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New technology creates virtual interrelated land surveys

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For anyone in the land-development industry, the complexity of a national land system that is hundreds of years old is frequently very challenging.

Surveyors, for example, often face situations where they cannot find a long-lost property corner stake. The surveyor then makes multiple measurements from other known monuments. He applies his measurements with mathematical calculations, historical records and boundary principles to re-establish the corner's true position.

In addition, attorneys, title companies, developers, public officials, surveyors and other real estate professionals struggle every day with the same common problem.

Property legal descriptions, often hundreds of years old, simply do not relate to each other. They were written independent of each other with their own unique directional and spatial reference. Relating even basic abutting property descriptions to each other requires special training and understanding that often challenges the best professionals.

National Survey & Engineering, a division of R A. Smith & Associates, has brought together survey and geographic information systems technology to create virtual interrelated land surveys. The new technology spatially relates property boundaries along with other associated survey data into one unified system. We believe the system is a breakthrough technology for the surveying profession.

Accurate system

BoundlessTM, patent pending, is a high-accuracy, survey-grade geographic information system that creates virtual interrelated land surveys. BoundlessTM readily transforms surveys into a common coordinate system without introducing distortion. When applied with measurements using modern GPS techniques, a new world of land surveying is created. All land boundaries and improvement locations can now be placed in a common spatially related environment with incredible precision.

Boundaries become perpetual and more easily retraceable with high accuracy.

Future resurveys of a BoundlessTM survey are not dependent upon recovering and measuring between physical monuments. Iron-pipe stakes, concrete monuments, crosses in sidewalks and other typical survey monuments are frequently destroyed or removed. Their loss adds up to expense and delays. The speed and accuracy of their recovery is greatly enhanced with

BoundlessTM and its associated technologies.

Currently, property must be surveyed and measured on the ground by a surveyor to determine the location of property lines and their relationship with improvements.

BoundlessTM surveys require the same procedure but with an important distinction. The measurements incorporate very high accuracy GPS techniques tying the surveyed data to the National Spatial Reference System.This is now possible because of the existence of a national GPS network of Continuously Operating Reference Stations.

BoundlessTM unifies land boundaries or legal descriptions in the spatially related environment of NSRS, allowing ready analysis, comparison and understanding with adjoining lands. Boundary conflicts created from inaccurate or ambiguous historical legal descriptions and resolved utilizing BoundlessTM will be memorialized in a high-accuracy environment for future generations.

Retracement of boundaries on the ground by surveyors is enhanced by BoundlessTM. Data output from BoundlessTM along with other technological advances allows the surveyor to easily navigate to the precise corner established in the previous BoundlessTM survey -- enhancing or even eliminating the tedious and time-consuming steps now used to retrace boundaries.

Who benefits

The technology will benefit most anyone with real estate interests -–– landowners to developers, land planners, land title companies, utility companies and federal, state, county and local government.

National Survey & Engineering is actively using BoundlessTM in its operations and has a patent pending on the proprietary BoundlessTM technology. The BoundlessTM technology is transparent to the survey operations and does not disrupt, hinder or alter normal office procedures for the surveying operation.

BoundlessTM provides a long sought link between surveyors and GIS professionals with a potential to impact anyone who owns, has interest in or hopes to possess land.

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