Data Sharing: An Age Old Problem

an introduction by Nancy von Meyer

The problems of sharing electronic data are probably as old as the second digital computer. It seems that once data are created in a digital format, there is a demand to provide that digital data to another computer system or application. How many times are digital pictures from cell phones with cameras or from digital cameras shared across the Web? How many Internet sites are dedicated to providing personal digital photo albums? And these are images with only a limited number of formats. Compounding the data-sharing problem for *parcel people* (tax assessors, parcel mappers, parcel geographic information systems [GIS] staff, and others) is the wide variety of formats for attribute information, the number and types of attribute fields, the mapping formats and structures, and the currency, lineage, and intended use of the data.

While modern data translators, uniform Web formats, and commercial national applications have reduced some issues, they have also exacerbated others. MapQuest, Google Maps, and Rand McNally—to name three—are sites that provide road and travel information to consumers. The data formats and presentations of the road information are relatively easy for consumers to understand, and the problems of local data formats and currency are hidden from the consumer. How many local governments receive calls about missing roads in Google Maps or MapQuest? How many times does Navteq or Tele Atlas re-collect road data already maintained by local or state agencies? Is it really easier to re-collect the data than to convert and transform existing information?

If everyone used the same software and had the same local conditions and information needs, developing national standards to ease data-sharing issues would be much easier. But that is almost never the case. How many times a day across the United States does a GIS person create a new data set defining attributes, codes for attributes, symbolization, and feature content? And how many times does that person check to determine whether there is a standard for what they are about to create. The quick data file created to meet an immediate need too often becomes a firmly embedded local standard that cannot be easily changed because applications and users have become dependent on this particular data format.

The Federal Geographic Data Committee (FGDC) Cadastral Subcommittee and IAAO are well aware of the breadth of issues facing not only the initial creation and maintenance of parcel information but also the sharing of this information in standardized forms to support business processes. The articles on data sharing in this issue of F&E look at the types of data-sharing problems, some of the approaches for addressing these data-sharing problems, the standards that are available, and some thoughts on how we can proceed as a community of *parcel people* to reach some national solutions.

The article by Craig and von Meyer, "Sharing the Data You Have—Getting the Data You Need," provides a taxonomy or classification of the data-sharing problems extracted from a 1992 article by Will Craig. The problems he identified and classified in 1992 still hold true today. Being able to discuss the types of data-sharing problems is the first step in approaching a solution. In other words, it is important to understand the problem we are solving before we declare an answer.

The article by **[name of author(s),"[title of article"],** looks at the differences between production (operation and maintenance) data sets and publication (presentation and distribution) data sets. Knowing the boundary between the data needed to support maintenance and internal operations and the data needed to support business processes that consume the results of assessors' efforts addresses one aspect of the solution.

The article by Stage, "Authority and Authoritative Data: A Clarification of Terms and Concepts," looks at authoritative and trusted sources for parcel data. This article arose from the proliferation of parcel information on the Web and the unending sources of parcel data that appear on an almost weekly basis. Consumers and business applications that rely on parcel information need to be able to recognize and depend on authoritative and trusted sources.

The article by **[name of author(s), "[title of article?],** summarizes the publication data standards that have been developed by the FGDC Cadastral Subcommittee and the activities to build on those standards with the IAAO–Cadastral Subcommittee working group. The working group is actively defining the parcel data needed by federal agencies, the data-sharing impediments, and the real benefits and resources that can be returned to local assessors in exchange for data sharing.

These articles on data sharing are intended to provide the parcel community with some common language and some ideas for solutions to help us address and solve the data-sharing issues that continue to impede our progress as a community.

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