

Everyone Wants Assessors' Parcel Data— Federal, State, Local, and Private: An Overview of Parcel Data Issues

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Understanding the issues and controversy surrounding the use and availability of parcel data is a *big* deal. Finding out why commercial data providers and the Federal Government want assessors' parcel data is also important. If assessors understand the value of their data, an equitable means of making those data available to other users can be determined, possibly benefiting the jurisdictions (taxpayers) that funded the creation of the data in the first place.

My position is that I have no objection to giving parcel data to any governmental agency (or its agent) for any purpose as long as distribution is limited to noncommercial or emergency use *only*. This is typically termed government-to-government data sharing but is not addressed here.

First, in any discussion of these issues, the question, What is parcel data? must be answered. Parcel data can be cadastral maps; name, address, legal (NAL) files; computer-assisted mass appraisal (CAMA) records; tax rolls; assessment rolls; building permits; photographs; legal documents; plats; surveys; and geographic information systems (GIS), defined as follows:

- *Cadastral maps* are the underlying layer to which tabular and coordinate data can be referenced. They relate abstract data to the real underlying physical geography. The cadastral map provides a visual reference point that helps to make sense of all the other data that sits on top of it.
- The *NAL file* (name, address, legal) is an administrative data file that helps link parcel records. In addition to the property owner's name, address, and legal data, the file often includes information about exemptions, abatements, and special assessments and other assessment administration data.
- The *CAMA record* is the assessor's data on all the parcels within a jurisdiction, including specific features of the property, improvements such as bedrooms, fireplaces, and

bathrooms, and square-foot measurements. It also includes other data that can be used to assist the appraiser in estimating value using statistical analyses such as multiple regression analysis and adaptive estimation procedure. The CAMA record has also been referred to as the master appraisal file (MAF) or appraisal database.

- The *tax roll* is an official list showing the amount of taxes charged against each taxpayer and each property within the jurisdiction of the tax district.
- The *assessment roll* identifies property owners within a jurisdiction and lists a parcel identifier, owner of record, assessed value of the land, assessed value of improvements, and total assessed value. It is frequently combined with the tax roll to avoid redundant data storage.
- *Building permits*, though somewhat self-explanatory, are the official documents that help assessors to identify new construction and improvements to existing properties.
- *Photographs* include orthophotographs, street-level photos, obliques, and other digital photos that identify and document individual property features.
- A *GIS* is a database management system used to store, retrieve, manipulate, analyze, and display spatial information (IAAO 1997).

Who Wants This Old Parcel Stuff and Why?

The assessor's office has traditionally, and in many places statutorily, been the builder and keeper of parcel data and is responsible for the integrity of those data. Parcel data can be collected by using outside services, but almost always under the auspices and authority of the assessor's office.

The funding to maintain parcel data comes directly from the taxpayers living in the jurisdiction that receives the benefits, that is, improved infrastructure and services, that property taxes pay for. With the exception of possible state subsidies and several other rare cases, no other entity—particularly a

nongovernmental entity—pays to create or maintain the parcel data. And it is almost always the assessor's office that is accountable for data accuracy. When taxpayers entertain lingering preconceptions that the data are inaccurate, the assessor's office must resolve the doubts.

Another factor that has affected the perceived value of assessors' property data was the savings and loan scandal of 1984. This financial crisis was precipitated in part by faulty commercial appraisals that inflated property values for lending purposes. This skewing of property values to benefit the savings and loan industry created a distorted market. Assessors' data are grounded in factual information about property features that contribute to value and therefore provide an empirical basis for estimating true market value reliably.

The bottom line is that commercial data providers want local parcel data because *they are valuable and important*. Parcel data provide the foundation for a successful land tenure/ownership system in the United States. The commerce generated by land ownership and transfer is part of the basic fabric of the country's financial systems. The current state of the economy is proof that property-related financial systems depend heavily on the ability to identify and track property ownership and characteristics. Parcel data are also a fundamental building block of the physical geography. If you cannot identify where a parcel is and what is on it, then how can you do anything with it?

A final reason why property data are so important is location, location, location. Knowing the demographics of a specific property is crucial to determining its relative value. Barring in-person inspection, the best way to determine the value of a property is through its parcel record data, which can then be compared to other parcel data in interesting and meaningful ways. Parcel data records are now on *everyone's* must-have list. So the question is, Do they have any value?

What Do Commercial Data Providers Get Out of the Deal?

Commercial data providers seek to integrate local parcel data into a larger coordinated database system they can use

or sell to end data users for commercial development; demographic analysis for retail, restaurant, and hotel locations; 911 emergency response systems; community planning; real estate investment; flood zone reporting and evaluation; right-of-way and utility location planning; insurance risk analysis; valuation for loan purposes; and a myriad of other uses.

Unfortunately, it has taken major disasters (financial and physical) and the maturing of GIS in the past few years for other governmental agencies to realize just how important the local parcel data are to everything they do.

Commercial users sometimes claim that they create a de facto parcel data standard by combining a multitude of local parcel data into a larger coordinated system. In fact, the final quality and integrity of the data still lie with the local jurisdiction that collected and verified the data.

The one common incentive for commercial data providers is profit. They seek the parcel records of local jurisdictions to add value to their own products or to resell the data for a profit. This profit motive may have an effect on the types and quality of data that are collected. The question becomes, "Should some of that profit accrue to the jurisdictions that developed the data in the first place?"

How Does the Fed Fit into the Equation?

The Federal Government has traditionally not had much interest in parcel data, except as it relates to the management and disposition of federally owned land and property by the Bureau of Land Management (BLM). The BLM has always supported local jurisdictions'

efforts to create and maintain parcel data. Unfortunately, it has taken major disasters (financial and physical) and the maturing of GIS in the past few years for other governmental agencies to realize just how important the local parcel data are to everything they do.

I believe that every federal agency (except the U.S. Department of Homeland Security, which believes that it has an inherent right to whatever it wants) understands the enormous effort that local governments have put into creating parcel data (without much federal assistance) and is willing to compensate the *creators* of the data for their efforts in some way or another. IAAO has met with many federal agencies in the past two years to discuss common standards and ways to help each other create and maintain better parcel data. Major strides will be made in this area within the next few years.

I have purposely left the U.S. Census Bureau out of this discussion because of the laws that Congress has passed that prohibit the bureau from sharing parcel-level information with anyone. In my opinion, however, the bureau could be a very valuable resource to any discussion of this nature.

Where Do IAAO and Other Groups Fit in the Parcel Data Mix?

Where does IAAO fit in with all of this excitement about parcel data? The answer is two words: alphabet soup. IAAO is one of many stakeholders that have an interest in how and why parcel data are developed and used.

The dizzying number of stakeholders, such as the Coalition of Geospatial Organizations (COGO), Federal Geographic Data Committee (FGDC), nongovernmental organizations (NGOs), and private-sector for-profit organizations (FPs), and their diverse interests make it extremely challenging to find a one-size-fits-all solution. IAAO has been thrown (or propelled itself) into the mix in an effort to determine its future role. IAAO has an opportunity to create awareness of the value of local jurisdiction data and ways that data can be shared equitably

and is currently involved in the following initiatives in pursuit of those goals.

IAAO and the Geospatial World

IAAO is committed to maintaining its links to the geospatial world, which pertains

... to the geographic location and characteristics of natural or constructed features and boundaries on, above, or below the earth's surface; esp. referring to data that is geographic and spatial in nature. (dictionary.com)

IAAO offers significant resources to its members, including the Cadastral Mapping Specialist designation, the *Standard on Digital Cadastral Maps and Parcel Identifiers* (IAAO 2004), the *Standard on Manual Cadastral Maps and Parcel Identifiers* (IAAO 2003), cadastral mapping and GIS courses, a Mapping/GIS special interest group section, the *GIS For Assessors* booklet, and Assessor NET, a discussion group that includes GIS and mapping topics. In addition, IAAO has created the Parcel Data Standards Task Force to act as a liaison with other groups that are interested in parcel data standards. The technical standards on cadastral maps and parcel identifiers are also available to the public. IAAO members, however, are one of the best resources that the organization has to offer. They have the expertise and experience in data collection and maintenance.

IAAO Parcel Data Standards Task Force

The IAAO Parcel Data Standards Task Force was created in 2007 by Past President Marion Johnson, CAE, to determine the needs of the IAAO community for parcel data standards; begin a dialogue with governmental users, NGOs, and the private sector; establish data requirements of the user community; evaluate the availability of data from assessors; and ascertain the quality of available data. As a member of the IAAO Parcel Data Standards Task Force, I recently joined the FGDC Cadastral Subcommittee Steering Committee as the liaison for the IAAO Executive Board.

IAAO and the FGDC Subcommittee for Cadastral Data Workshop

On February 25, 2008, IAAO hosted a workshop in conjunction with the FGDC Cadastral Subcommittee. The workshop,

“Sharing Parcel Data to Protect and Rebuild Communities,” was presented in conjunction with the GIS/CAMA Technologies Conference in New Orleans.

The purpose of the workgroup is to build a strategy in which both the “creators” and users of parcel data understand the quid pro quo and the responsibility of their organization to participate. (Nancy von Meyer, Ph.D., Fairview Industries, FGDC Cadastral Subcommittee member, and Cadastral Data Workshop presenter)

In summary, the workshop demonstrated the vastly different viewpoints on how and why parcel data standards should be implemented and, even more importantly, who should fund the effort. It was a good starting point for a meaningful dialogue on a very complex and multifaceted topic. Several recommendations that came out of the workshop provide direction on how to proceed; see table 1. The meeting pointed out the need for advocacy and coordinated actions to make progress towards a national parcel data standard. It became clear

Table 1. Recommendations towards developing a national parcel data standard

A national strategy for government-to-government users to share data must be developed.
Advocates must be identified who can speak concisely to the needs of their constituents.
Federal agencies should take a proactive role in supporting the creation of a national parcel data layer with the help of all stakeholders.
Ways to assist local governments in the production and publication of parcel data should be identified.
Federal and state needs and applications for parcel data should be identified and documented.
Feedback loops should be developed to improve local data.
Federal and state agencies should conduct a needs analysis of parcel data.
Parcel producers and consumers should be educated and informed about the availability of parcel data and its uses.
Existing solutions to the issues related to parcel data sharing should be documented.
Publication sources and topics that should be addressed by stakeholder organizations should be identified.
Outreach articles should be developed that can be used in the publications of professional associations and in federal, state, and NGO publications.
The National States Geographic Information Council (NSGIC) and departments of revenue should develop business plans for the completion of parcel data for all states.
Each state should develop or document its parcel management plans.
NSGIC and the 50-States Initiative should adopt these business templates as an official part of their strategic planning activities.
Examples of successes and best practices should be documented and distributed.
Model requests for proposals and memorandums of understanding that can be used for different communities should be developed and published.
The essential elements and components of private sector-local government agreements that should be considered by counties and other parcel producers should be documented.
A national inventory of parcel status and sources for parcel information should be created.
The FGDC Subcommittee for Cadastral Data's national inventory of parcel data should be maintained.
The parcel information should be migrated to the U.S. GIS Inventory.
Good corporate citizens who help create and maintain parcel data and are willing to compensate the creators of the data should be recognized and encouraged.
A work group should be established to explore ways of improving government-to-industry relationships.
The role that industry can play in building a national parcel data infrastructure should be identified.
The roles and relationship of industry in the development of parcel data should be examined.

that work groups must be established from the producer and user community (IAAO/FGDC Cadastral Subcommittee Project team).

The recommendations shown in the table are an important step towards developing a national parcel map and database, but they are only a part of the eventual solution. The question is, Who will underwrite the labor and resources necessary to act on these recommendations so the full benefits of a national parcel database can be realized?

The Next Step—IAAO and COGO

On August 4, 2008, IAAO became an official founding member of COGO. Prospective COGO members met at the ESRI Users' Conference in San Diego and voted unanimously to approve a set of rules of operation and procedure that brought COGO into existence. After much debate, the group eventually came to understand the importance of geospatial data to assessors, and IAAO was invited to become a founding member.

The coalition is a forum for discussing geospatial issues and establishing a unified voice for member organizations; see table 2. COGO is intended to improve communications among member organizations (and others), provide educational information on relevant issues, align and strengthen the respective policy agendas

of its member organizations, and facilitate development of strategies to address national issues.

I speak for all organizations that have joined this coalition when I say that we are excited and optimistic about the potential to accelerate the advancement of a variety of national geospatial issues. (Cy Smith, COGO Chair, Oregon GIS Coordinator, and NSGIC Past-President)

IAAO and FGDC Cadastral Subcommittee Working Group on Mortgage Crisis Response

The FGDC Cadastral Subcommittee has now been charged by the FGDC Steering Committee, based on recommendations from the National Geospatial Advisory Committee (NGAC), with convening the stakeholders in the mortgage crisis response effort and identifying how parcel information could support a reasoned response to the mortgage crisis. The Cadastral Subcommittee, IAAO, federal consumers of the data, and state and local governments also will participate in this initiative.

IAAO was asked to participate because it has the expertise, knowledge, and experience in developing an internationally recognized set of standards for mass appraisal, automated valuation modeling, and statistical analysis. These standards and processes recognize differences be-

tween cost and market valuations, the use of local parcel data, and the application of statistical measures to determine the quality of modeling outcomes. Unlike site-by-site fee appraisal, these processes could be integrated into applications for real time analysis and reporting of values. Coupled with monitoring and reporting on foreclosure and refinancing activities, a solution could be achieved to support decision making for consuming agencies.

In addition to providing standards for the processes and applications, IAAO has the unique capacity to reach into nearly every assessment jurisdiction in the country to provide manpower if on-site inspections and/or additional data are required. IAAO is currently developing a demonstration of solutions for the consuming agencies, including the U.S. Department of the Treasury and the U.S. Department of Housing and Urban Development, as a starting point so that all stakeholders understand what is needed in terms of data content, technology, standardization, data availabilities, and so on. More information on this initiative will be provided as funding becomes available in 2009.

Other Parcel Data Standards Initiatives

The FGDC Cadastral Data Subcommittee has been working on various aspects of Cadastral National Spatial Data Infrastructure (Parcels, Public Land Survey System, and Offshore Continental Shelf Grid System) for more than 10 years. It has produced more than 140 publications on standards, business requirements, best practices, project reports, concept definitions, case studies, and implementation strategies. All the subcommittee's reports, publications, presentations, and meeting notes have been posted on the subcommittee Web site, <http://www.nationalcad.org/>. Within these documents the subcommittee recognized that there are a set of foundational publications that are core to understanding the Cadastral National Spatial Data Infrastructure and the strategy that the subcommittee is pursuing. The subcommittee recently completed an annotated bibliography, which provides an overview of these publications along with a few related publications from other sources.

Table 2. COGO participants

Founding Members
American Society of Photogrammetry and Remote Sensing (ASPRS)
Association of American Geographers (AAG)
American Congress on Surveying and Mapping (ACSM)
Cartography and Geographic Information Society (CaGIS)
Geospatial Information & Technology Association (GITA)
GIS Certification Institute (GISCI)
International Association of Assessing Officers (IAAO)
Management Association for Private Photogrammetric Surveyors (MAPPS)
National States Geographic Information Council (NSGIC)
University Consortium for Geographic Information Science (UCGIS)
Urban and Regional Information Systems Association (URISA)
Founding Advisory Organizations
American Planning Association (APA)
National Association of Counties (NACo)
National Emergency Number Association (NENA)
Western Governors' Association (WGA)

There are numerous, powerful stakeholders—plus hundreds of smaller groups such as university-based photogrammetry and spatial analysis groups and local service providers—involved in this huge, complex competition to create, organize, store, and distribute data. Can you say, “supercalifragilisticexpialidocius”?

One thing is clear—IAAO will have a role once the dust settles and significant standards are adopted and embraced by the assessment community.

What's Next? George's Vision...

What can the various stakeholders do to advance the cause of a standardized national parcel database? Each stakeholder has an obligation to participate and share in the burden of development. This initiative is too large for the responsibility to fall to any single group. Financing is a *major* issue, and some participants will need to step up and find a way to provide funding in order to realize the benefits they seek. The data that are created and maintained by taxing jurisdictions is *not free*. The issue of *public* records needs to be clarified to discourage exploitation without some form of compensation.

IAAO

IAAO can seek funding from stakeholders. With such a great interest from so many stakeholders, it is clear that funding is needed. It is also clear that most stakeholders will directly benefit from an established standard.

IAAO can contribute by surveying the status and condition of the parcel data across the nation. IAAO can also help establish procedures for creating a Parcel One Stop Shop of existing digital data for governmental use, determine the funding and maintenance needs of constituents, and suggest ways for local jurisdictions to upgrade their infrastructure such that they can participate in a national parcel database initiative. IAAO should be an advocate for fair compensation to jurisdictions for commercial use of their data beyond the initial intended use for local property tax assessment. IAAO can also be a voice for taxpayers to ensure that the system they fund to maintain public services and infrastructure is not misused. IAAO, in conjunction with local

and state governments and the Federal Government, is in a position to influence and publicize policies on the interpretation of freedom of information so that it is not abused by data end users who view any government database as *free* to use for commercial gain. The concept of intellectual property and its associated rights should not be ignored when determining how data should be made accessible beyond its initial intended purpose.

Jurisdictions

Jurisdictions need to keep their data current, determine the fair market value of the data, and devise a method to fairly and equitably compensate those who create and maintain the data. IAAO, as the only organization that represents property tax assessors, is in a position to lobby for these purposes and protect the interests of local jurisdictions.

Data End Users

Stakeholders that stand to profit from a national parcel database need to suggest ways to fund parcel and cadastral modernization for small jurisdictions that do not have the resources and staffing to create and maintain a compatible digital parcel database. An umbrella infrastructure is necessary to ensure uniformity and fill in data gaps at the national level. Whether the infrastructure is implemented by state governments and the Federal Government, vendors, independent standards organizations, or some yet-to-be-determined mix of stakeholders remains to be seen.

Federal Government

The Federal Government must make sure that no *creators'* inherent rights to their data are trampled in the rush to take over and create a national parcel map. It is so easy to simply say, “We want it and you have it, so just hand it over,” without any regard to value. The Federal Government and IAAO should play a major role in ensuring that all parties “play nice” as we try to physically and fiscally assemble this 130 million-piece puzzle called the National Cadastral Map!

What Should IAAO's Vision Be?

The door is open to become involved in the debate. IAAO members can get involved simply by voicing their opinions to

IAAO leaders. Tell them what you think! In 2009, the IAAO officers are President Josephine Lim, President-Elect Bill Carroll, Immediate Past Guy Griscom, and Vice-President Bruce Woodzell. They are willing and eager to hear what you have to say.

Members can also speak out by sending letters to the editor to Bennett@iaao.org or participating in discussions on AssessorNET, the IAAO online discussion forum.

Let's be heard—this issue is too important for us to remain silent!

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George Donatello, CMS, has more than 35 years of experience in the public and private sector, working at the county and state levels as well as in the private sector. He has provided a wide range of assessment administration and related technical consultation services to state and local governments.

George was president of International Association of Assessing Officers (IAAO) in 1994. He is an IAAO Representative and he has served on numerous committees. He is a frequent presenter at IAAO conferences. He has received numerous awards on a local and national level including the McCarran Award eight times and Stacey Ford Award for the past seven years.

He is also the Principal of TEAM Consulting.