INCITS: Standards Employed to Obtain 2020 U.S. Census

Background

The U.S. Constitution mandates that the population of the United States be counted once each decade in order to equitably disseminate federal funding for infrastructure, programs, and services, and ensure electoral district boundaries are accurate. There are unprecedented challenges facing the U.S. Census Bureau as it plans for the 2020 Census: it must consider the unique challenges of the era while utilizing information technology to count an increasingly diverse and growing population of around 330 million people in more than 140 million housing units.

Problem

The Census Bureau is tasked with obtaining an accurate count that is less costly and achieves more accurate results of higher quality than previous censuses. In order to achieve those goals, the Census Bureau must build an address list of every street, house, farm, apartment unit, or other domicile. To compile this information geospatial data is used: statistics derived from the analysis of geography-based considerations. However, integrating geospatial data from numerous sources is challenging and time consuming. The Census Bureau needed to create data submission guidelines to help normalize disparate data and develop a process for efficiently processing the data.

Approach

In 2011, the Census Bureau launched the Geographic Support System Initiative (GSS-I). This integrated program will support the 2020 Census by employing automated processes to improve address coverage, enable continuous updating of spatial features, and enhance the quality assessments and measurements of the Master Address File (MAF)/Topologically Integrated Geocoding and Referencing System (TIGER) database (a file that contains an accurate, up to date inventory of all known living quarters in the United States, Puerto Rico, and associated island areas).

A primary component of the GSS-I is its partnership program which provides an opportunity for tribal, state, county, and local governments to continually exchange address and spatial data with the Census Bureau. The program recognizes local governments as a definitive authority for quality address and street data within their communities and leverages the Census Bureau's broad partner network to encourage participation.

To provide guidance to partners on address formats, coalesce geospatial data submissions, and establish business processes for address and spatial data management between data providers and the Census Bureau, the Bureau published guidelines, based on existing standards:

- FGDC-STD-014.7c-2008, *Federal Geographic Data Committee (FGDC) Geographic Information Framework Data Content Standard, Part 7c: Transportation – Roads*
- FGDC-STD-016-2011, *U.S. Thoroughfare, Landmark, and Postal Address Data*

Standard

- National Standard for Spatial Data Accuracy, *Geospatial Positioning Accuracy Standards, Part 3*
- FGDC-STD-001, *Content Standard for Digital Geospatial Metadata (CSDGM)*

Outcome

The use of data submission guidelines, based on American National Standards (ANS), is improving efficiencies in handling data, aiding in better understanding partner-provided data formats, and helping to normalize disparate data. As the Bureau continues to prepare for the 2020 Census, its biggest challenge is ensuring that data submissions meet minimum guidelines and that other cost- and time-saving standards-driven technologies are employed to obtain the most accurate Census ever recorded.