

The Application of Entity-Relationship Model in the Design of an Integrated Data-Driven Land Administration System

J. Opadeyi

Abstract

The emerging open market philosophy, the decline in oil revenue, and the increasing environmental considerations have renewed the need to improve land administration systems, particularly in the developing countries. These countries cannot continue to treat land resources as a common good nor used colonial infrastructure which have proven inadequate and sometimes inappropriate in meeting modern land administration demands. Each country would need to design its land administration system to meet its present and future requirements using appropriate and affordable infrastructure. The paper proposes the use of Entity-Relationship Model (ERM) for the design of an Integrated Data-Driven Land Administration System (IDLAS). The use of entity-relationship model in business management and manufacturing industry as a design tool is well founded. The model presents the following advantages to land administration development:

- It incorporates semantic information about land;
- It can be used to achieve a high degree of data dependency;
- It facilitates the derivation of the database schema required in an automated land administration system;
- It provides a holistic view of data within a system;

Using Trinidad and Tobago as a case study, the paper uses entity-relationship diagrams as tools in the design of land administration. The various design steps are presented at the corporate and domain levels.