



THE FUTURE OF LAND REGISTRY

New blockchain technology offers a safe and secure solution to a global issue

BY GLENN WINFREE, SR/WA

In most developed countries, having access to a proper land registry system is an assumed fact of life. However, this is not the case for an estimated 80 percent of the world's population. This lack of a trusted and secure land registry impacts businesses, governments and the lives of billions of individuals—arguably contributing to a substandard quality of life. The most severely impacted are, in essence, deprived of even the most basic opportunities due to their

inability to prove property ownership, transfer title and secure loans as capital for business or investment needs.

What if a transparent, trusted and secure land registry were available to the majority of the world's population? Could something as seemingly mundane as having access to a proper land registry have a real and meaningful impact on people's quality of life everywhere?

There is a complex and multi-faceted solution that is both developing and evolving at the same time—one that offers the potential for significant change in all areas involving infrastructure land rights.

Absent or Lacking in Many Places

An example where there is a lack of a proper land registry is Honduras. Its land registry system has been described as a dusty, damp room in a basement that stores hardcopy ownership records without so much as a closeable door. Essentially, anyone could—and reportedly has—walked in and completely removed records or replaced existing ownership documents with new documents showing themselves as the “legal” owner of valuable beachfront property of their choosing. However, resolution of this current state of affairs is now underway using some of the world’s newest available technology.

Another example is Indonesia, where a pipeline project owner reported that they had paid multiple owners for the same right of way as a result of the lack of any system for land registry or written ownership records. Faced with the impossible task of validating property ownership, the project owner decided that, rather than delay the acquisition process, it was more efficient to simply acquire the same land rights from multiple people.

As problematic as these situations are for the companies involved, the lack of a proper registry is even more troublesome for people who live within those constraints.

According to research conducted by Hernando de Soto, a Peruvian economist and founder of one of the world’s leading think tanks, “Institute for Liberty and Democracy,” weak property rights are a fundamental underlying cause of third-world poverty. Essentially, people in these circumstances cannot develop land, borrow capital needed for life improving efforts, settle land disputes, or even use their property to assist in their own survival in extreme cases.

Fortunately, a promising solution to this current state of affairs is now underway using some of the world’s newest technology.

Opportunity on the Horizon

From a most unexpected source comes a tool for paradigm change. The global Bitcoin phenomenon that is currently underway involves a new type of money—one that is digital in nature and not tied to nor issued by any government. Its connection to the land registry arena is found in its technological registry known as “blockchain.”

In the most basic terms, blockchain is a database that can be accessed worldwide. One of the many aspects that make it unique is that, unlike current digital storage arrangements, all Bitcoin financial transactions reside simultaneously on many thousands of computer servers around the world. This technology behind Bitcoin is what offers such promising opportunities for current and future land registries worldwide. It involves an open ledger setup with options for side chain constructs, public access, private access and discretionary transparency. Every transaction

contains unique data, and upon execution, it forms its own immutable block of information with all of the transaction specifics included. These blocks of information form a chronologically sequential chain that cannot be altered by anyone after they are formed. This process results in a permanent, unalterable record that is transparent to all stakeholders, including the general public, if applicable.

Blockchain records for properties can not only capture valuation data and ownership changes, but easement and right of way records, title concerns and resolutions, permitting, remodeling records, fire or hurricane events, surveys and whatever else owners deem pertinent to include. And while this will become available to both developed and undeveloped countries, the relative benefits will be significantly greater for those in undeveloped areas. Once a country has trusted parcel ownership and boundary records, it can develop a tax revenue system that can be used to finance and build critical infrastructure that’s essential to improving the overall health and economic well-being of its citizens.

Over time, government agencies that manage existing land registries will also benefit from a reduction in registry related expenses. Beyond the efficiencies gained, the technology also offers improved data security and records that are indisputable, thereby minimizing the potential for fraud and property disputes.

Future Applications

There is an extensive range and scope of uses that are likely to become blockchain-based in the foreseeable future, and many industries are already moving in that direction. Here is a sampling:

BLOCKCHAIN TECHNOLOGY USES IN DEVELOPMENT

- **Financial:** 7 major European banks are launching a blockchain-based platform in 2017 for international trade deals.
- **Land registry:** Dubai plans to have a 100% blockchain-based document system by 2020.
- **Voting:** England is investigating the use of a blockchain-based voting system.
- **Business records:** Isle of Man is developing a blockchain records system for businesses.
- **Investment:** Nasdaq stock exchange is developing a blockchain-based system for processing their credit swap transactions (roughly \$12 trillion annually).
- **Oil industry:** Global Blockchain Business Council is working to bring the world's oil trade business onto a blockchain-based platform.
- **Land registry:** Sweden is conducting preliminary trials to eliminate centralized databases and move records to blockchain technology.
- **Music industry:** Models are being tested to collect royalties via blockchain technology.
- **Currency:** In addition to the established Bitcoin currency, central banks in the United States, China, England, Singapore, South Africa and others are investigating ways to issue their own versions of cyber-currencies based on blockchain technology.
- Other uses are also being developed by the **insurance industry, the global supply chain industry, major companies of the accounting profession, MasterCard, Google, Deutsche Bank, Charitable Foundations and identity theft prevention** companies.

Beyond the Technology

Like other paradigm changers, blockchain technology has much to offer, and as such, will likely be the subject of overreaching promises and hype in the years to come. And unfortunately, there are critical factors that this new technology will not be able to change, such as the political challenges and corruption in some countries around the world.

Developing the new system will also require that an originating chain of ownership and parcel information be established. In those areas that lack a pre-existing land registry, the most obvious challenge is establishing historical records of ownership and boundary data. While the information needed will vary according to locale, the first challenge will be to capture whatever parcel information is available. In areas with an existing land registry system, one challenging obstacle will be determining how to blend and transition to a new system while retaining the use and access to existing archives.

The Road Ahead

One of the most promising aspects of the technology is the impact it can have on people by unlocking their access to capital and wealth that is currently tied up in unregistered land and completely inaccessible. Those are the very circumstances that put people at risk from corrupt politicians and governments, something that could be reduced and eventually eliminated as citizens become empowered by the

opportunities offered by a proper land registry.

The road ahead for this new paradigm changer will no doubt be long and filled with both challenges and opportunities. And while resistance to change is certain to be one of many obstacles, the possibilities for land registry opportunities hold promise, not only from a process standpoint but also from the perspective of the billions of people who will benefit from a proper system of trusted and secure ownership records. So despite the challenges ahead, the potential offered by this invaluable opportunity will contribute greatly to improving the lives of many. 🌟



Glenn Winfree, SR/WA is a Land Agent with Duke Energy with over 30 years of real estate experience. He is currently Vice Chair of IRWA's International Relations Group, actively involved in forming new Chapters outside North America. He is also the former Chair of the International Electric & Utilities Committee and an active member of the Carolinas Chapter 31.