LandInfra
Land Administration. This includes addressing the technical models for LADM: INTERLIS, RDF, Cadastre, more explicit relations with Building Information Modelling, further modelling of LADM’s survey and spatial eg. further modelling of LADM’s rights, restrictions and responsibilities; a fiscal/valuation extension module, Marine
Based on current experiences and future expectations, the need and content of possible extensions will be addressed; 19152:2012). After the initial brainstorming on the second Edition of LADM at the 6th workshop (chair: Peter van Oosterom), the result was submitted by FIG to ISO TC211 as a
workshop (chair: Rod Thompson) and further scoping at the 7th workshop (chair: Peter van Oosterom) the result was submitted by FIG to ISO TC211 as a new work item proposal (NWIP) for the second Edition. It is now time to provide proposals for the new LADM parts. Based on current experiences and future expectations, the need and content of possible extensions will be addressed; eg. further modelling of LADM’s rights, restrictions and responsibilities; a fiscal/valuation extension module, Marine Cadastre, more explicit relations with Building Information Modelling, further modelling of LADM’s survey and spatial representation and 3D/2D Cadastre. In addition, more and more attention will be paid to the Operational Standards in Land Administration. This includes addressing the technical models for LADM: INTERLIS, RDF, CityGML, IndoorGML, LandXML, and GeoRTM. Finally, also the aspects beyond Information models will be discussed.

**Technical Programme and Proceedings**

**Title page and other front matter of the Proceedings**

**Final programme 1 October 2019:**
9:00-17:00 Tutorial Advanced 3D Modelling and Big Geo Data

**Final programme 2 October 2019:**
9:00-10:00 Technical Session I: Foundations/Fundamentals (chair: Chris Boddy)
- **A1** Christian Lemmen, Peter van Oosterom, Abdullah Alobaidi, Etychka Kalgopun, Anna Shreadman, Agung Indrati, Abdullah Alzahabi: The scope of LADM vision is shaping up
- **A2** Erik Stadler, Han Christoph Gruver, Scott Simmons and Volkan Dogladı: Code list management supported through a controlled domain vocabulary
- **A3** Rod Thompson and Peter van Oosterom: A suggested Terminology for Point-Like Entities in a Bi-Temporal Plenary session of 2D and 3D Cadastre Data Model
- **A4** Anna Shreadman, Peter van Oosterom and Christian Lemmen: LADM Refined Survey Model

10:30-12:15 Opening session: plenary with GGT, SDSC, LADM: opening and keynote 1

14:15-15:10 Plenary session with GGT, SDSC, LADM: keynote invited talk 1

15:10-16:00 Technical Session II: 3D BIM (chair: Ski Zlatanov)
- **B1** Jingga Yan, Kean Huet Soon, Siew Wai Chew and Gerhard Schrottner: An LADM-based 3D Underground Utility Data Model: A Case Study of Singapore
- **B2** Shen Ying, Yifan Xu, Chenggang Li, Ruihong Guo and Lin Li: Easement spatialization with two cases based on BIM
- **B3** Abbas Rajjlifard, Behnam Azadeh, Xi Meng Yi, Mohsen Kalantari, Mohsen Rahimipour, Hamid Ollie, Farhad Badies, Davood Shejeli, Chen Kei Kim and Mohd Azuan Mohd Jan: Design and implementation of a 3D National Digital Cadastre Database based on Land Administration Domain Model: Lessons Learned from a 3D Cadastre Project in Malaysia

16:30-17:15 Technical Session IIIa: Country Profiles/Implementations I (chair: Jacyrine Pouliot)
- **C1** Javiere Moukes, Christian Lemmen, Rolf de By, Mahvilde Malmidnd, Ernst Peter Oosterom and Alvaro Enrique Ortiz Chaves: On the Design of a Modern and Generic Approach to Land Registration: The Colombian Experience
- **C2** Daniel Cazaban and Dagi Alvarez: The role of the LADM in the transactional flow of Land Administration – Case: Colombia
- **C3** Agung Indrati, Vinya Eraesta Jaya, Bastian van Loenen, Anna Shreadman, Hendrik Pieters and Peter van Oosterom: Implementation of the Spatial Planning Package for Construction of an LADM Country Profile: Reducing Asymmetric Access to Information of RRs in Indonesia

17:30-18:30 Technical Session IIIb: Modelling/Implementation II (chair: Kees de Zeeuw)
- **D1** Jacyrine Pouliot, Claire Monney, Jens Ingenbrand and Suaze Lamine: How to quickly detect the overlap and the consistency between LADM with landXML and LandXML Application of schema matching techniques
- **D2** Christian Lemmen, Eva-Maria Unger, Monica Lengoiboni, Marisa Balas, Roelof Saad, Róhin Bennett, Peter van Oosterom, Jaap Zevenbergen and Maritha Vrienden: Exploring and Assessing STDM and LADM for gender equitable land administration
- **D3** Eva-Maria Unger, Rohan Bennett, Christian Lemmen, Jaap Zevenbergen, Paula Dijikstra and Kees de Zeeuw: LADM-based models for sustainable development LD-DRM for disaster prone areas and communities (an example for SGD 1 and SGD 13)
- **D4** Peter Oukes, Christian Lemmen and Erwin Fulmer: An Approach to Interoperability Between LADM Profiled Implementations

**Final programme 3 October 2019:**
9:00-10:00 Technical Session IV: Country Profiles/Implementations II (chair: Shen Ying)
- **E1** Etychka Kalgopun, Mohsen Kalantari, Eli Dimopoulos and Peter van Oosterom: LADM country profiles development: aspects to be reflected and considered
- **E2** Nur Amalina Zulkifli, Alias Abdul Rahman and Chengxi Bernad Siew: Database Design and Development of 3D Cadastre Registration based on LADM
- **E3** Abdullah Alobaidi, Peter van Oosterom and Erik Zlatanov: Initial Country Profile of the Kingdom of Saudi Arabia based on LADM
- **E4** Anna Shreadman, Peter van Oosterom, Shrinom Basarjav, Anat Marcovich and Shull Aune Sholeam: LADM-based Israel Country Profile Toward Implementation of 3D Cadastre Registration

10:30-12:30 Plenary session with GGT, SDSC, LADM: keynote 2-7 and invited talk 2

14:00-15:30 Technical Session V: Industry/Modelling (chair: Rod Thompson)
- **F1** Katherine Smyth: The role of LADM in Contiguous Geographic Information Systems
- **F2** Aurelie Milledogues, Igor Popov, Mackay Kayla and Carol Roffier: Uganda and Tanzania Land Administration Modernisation Based on IT-Leap Concept
- **F3** Theo Adyala, I Ketut Gede Andi Suastika, Fado Adi Nugroho, H Aan Lukman Syahid and Dany Lesp: Developing an LADM-compliant Mobile Data Collector for Accelerating Participatory Cadastre Mapping and Registration Activities
- **F4** Padmakumara Mildha Piyanorawat, Madyphoargument, Agent Based Simulation modelling Approach for tenure Security Dynamics
- **F5** LADM2019 Workshop: Wrap-up and next steps within FIG, ISO TC211 and OGC

16:00-17:30 Closing session: plenary with GGT, SDSC, LADM: panel discussion, awards and closing

**Background LADM2019**
The idea of LADM2019 workshop will be on preparing input for second Edition (first Edition published as ISO 19152:2012). After the initial brainstorming on the second Edition of LADM at the 6th workshop (WorkshopAgenda2017) and further scoping at the 7th workshop (LADM2019Workshop) the result was submitted by FIG to ISO TC211 as a new work item proposal (NWIP) for the second Edition. It is now time to provide proposals for the new LADM parts. Based on current experiences and future expectations, the need and content of possible extensions will be addressed; eg. further modelling of LADM’s rights, restrictions and responsibilities; a fiscal/valuation extension module, Marine Cadastre, more explicit relations with Building Information Modelling, further modelling of LADM’s survey and spatial representation and 3D/2D Cadastre. In addition, more and more attention will be paid to the Operational Standards in Land Administration. This includes addressing the technical models for LADM: INTERLIS, RDF, CityGML, IndoorGML, LandXML, and GeoRTM. Finally, also the aspects beyond Information models will be discussed.
LandXML, and GeoBIM. Finally, also the aspects beyond Information models will be discussed: Organization, Best practices, Legal/financial aspects, OpenCadastre approach, Crowdsourcing, Workflow modelling, Blockchain and ledger technologies.

Submissions procedure

All submissions (extended abstracts of 500-1000 words) will be peer reviewed and all accepted contributions are expected to submit a full paper, which will be included in both the on-line and printed proceedings (available at the workshop), published by the FIG with ISBN/ISSN reference. All papers must be submitted via the EasyChair online system.

LADM2019_template.doc: template for full paper (not yet needed for abstract, which is web form based).


Important dates

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Extended abstract submission</td>
<td>25 May 2019</td>
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<tr>
<td>Acceptance notification</td>
<td>15 June 2019</td>
</tr>
<tr>
<td>Camera-ready full paper</td>
<td>22 August 2019 (at least one author must be registered)</td>
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<tr>
<td>Workshop</td>
<td>1-3 October 2019</td>
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</tbody>
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Registration and accommodation

See website of Geospatial Kuala Lumpur 2019.

Previous workshops

1. March 2003, Enschede, the Netherlands  
2. December 2004, Bamberg, Germany (http://www.kinf.wiai.uni-bamberg.de/SICD/)  
3. November 2008, Quebec City, Canada (http://www.isotc211.org/WorkshopQuebec/LADM_Workshop_Quebec.pdf)  
4. July 2012, Rotterdam, the Netherlands (WorkshopLADMPresentations)  
5. September 2013, Kuala Lumpur, Malaysia (FinalProgramme papers and presentations)  
6. March 2017, Delft, the Netherlands (WorkshopAgenda2017 presentations)  
7. April 2018, Zagreb, Croatia (LADM2018Workshop papers and presentations)

Organized in collaboration with

[Images of logos: KADASTER, OGC, TU Delft]
Scope

The focus of LADM2019 workshop will be on preparing input for second Edition of the Land Administration Domain Model (first Edition published as ISO 19152:2012). It is now time to provide proposals for the new LADM parts. Based on current experiences and future expectations, the need and content of possible extensions will be addressed: e.g. further modelling of LADM’s rights, restrictions and responsibilities; a valuation information package; a spatial planning information package; Marine Cadastre; more explicit relations with Building Information Modelling; further modelling of LADM’s survey and spatial representation and 3D/4D Cadastre. In addition, more and more attention will be paid to the Operational Standards in Land Administration. This includes addressing the technical models for LADM: INTERLIS, RDF, CityGML, indoorGML, LandInfra, InfraGML, LandXML, and BIM/IFC. Finally, also the aspects beyond information models will be discussed: Organization, Best practices, Legal/financial aspects, OpenCadastre approach, Crowd sourcing, Workflow modelling, Blockchain and ledger technologies.

Submission and selection

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Organization

LADM2019 is organized by FIG, OGC en ISO TC211. LADM2019 is a joint event with UDMS’s 4th International Conference on Smart Data and Smart Cities (SDSC2019) and Geomatics Geospatial Technology (GGT2019) as part of Geospatial Kuala Lumpur 2019.

More information

Website: [http://isocadim.org/LADM2019Workshop](http://isocadim.org/LADM2019Workshop)
Contacts: Chief Lummen@kualadock.nl, ned

P.J.M.vanOosterom@tudelft.nl