

# Towards Malaysian LADM Country Profile for 2D and 3D Cadastral Registration System

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## SUMMARY

This paper proposes a comprehensive Land Administration Domain Model (LADM, ISO 2012) country profile for 2D and 3D cadastral registration system in Malaysia. The proposed Malaysian country profile is partly based on the existing spatial (including survey) and administrative registration systems, and partly based on new developments inspired by the LADM standard. Within the country profile it is attempted to cover all Malaysian land administration related information in the model, which are maintained by different originations. The different types of spatial units include customary areas, reserved lands (forest, wildlife), lots (both of private and public land; e.g. roads), buildings and building parts (strata, all in 3D), strata land parcel (with house no more than 4 storeys) and utilities (legal spaces). The lots can have 2D or 3D representations, and include lots for qualified title and temporary occupation licence (TOL), where there is not yet a certified plan available. What makes the development of the Malaysian country profile unique is the support of this very wide range of spatial units. Each of them having different requirements: some need sketches and text descriptions, others need 2D geometry and topology, while yet others need 3D geometry. The county profile includes the content of the various code lists, which are an important aspect of standardization. It is the first time ever that objects related to strata titles are modelled within LADM: building and land parcel (both within a single lot), which can be refined with parcel unit, accessory unit, and (limited) common property unit including support for provisional and multilayer/underground aspects. This is not only important for Malaysia, but also useful for many other countries, that also have the strata title system. Several novel aspects for the Malaysian land administration are introduced, such as: 3D representations (for building units and option for lots), full version management and inclusion of historic information, explicit linking of all land administration information and source documents (titles, certified plans), possibility to group multiple spatial units in one basic administrative unit with same rights attached, and legal spaces around utilities (in 3D). The country profile helps to establish the national SDI enabling meaningful exchange of information between different (type of) organizations in different parts (states) of the country. As LADM is an international standard it will also support international exchange of information, as part of Global SDI (GSDI).