Simplification of Parcel Mapping Process and its Application: Geographical Information System based Approach

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ABSTRACT. Parcel maps facilitate administration, Zoning, Flood determination, Real Estate, Service territories, Financial services, Tax, Utilities, Building and site development, lake and stream erosion control, Planning, Design and construction of roads, public works etc. Understanding actual parcel boundaries significantly improves the positional accuracy of property location. Positional accuracy is a measurement how close are the property location features representing the true position on Earth. Knowing actual parcel boundaries significantly improves the accuracy of parcel data.

This study mainly focuses on implementation of GIS technology in parcel mapping process and discussing various methods on creation and maintaining of high level accuracy of digital parcel data. The methodology of creating digital parcel map depends on the availability and quality of the source maps, application software availability, requirements for quality and completeness of the data. In this context CoreLogic internally developed many customized GIS tools and various methods in AutoCAD Map and ArcGIS environment for parcel mapping, these methods plays vital role in creation of new of parcel map and updating large quantity of existing parcel map. These method which includes Geo-referencing, vector based Geo-reference, COGO (Coordinate Geometry), Tally methods, Object ID cross checking, Hathways tool, ET tool, APN Attribution, Spatial Unique ID Creation, Multiple Stack Creation Tool, Arc Google Synchronize Tool, Simplification of Raw Data, Simplification of Projection Setting System, Color Code Check, Data base check etc. The main aim of this study is to analyze various methods in parcel mapping and simplification of the process to improve daily team productivity and to meet high data accuracy as per National Standard for Spatial Data Accuracy (NSSDA).

Key words: Parcel mapping, Positional Accuracy, GIS, Methodology, Techniques & Tool, Applications.

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