

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SWISS LAND MANAGEMENT FOUNDATION
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Overview

1. Cadaster 2014
2. Situation in Switzerland
3. Implementing LADM
4. Conclusion

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Cadaster 2014 Statement 3:

«Cadastral Mapping is dead!
Long live modelling!»

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Situation in Switzerland

The first version of the cadastral model was introduced in 1993 and revised in 2001 (pre Cadaster 2014!).

With the introduction of the geo information law **160 new data models** will be completed by end of 2014.

INTERLIS is the common modelling language to formulate all models of the GDI (since 1993).

Many computer assisted tools (compiler, checker, translators) support INTERLIS.

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INTERLIS Key Features

System neutral modelling language to describe relational or object-oriented data models.

Directly process able by modern software tools.

XML based data exchange.

Compatible with the relevant international Standards (UML, XML).

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Available Software Tools for INTERLIS

Compiler	Tests the syntactic correctness of INTERLIS models (free).
Checker	Validates XML data sets against a model (free & commercial).
Other	DB-Generator, Translators, UML-Editor, etc. (free & commercial).

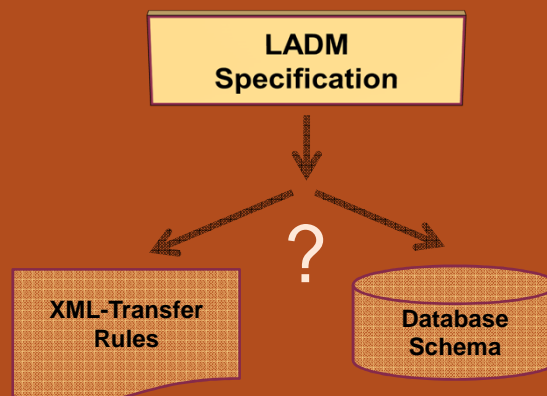see also **www.interlis.ch** for more information

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ISO19152 / LADM

- Conceptual model covering basic information related components of land administration.

- Basis for the development and refinement of efficient and effective land administation system.

- Compatible with Cadaster 2014 principles.

- ISO Standard since December 2012.
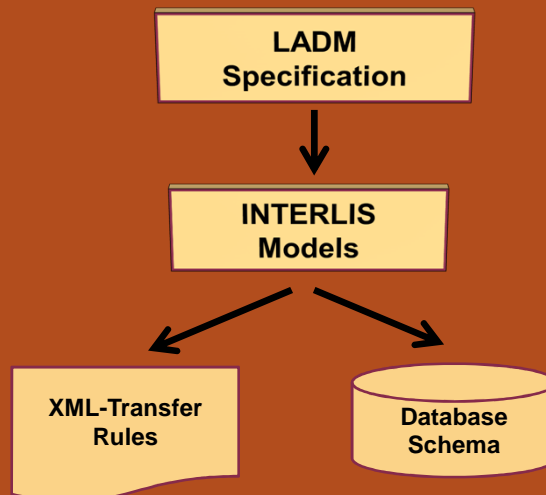
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LADM Implementation

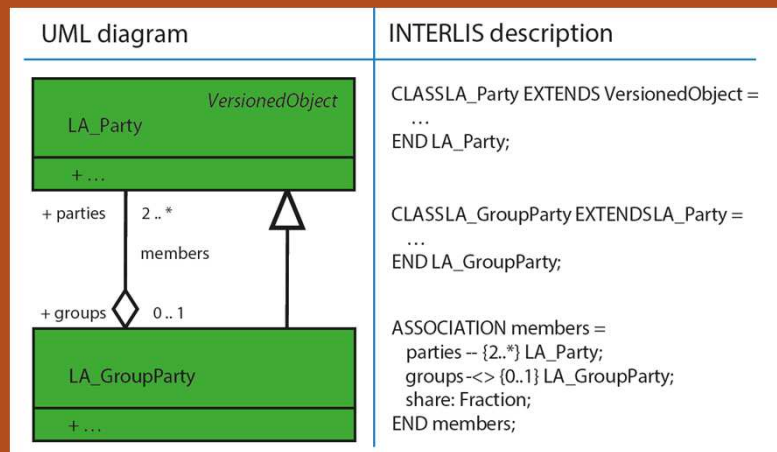**SWISS LAND MANAGEMENT**

The INTERLIS Approach

LADM Specification → INTERLIS Models → XML-Transfer Rules / Database Schema

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Example 1

UML diagram	INTERLIS description

VersionedObject
 	
LA_Party
 	
+ exPID: OID [0 .. 1]
+ name: CharacterString [0 .. 1]
+ pID: Oid
+ role: LA_PartyRoleType [0 .. *]
+ type: LA_PartyType
	CLASS LA_Party EXTENDS VersionedObject =
	    ExPID: Oid;
	    name: CharacterString;
	    pID: MANDATORY Oid;
	    role: LIST {0..*} OF LA_PartyRoleType;
	    type: MANDATORY LA_PartyType;
	END LA_Party;

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Example 2

UML diagram	INTERLIS description

VersionedObject
LA_Party
+ …
 	
+ parties 2 .. *
members
+ groups 0 .. 1
 	
LA_GroupParty
+ …
	CLASSLA_Party EXTENDS VersionedObject =
	…
	END LA_Party;
	
	CLASSLA_GroupParty EXTENDSLA_Party =
	…
	END LA_GroupParty;
	
	ASSOCIATION members =
	  parties -- {2..*} LA_Party;
	  groups -<> {0..1} LA_GroupParty;
	  share: Fraction;
	END members;

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Conclusion

- ✓ By translating LADM to INTERLIS we get directly computer process able data models and data exchange formats
- ✓ We can use the available INTERLIS tools (compiler, checker, translators) for LADM
- ✓ All translated models can be downloaded from the SLM website at

  swisslm.ch

  for free

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Thank you for your attention…

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