Curating GIS Data: Collaborations Between University Libraries and Local Governmental Agencies

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Abstract

We are living in an era of big data and data-driven decision-making. The accessibility of data is critical for daily operations and planning in the private and public sector, as well for the well being of our society. The role of libraries is evolving as a partner for archiving and preserving data.

Government agencies are shifting from traditional modes of public domain data delivery to more efficient systems such as Geographic Information Systems (GIS). Municipal governments produce a wide range of GIS data which supports the planning and sustaining of local governmental operations, including roads, utilities, parcels, zoning and various services. The National Geospatial Advisory Committee has recommended Best Practices for Local Governments Geospatial Programs. While cities and other local agencies are active users and producers of GIS data, maintaining archives or versioning GIS data, as recommended, may not be their priority. Versions of the GIS files are needed to support local planners, environmental, legal or other researcher needs which require assessing change over time.

An executive order released in May 2013 required all government entities to generate “open and machine readable information.” The implications of this federal mandate for archiving and preserving critical data owned by the public are evident and require immediate action.

Traditionally, libraries have among their missions to collect, organize and disseminate public domain information. Curating, archiving and preserving data are increasingly recognized as within the domain of libraries and are beginning to be integrated into their missions without major difficulty.

Librarians at the Map & GIS Library at Texas A&M University have been curating GIS data from the cities of Bryan and College Station, Texas, since 2006. The Library
periodically receives data from the local agencies. The data is stored in servers that are backed up weekly with an independent storage management server attached to a tape library. Internal procedures and systematic training to protect the stability of data have been established, virtually eliminating the incidents of data loss due to usage or mishandling.

The curating and preservation of historic data is of benefit to both the local agencies and the general public. Library users have immediate access to files, their metadata, and are able to conduct longitudinal studies. The local agencies benefit because they can rely on the library to archive and preserve the data over the long term.

One factor in the Library’s mission is to preserve information for future generations. The objective of the Federal Open Data policy is to strengthen our democracy, promote efficiency and effectiveness of public services, and contribute to economic growth. The curation, archiving and preservation of government data at local level supports the educational outcomes of our institution and directly benefit our society.

Resources: