DISTRIBUTED GIS SYSTEM FEASIBILITY

Description:

A distributed web-based system would include the following centralized features:
- Software
- Hardware (primary server and backup machine)
- Data (GIS layers, standalone databases and/or spreadsheets, images, etc.)
- Maintenance Staff (data updates, software installation, interface and customization changes or enhancements, hardware, network configuration)

Advantages:

Consolidation of GIS has many benefits to the communities:
- Maintenance burden of GIS software would fall entire upon the County. The communities currently spend **$100-$800 annually** to maintain desktop GIS software (ArcView, ArcEngine) used by assessors and planning/zoning staff.
- Eliminated dependence on particular platform or operating system (e.g., Windows XP, Windows 7, Linux, Macintosh, etc.), as well as browser type.
- Minimal end user computer requirements other than a browser and broadband internet connection.
- Eliminates the need for on-site visits by the County GIS Coordinator for computer troubleshooting.

Risks and Solutions:

- **Primary server crash**
  - *SOLUTION*: Dedicated backup server mirroring primary server. Setup to automatically activate if the primary server goes down.
- **Heavy network traffic slows performance**
  - *SOLUTIONS*: Add an additional server (will require additional ArcGIS Server license for $1,000). Increase bandwidth to the primary server using a dedicated cable line rather than County fiber optic network.
- **Complete internet shutdown**
  - *SOLUTION*: Develop an identical desktop-based Flex AIR application running local data that can be run offline. No special software or hardware investment is needed for the end-user, BUT current data for key layers (parcels, roads) will need to be periodically obtained from the County.
- **Municipal Planning and Zoning Permit System** – Lake George and Bolton use this desktop GIS integrated system which will need to be replaced to work with a distributed GIS. ***NOTE****: This current permit system is NOT compatible with ArcGIS version 10 and there are issues with Windows 7.*
  - *SOLUTION*: Re-create the system as a centralized (and standardized) easy-to-use web-based application that communicates with the distributed GIS system. Ideally this would also synchronize with the County Building Permit system.
- **Imagemate Online** – Web Mapping dynamic linkage must be re-created.
  - *SOLUTIONS*: Annual service with SDG will cover the IO end, but connection from web GIS to IO will need to be created either in-house or by a consultant. Alternatively, a new inventory system tapping into the County RPS could be developed, but would be a very large undertaking for IT.