

Maintaining Cadastral Measurement Data in GIS

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SUMMARY

The next generation parcel fabric technology allows cadastral organizations to store parcel-based measurement information as well as its metadata. Organizations that serve as the authoritative source for multi-purpose land parcel information systems require specific metrics on the captured data.

The technology innovations of the past two decades have had a major impact on speed, quantity, quality and overall characteristics of cadastral measurement data. Simple web maps on mobile devices can be used to capture high accuracy coordinate information in the field, either in real-time, or disconnected and synchronized later. Such innovations have spawned exciting new approaches in the cadastral information systems of developing nations around the world and have also sparked a resurgence in the modernization of cadastral systems in the developed world. As a result, there is now an ever-growing body of cadastral data coming from diverse sources ranging from recorded paper documents, to electronically submitted records, to a variety of measurement sensors.

The parcel fabric allows cadastral organizations to support fit-for-purpose requirements by storing the required metrics for establishing appropriate use. Metadata such as method of capture, date, spatial accuracy, and historical lineage can be stored, used and published as needed. The built-in data quality management of the software assesses other key criteria such as topology and attribute accuracy.

This paper describes a modern cadastral software system that is a proven, practical solution for maintaining and using measurement-based information for land parcels.