

# Geographic Support System Initiative (GSS-I)

Craig Best  
Supervisory Geographer  
Chicago Regional Office



*Chicago Region*

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



# Census Geographic Support – Major Initiatives Over Time

For the 1990 Census – Introduced TIGER

For the 2000 Census – Introduced the Master Address File

For the 2010 Census – Realigned the street network  
through the MAF/TIGER Enhancement Program

For the 2020 Census – The GSS Initiative



# Major Components of 2010 Census Address List Development



# 2010 Address Canvassing Facts

- Number of housing unit addresses that needed verification: **145 million**
- Number of census workers hired for Address Canvassing: **140,000**
- Number of hand-held computers used: **151,000**
- Number of local census offices that managed operations: **151**
- Dates of operation: **March 30 - Mid-July 2009**





# Goal: A Shift in Focus for the 2020 Census

- From a **complete** Address Canvassing to a **targeted** Address Canvassing
  - Hinges on establishing an acceptable address list for each level of government





# Why a “Targeted” Address Canvassing?

- \$\$\$! It is **VERY** expensive
  - Field an **ARMY** of address canvassers
  - “Walk” **EVERY** street in the nation...
- Goal: developing on-going update and change detection processes
- Result: “Target” only areas with uncertainty
  - Quality of Addresses
  - Currency of Addresses



# Key Components of the GSS-I

- An integrated program that utilizes a partnership program for:
  - Improved address coverage
  - Continual address and spatial feature updates
  - Enhanced quality assessment and measurement

## Address Updates



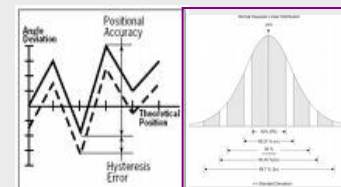
123 Testdata Road  
Anytown, CA 94939

Lat 37 degrees, 9.6 minutes N  
Lon 119 degrees, 45.1 minutes W

## Street/Feature Updates



## Quality Measurement



# The GSS-I Partnership Program

- Recognize local governments as the definitive authority for quality geospatial data within their communities
- Provide a repeatable opportunity for partners to exchange geospatial data with the Census Bureau leading up to 2020
- Provide simple tools that allow data transfers with partners through web-based technology and service-oriented architecture





# How will the Program work?

- Request address, housing unit structure, and street feature data for purposes of updating the MAF/TIGER System
- Reach out to national & state organizations, commercial partners, and federal agencies as other potential sources of this quality data
- Apply quality checks to determine if partner-provided data meet our minimum requirements



# What Kind of Address Data?

- **City-style addresses**  
and/or
- **Non city-style addresses** (i.e., Rural Route #)  
that *'ideally'* meet:
  1. **USPS** minimum delivery requirements, and
  2. the **'FGDC Address Standard'** (U.S. Thoroughfare, Landmark, and Postal Address Data Standard)

See the Census Bureau *Address Data Content Guidelines*:

<http://www.census.gov/geo/www/gss/gdlns/addgdln.html>



# What Kind of Housing Unit Structure Data?

- Latitude/Longitude Coordinates for a **Housing Unit structure or access point** (i.e., from E-911 or Next-Gen E-911 database)
- **Structure centroids**
- Latitude/Longitude Coordinates for a **real property parcel or parcel centroid**
- **Other points** used by partner?

Again, see the Census Bureau *Address Data Content Guidelines*:

<http://www.census.gov/geo/www/gss/gdlns/addgdln.html>



# What Kind of Street Feature Data?

- Street centerline geometry
- Street attributes – names, address ranges, etc.

## Why?

- Expand Census centerline and attribute coverage
- Spatially-correct misaligned streets in conjunction with high-quality imagery

## Feature Data and Metadata Content Guidelines

- <http://www.census.gov/geo/www/gss/gdlns/addgdln.html>



# What's in it for you?

- **Improved** address and feature coverage
  - support current survey samples, including the American Community Survey.
- More **current** data and **improved** process flows
  - should minimize the impact of programs like LUCA
- Taxpayer **savings**
- A more **accurate** 2020 Census
  - with all the benefits therein (increased funding, etc.)
- Our evaluations & feedback may help you improve **your** data.





# Planned Schedule for FY13-14

- **October 2012**
  - Kick-off program with data from limited partners (@50, TBD)
- **February 2013**
  - Start providing feedback
- **March 2013**
  - Identify 300-400 supplemental FY13 partners based on quality audit of MAF/TIGER data
  - Make “Community TIGER” available for beta testing
- **October 2013**
  - Planning **for open participation**



# Summary

- Goals of the GSS initiative
  - Ongoing update of the MAF/TIGER database
  - Improve address coverage, feature coverage, and quality in the MAF/TIGER database
  - Facilitate a targeted Address Canvassing operation for the 2020 Census
- Aligns with our commitment to provide high quality products and data



# Community TIGER

- Cloud based solution to allow our partners to
  - Assess, standardize, contribute or exchange, improve their geospatial (address) data



# Community TIGER

- Partners will have access to
  - Address management tools with capabilities such as address standardization, address matching, address unduplication, and Geocoding
  - Have the capability to implement our minimum and/or desired address and spatial standards



# Community TIGER

- Partners will have access to
  - Upload their data to one standard system in a secure environment
  - Assess how their data relates to their neighboring contributing governments' data (edge matching, etc)
  - Receive feedback on the validity of the contributed data as it applies to community TIGER.





# GSS-I Web Site

See the GSS-I internet site at the following URL:

<http://www.census.gov/geo/www/gss/>



*Thank you, and we look forward to  
your participation!*

Craig Best  
U.S. Census Bureau  
816-304-7342  
craig.duane.best@census.gov

