



### Case study: Privacy and Planning

A group of six neighboring municipalities agree to work together to create a common redevelopment plan. GIS is a core component of the initiative and significant effort is devoted to standardizing databases across municipal lines and developing mechanisms to keep data current.

Up-to-date demographic data is the hardest to obtain. Decennial census data aren't current enough, and even American Community Survey estimates are too approximate, too infrequent and too generalized to meet the planners' requirements. The cities need to know ages of householders and whether children are at home so they can estimate the number of homes that might be sold as families downsize. City departments want this information so they can plan programs to meet community interests and needs.

An enterprising GIS consultant suggests a solution. He knows that state and local public records contain much of the necessary information. Local utility records (e.g. water) have ratepayer names. Local tax records contain similar information for the owner, who may or may not be same person. Voter registration rolls help verify the names of individuals living at an address, whether or not they are owners, and added the names of other people over age 18. Driver's license data add information on ages of individuals. All these data must be merged, verified to ensure consistency of data at each address, and reconciled when inconsistencies arise. The consultant prepares a proposal and a bid to provide these database development and administration services.

The municipalities are excited by the proposal and hire the consultant to do the work. Scrupulous about privacy, the municipal clients request and receive only summary data that the consultant has aggregated at the block level. The consultant retains ownership of the database he developed, but he keeps data about individuals and households to himself as specified in the contract.

Soon a local school district becomes interested in the project, because they need household data to help them make projections about school enrollment. The municipalities welcome the district into their consortium because it shares costs, and because it has access to data sets that the municipalities don't. For example, it has age and gender data for every child in the district. Data about minors is protected by State law, but the school believes that it is in compliance if it engages the consultant as a contractor and shares only summary data with the municipalities. The district also has family income data, which it needs to determine eligibility for federally subsidized lunch programs. This too the district agrees to share with partners only as block-level averages.

All the partners trust the consultant to protect the confidentiality of data about individuals and households. However, a competing GIS firm soon becomes aware of the business arrangement and is alarmed at the inadequate safeguards in place to protect the confidentiality of the sensitive data the consortium has compiled. The firm has evidence that the consultant's computer network can easily be breached by a determined hacker. The president of the competing firm, who is also

a certified GIS professional, must decide whether to report the consultant and his clients for a potential ethics violation. This is not done lightly, since the GISCI Rules of Conduct (Section I, item 9) stipulates that “we shall not use threat of filing an ethics charge in order to gain, or attempt to gain, an advantage in dealings with another GIS professional.” How can the competitor decide whether whistleblowing – or some other intervention – is the right thing to do?

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## Resources for educators

Suggested discussion points, relevant GISCI Rules of Conduct, and further resources related to this case study are available on request. Send request to David DiBiase ([dibiase@psu.edu](mailto:dibiase@psu.edu)) along with contact information (including your position and affiliation) and a brief description of how you plan to use the case.

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