

Quality Management for Cadastral Systems

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SUMMARY

Cadastral systems are a ‘System of Record’ and represent both the legal and the physical world. Many cadastral agencies, which are the authoritative source for cadastral information by law, suffer from severe quality issues, often to an unknown extent. Data quality is not uniform and is usually directly related to how the data was collected, assembled, and maintained over many years. Ignorance is not a bliss: poor data quality causes undesired consequences such as loss of trust, poor decision making, and other agencies creating their own competing trusted versions of the cadastral data. With the right tools and technology, the cadastral data can be evaluated, quantified and dedicated tools can be used to fix common errors. Common quality issues range from missing and wrong attribution, geometry related issues such as topological integrity problems and poor spatial accuracy and suspicious measurements in the survey network. The diversity in business requirements, priorities of issues and the workflows to address them varies greatly between different organizations. This requires easy configuration to meet the unique business needs of every cadastral organization. Issues, often modeled as error objects, must be stored and communicated in efficient manner. The parcel fabric ships with built in quality management rules that can be configured to meet the unique business needs. Important quality indicators are stored as metadata on the relevant cadastral features. Real world examples of common quality issues are used and demonstrate different engines and capabilities to assess and fix them. Best practices used to gain stakeholder and public trust are examined. Since cadastral data is a foundational dataset for many other datasets like zonings and administrative boundaries, quality improvements to the cadastral data should also be applied to the dependent datasets.