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**Questions and Answers
For
Recorders
About Land Records
And
GIS Integration**

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Questions and Answers for Recordors¹ About Land Records and GIS Integration

1. As a land records recording official, how does land records/geographic information systems (GIS) integration benefit my office?

As you are aware, land records are the fundamental starting point for some of the most critical functions of government. Land records are the starting point for assessment, property tax, and real estate valuation updates. Land records are also a key in mapping updates, changes, and corrections in GIS. Land records power one of the most essential “layers” defined in GIS: the cadastral layer.

Since so many users, both governmental and business, utilize public records, new methods of access can speed the application of your records in a geographic context. For example, recorded documents can be queried by situs/location address or parcel identifier in addition to established identifiers such as grantor/grantee names, legal descriptions, and document recording numbers that support title searches. Integration is also an effective method for improving the quality of public records, thus making them more reliable for additional users and functions. Access is improved in ways that may even make new revenue streams possible.

2. Wouldn't land records/GIS integration slow down record processing in my office?

No, it should not. In some situations, automation and workflow improvements have reduced backlogs and improved recording functions and processes. Given overall recording and map filing workflows, substantial improvements have been noted due to the benefits of integration. The onus on the document preparer still requires that the documents be properly prepared and ready for indexing and recording. In fact, integration can facilitate the preparer's ability to confirm key elements of a document before it is presented for recording. Any new verification steps (checking for correct map/parcel identifiers) should take minimal time prior to recording, and these steps can often be automated.

¹ In the United States, land document recording may take place at the State, City, Town, County, Borough, or Parish level. Depending on the jurisdiction, the Office of the Recorder may also be known as Recorder of Deeds, Registrar-General, Register of Deeds, Registrar of Deeds, Registrar of Titles, Deeds Registry, Auditor, or Deeds Office. In some states, the recording function is part of the county clerk's responsibilities. Throughout this paper, the term utilized for this role will simply be “Recorder.”

3. Would I need additional staff members in my office to undertake land records/GIS integration?

Possibly. The answer largely depends on where the staff members who review geographic data (legal description, parcel identification number, address, etc.) reside in your organizational structure. It is very important to examine workloads in multiple, affected departments. Generally, automation and workflow improvements increase productivity of existing staff members, allowing them to do more, more efficiently. Often, the work is done anyway. If done in a more timely manner, staff members may benefit from not having to do something redundantly. Note that other staff members may be responsible for building the key cross-references such as situs addresses, uniform parcel identifiers (UPIs), parcel identification numbers (PINs), grid parcel identification numbers (GPINs). Still other staff members are updating the GIS map layers, assigning new keys or cross-referencing existing keys, as needed.

Remember that all of the traditional tasks completed by your office staff are still mandated by statute. We are just talking about coordinating datasets between offices.

4. How can the public directly benefit from land records/GIS integration in our office?

Land records/GIS integration improves information architecture, workflow, and processing among various governmental agencies. By more quickly referring to the proper parcels, documents, and properties, government work and processing is more accurate and timely. By making GIS maps and products available directly to the public and other governmental entities via the web or via direct distribution, the governmental, public, and commercial interests can use GIS products directly and experience real benefits. Real estate interests, commercial interests, preservationists, open space advocates, and nonprofits can use GIS maps, land records, and data products directly.

Having maps and aerial photographs more widely available, the correct property is more easily verified. For example: "Yes, it is the property on the corner," or "No, it is next to the property with the out buildings behind the main residence."

With staff members examining the proper property and land records earlier, data is more accurate and fewer errors result. The chances of transferring the wrong property are greatly reduced.

5. We are a small jurisdiction; how can we expect to implement land records/GIS integration?

Smaller recording jurisdictions have the same problems and opportunities that larger ones do – just fewer staff members to handle the situation.

Ask questions and learn from others. Most states have a land records modernization organization or a statewide group of Recordors. PRIA has made land records/GIS integration a multi-year initiative – we will have additional source and reference materials to answer your questions. Look for workshops, educational briefs, white papers, and case studies from PRIA in 2011 for much more detailed implementation information. Also, the Urban and Regional Information System Association (URISA) is a great resource of GIS experiences from across the U.S. and Canada. The land records management systems and GIS vendors are also good sources of information. Go visit other jurisdictions in your state, or in a nearby state, and talk to their GIS offices or Recordors. It has never been easier to implement advanced technologies.

6. How useful are photographs as part of the GIS? What kind of photographs?

In today's GIS many kinds of photographs and imagery are referenced to the GIS base map. Traditional "planimetric" or top down photographs are "registered" (or tied) to the GIS base map. In the last several years more "oblique" imagery or helicopter perspective views that show the sides of buildings are being utilized. Even street level imagery can be shared and registered to the GIS. More sophisticated, seamless street level imagery is now appearing on the Internet. Historical photographs can also be registered to the newer photographs and the GIS databases, thus allowing for full address or owner name queries over time.

The ability to now link photographs and imagery to land records is just another example of the "value added" by the GIS component of land records/GIS integration.

7. How can attribute data from other government departments be "linked" to the GIS and how can maps be created?

Think of it as the "G" in the GIS. Chances are that almost every other function, system, or department in government could use geographic information, such as addresses or parcel numbers, to capture records and service people, property, and requests. If this data is accurately captured, it can be used to link those records to the GIS. This might help to identify needy households for referrals, building permits that relate to a specific property, etc.

8. Sounds like addresses and proper parcel numbering are quite important to GIS. Please elaborate on what this means for our jurisdiction wanting to implement land records/GIS integration.

Accurate and unique addresses can be captured throughout your jurisdiction with cooperation from the local officials who often assign the address numbers and the street names. Unique addresses are crucial to E-911 functions and Emergency Services operations for dispatching emergency vehicles. If all accurate street names, with the proper street types, street directions, and address ranges are maintained in the GIS, then they can easily be mapped and shared with all other address usage and functions.

Proper addresses (both mailing and situs/location) can then propagate into other government systems that use addresses. The Recordors' land records systems are often the first and primary opportunity to capture mailing and situs addresses in their proper, complete formats.

Unique and consistent parcel numbering is also important. Like addresses, PINs can be maintained on a jurisdiction-wide basis with cooperation from other governmental entities. Experience indicates PINs are most effective when they are unique and are not reused over time. Also, various formats may exist among different users or departments. Care should be taken to develop a single numbering system that meets the needs of all users.

Addresses and parcel identification schemes may require much work to have stable and shareable keys across multiple functions, departments, and governments, but the benefits of undertaking this work are many.

9. We are a Torrens jurisdiction. What differences, if any, may arise with GIS integration with our recording system?

Torrens jurisdictions provide even more keys and identifiers (certificate number) to access land records and find historic properties. Torrens jurisdictions also eliminate the entire title search process. Torrens jurisdictions may also benefit by implementing additional search criteria via GIS integration, such as being able to use legal descriptions to cross-reference to land record identifiers.

10. Other offices and elected officials are responsible for other records that may deal with real property (e.g. Register of Wills, Prothonotary, Clerk of the Court). How do we get them involved too?

Ideally, any index or register that a title searcher may use to search for records would benefit from GIS integration. Have those offices become a "phase II"

implementation opportunity. Stay tuned for more from PRIA regarding the PREP educational programs that are beneficial to these other officials as well.

11. Isn't GIS software expensive and doesn't every user need it to see the maps and do real work?

Not necessarily. Only select staff members who are responsible for map and database maintenance or heavy analytical work may need to use full-featured GIS software, which can be comparatively expensive. Many options for "reader" or "viewer" software currently exist, and these applications are either low or no cost. Over the years, "reader" or "viewer" software has gotten more sophisticated over the years. Some implementations use PDF files and can do "GIS-like" functions, turning layers or features off or on. In fact, the most important GIS users may simply be entering addresses or PIN numbers into their systems and accessing the correct records, all without even having to look at a map.

12. Where do I go for more information?

PRIA has made conversation about land records/GIS integration a multi-year initiative. Check with PRIA about workshops, white papers, educational briefs, and speakers, all of which are available for additional information. URISA is also a good resource for more information on GIS, addressing issues, and dissemination options.

13. What funding sources have been used to help cover the costs of land records/GIS integration?

Landline E-911 fees, wireless E-911 fees, UPI number verification fees, supplemental recording fees, bond programs, general funds, consortium fees, GIS data distribution fees, and grants have all been used to help fund land records/GIS integration and modernization. If done properly, the return on investment (ROI) can be very substantial.

14. My staff members only check certain fields for correctness prior to recording and indexing a document. Does this change with GIS integration?

Not really, but just as advances in technology have impacted document storage (imaging vs. microfilm), likewise, advances in technology can be leveraged to improve the accuracy of land record indices. While statutes generally do not require Recordors to check legal descriptions for accuracy, closure and completeness, what if we could automate review of these items and improve the

overall quality of our records? What if document preparers could easily confirm legal descriptions in documents before the documents were presented for recording? Better integrated systems can facilitate more consistent and accurate documents.

There is also a bigger picture to land record modernization beyond GIS integration that still needs to be discussed. Issues include time-slice mapping and land records integration over time, geodetic control monuments and their role, and 3-D record interfaces.

15. Why do GIS people seem so excited about what they are doing?

Good question. In the January 22, 2004 issue of Nature magazine, the coming new technologies were listed as bio, nano, and geo. It is exciting to see that local government can play a role with innovation and new technology and GIS is just that. Think of the GIS map as being the most powerful kind of business graphic for decision-makers in government. GIS staff members still sense the excitement about using this new technology to make government work better and be more effective. The "G" is truly the common denominator of what all government does. The private sector cannot take advantage of the "G" like government can. Yes, government is a leader in GIS! It can also be a leader in land records modernization as well.

Wait till the first time you see a map showing all your recorded documents that deal with real property in the last six months, you'll know what we mean.