

An important part of this reconnaissance study involved tracing the flow of parcel data among disparate users and uses. Figure 1 depicts the typical flow of parcel data in New York State which can be characterized by both regular and ad-hoc processes. Much data flows regularly and systematically through the real property tax system, as shown by the solid arrows in Figure 1. However, all other data flows tend to be one-by-one, ad-hoc transactions between individual requesters and various data sources. These are represented by the broken arrows in the figure. (Click anywhere on Figure 1 to view larger image.)

In the systematic data flow, the County Clerk sends deeds and sales documents (form RP-5217) to the County Real Property Tax Services (RPTS) office and copies of the sales information to ORPS. Mostly through field work, assessors collect and update assessment and attribute data for parcels in their municipalities. Assessors also receive construction and improvement information directly from municipal building departments. Assessors merge sales, ownership, inventory, improvement, and assessment information and submit it annually to the county RPTS which prepares tax maps and annually submits assessment rolls to ORPS at the state level. Data exchanges occur among all three levels of government to communicate changes and corrections for purposes of real property tax administration. In addition, ORPS annually sends statewide data (both centroid and selected parcel attributes) to the NYS GIS Clearinghouse.

In general, the ad-hoc data flow exemplifies access and use of parcel data for all purposes other than real property tax administration. At each stage of data flow, any number of individuals or public, private, or non-profit organizations request parcel data. Typically requests are directed to assessors, County RPTS offices, and ORPS, with counties receiving the largest proportion. These requests are not made on a systematic basis, but rather depend on the needs of the requester. Typically, each request is treated as a separate transaction.

## Alternative Data Management Approaches

The typical data flow represents the most common situation throughout New York State, but the study revealed many variations and four notable alternative approaches to data management. These data management approaches include an on-line public access approach, a county-wide data sharing and services approach, a "communal" data management program, and the concept of a broad data sharing cooperative. Each is briefly described below.

- **The Town of Clarence web site** features an online tool for citizens to search for information about recent home sales. The goal is to get citizens involved in the assessment process and to work toward ensuring fair and equitable assessments. Having the data online represents a way for individuals who believe their assessments are not accurate to do fact checking and data gathering on homes similar to theirs. This allows citizens to take an active role in the defense of their assessment appeal. The openness of the data and widespread access has contributed to a reduction in Board of Assessment reviews and the number of complaints registered in small claims court. The tool allows citizens to search property sales by street or get a listing of the entire town and returns information about the assessed values, physical characteristics and sales information. In addition, each address listed shows a picture of the property and provides the property identification number. The site is updated as needed with new sales information and pictures.
- **Dutchess County's "Parcel Explorer" and "Atlas" applications** represent another data management strategy. These countywide applications combine parcel data with GIS capabilities in a user-friendly format, which allows several county departments to access assessment and planning data faster and more easily. The County GIS is an up-to-date resource that can generate customized maps, which include real property parcels, along with roads, wetlands, zoning, and many other fields. This system makes it possible for departments within Dutchess County, along with property owners, to make more informed decisions and has led to a quicker approval process for these decisions.
- **The Town of Southampton's "Govern" system** goes a step further by allowing all the town departments to share the multiple data sets and by giving each department responsibility for managing and updating its own segment of the total data. While every department has access to the same central data repository, each views, uses, and edits the portion of the data that they use to support their own particular mission. The data is available in multiple formats to suit the needs of each department. Those who need to manage the data in a GIS format have the capability to do that, while other departments may see the data in graphical layout or in tabular form. In addition, the system has audit trails that allows everyone to see a record's change history.

Since each department has access to the data and uses it daily, updates are made several times a day. The timeliness of the data is beneficial not only for municipal functions but also for annual on-line subscribers (\$300 per year) and for citizens who regularly come in to the county offices to use the system for searches and queries.

- **The New York State GIS Clearinghouse and Data Sharing Cooperative** is a fourth alternative data management model. The Clearinghouse is a publicly accessible resource of information about GIS data, (including parcel data of various kinds), some in the form of actual data sets and some in the form of metadata descriptions that tell potential users how to obtain the data sets from different sources. The Data Sharing Cooperative is a special arrangement in which public and nonprofit organizations sign a standard data sharing agreement which entitles them to use the GIS data listed by the other members without cost but also obligates them to return any data enhancements or corrections to a designated "primary custodian" for each data set. Thus, cooperative members who use road data provided by the state department of transportation, for example, agree to notify DOT of errors and to share with DOT any enhancements they make in the course of their own work. In this way, all users follow a standard set of data exchange policies and shared data is readily available and subject to constant improvement.