

FACT SHEET
Geographic Support System Initiative (GSS-I)
May 2014

Summary

- GSS-I is an integrated program of improved address coverage, continual spatial feature updates, and enhanced quality assessment and measurement
- Activities contribute to Master Address File (MAF)/Topologically Integrated Geocoding and Referencing (TIGER) System improvement
- Research and analysis support a targeted, rather than full, address canvassing operation for the 2020 Census
- Major participants are the Census Bureau with federal, state, local, and tribal governments, contractor partners, and all users of MAF/TIGER data
- The program has a 10 year lifecycle that began in fiscal year (FY) 2011

Benefits of the Program

- Updates to the MAF/TIGER System throughout the decade improve address and feature coverage for the decennial census and current surveys such as the American Community Survey, leading to improved data collection and data dissemination
- Progress and performance continually are reviewed, ensuring a sufficiently mature state by FY2015 for a key decision on targeted address canvassing, which yields cost avoidance for the 2020 Census
- Responsive to recommendations by the General Accountability Office, Office of the Inspector General, National Research Council, advisory committees, and others
- Supports federal agency geospatial data responsibilities
- Benefits data users:
 - Relevant and accurate reporting of demographic and economic statistics
 - A more accurate picture of the United States and its population for decision-makers at all levels of government and commercial enterprises
 - Resources for state and local government planners in their analysis of population growth and change for identifying the need for types of services, new amenities, and schools
- Ensures data currency by capturing new addresses that become part of the statistical frame for censuses and surveys, new street growth and assures the stabilization of the existing street network's positional accuracy and attributes in the MAF/TIGER System
- Increases staff efficiency through the availability of up-to-date geographic information during field operations such as canvassing and response follow-up

GSS-I Activities Completed

- Conferences and pilot projects conducted in collaboration with tribal, federal, state, and local governments to identify challenges and best practices in collecting, maintaining, and using addresses
- Change detection. Compared road features in MAF/TIGER with imagery to evaluate and classify the quality of roads in the MAF/TIGER System
- Developed applications to assess and improve the MAF/TIGER System including
 - Software that uses MAF addresses to correct TIGER address range overlaps
 - Software to remove duplicate MAF structure points
 - Matching and geocoding software to assess whether partner files and others will improve MAF coverage
- Developed a tool to identify areas within the MAF/TIGER System that need updates and those that are stable. Includes longitudinal analysis capabilities for monitoring change in MTDB quality
- Developed indicators that report quality of any census tract in the MAF/TIGER System
- Implemented content guidelines for partners submitting address and feature files
- Processes developed and implemented for partner file acquisition, verification of fitness for use, and address and feature updates to the MAF/TIGER System
- Improved a workflow control system that captures key actions in acquiring and readying partner files for address and feature processing
- Established a geocoding service that returns latitude and longitude for addresses. Use is internal to the Census Bureau

Activities in Progress

- Developing models to identify areas for inclusion in a targeted address canvassing universe and areas that do not need to be canvassed as well as the data gathering, mapping, and technical infrastructure to support review and decision-making through the decade
- Using an internally developed system to aid hands-on resolution of residential address records where MAF and TIGER geocodes do not match
- Replacing a legacy system with a new problem capture tool that collects issues reported through different interfaces and prioritizes and tracks problems and their resolutions
- Developing Community TIGER, a web-based data exchange and data management portal
- Implement COTS solution for spatial conflation to replace existing hands-on process

Future Work

- Enhancements to web mapping service
- Research and develop software for internal data users of multiple occupancy unit information, for example, standardization and matching software for group quarters names
- Web crowdsourcing for improvements to TIGER Line data
- Research and assess 2010 address canvassing GPS data collection
- Change detection to identify address and spatial updates to the MAF/TIGER System