

Supporting Dynamic, Evolving and Emerging Land Information

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Key words: Cadastre; Digital cadastre; Land management; Security of tenure; Land Administration; Mobile Technology; Cloud Computing; Computerization; Temporal Data Model

SUMMARY

Land administration situations that feature highly dynamic information and rapidly evolving and emerging understandings and practice, require appropriate computerized representation and implementation that supports variety, velocity, and evolution of data, its meaning, and the practices associated with its treatment. Such situations include land administration jurisdictions that are emerging or recovering from disaster or conflict, moving from manual to digital practice, or that feature highly dynamic and evolving extra-legal or secondary arrangements that are difficult to harmonize and resolve with state sanctioned or conventional treatments. The use of mobile technologies and publicly contributed information and claims regarding land and tenure provide a useful and timely means by which such data may be sourced in these situations although such means introduce additional potential for corruption and for ambiguous, conflicting, and imprecise data.

This paper describes an approach to representation that addresses the above concerns. The temporal nature of the shared and agreed understandings relating to the organization of land, land tenure, and administration, and the specification, implementation, deployment and maintenance of computerized land information (LIS) systems is examined and an amendment event-based bi-temporal model is developed. The model well supports the faithful recording of history and tenure reality and a cloud implementation that combines aspects of social networking and contributed knowledge, and support for large variable data sets and analytics. The model has particular relevance to the treatment of customary, extra-legal and secondary associations to land, to dynamic, emergent and evolving concepts of LA, and to such concerns as recovery from disaster and sustainability over time. In addition, the model and treatment provide representational support for adjudication processes and automated determination of claims.