Update on the 2020 Census Program

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Percentage Net Undercount, U.S. Total, 1980 to 2010

- 1980: 1.4% (Upper 0.8%, Lower 1.4%)
- 1990: 1.61% (Upper 0.8%, Lower 1.61%)
- 2000: -0.49% (Upper 0.01%, Lower -0.49%)
- 2010: -0.01% (Upper 0.01%, Lower -0.01%)
Cost Per Housing Unit (1970 - 2010)

Figure 1: Cost per Housing Unit by Census Year, 1970 - 2010 (2010 dollars)

Source: Bureau of the Census. Note: Includes the costs for the Master Address File/Topologically Integrated Geographic Encoding and Referencing Enhancement Program and American Community Survey.
## 2020 Census

### 2020 Census Innovation Areas Recap

<table>
<thead>
<tr>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reengineering Address Canvassing</td>
</tr>
<tr>
<td>Optimizing Self-Response</td>
</tr>
<tr>
<td>Utilizing Administrative Records</td>
</tr>
<tr>
<td>Reengineering Field Operations</td>
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Up to $5 Billion* in Savings Through:

*This estimate is based off of the 2014 Census Lifecycle cost estimate.*
2020 Census
Lifecycle Recap

In the next census, we will be trying to reach an increasingly diverse and growing population of around 330 million people in more than 140 million housing units. The Census Bureau is conducting research in order to inform key design decisions by the end of FY 2015.
2020 Census

Research: 2015 Census Test Recap

In 2015, we conducted five tests:

1. **Human in the Loop Simulation (SIMEX):** Established a simulated operational control system (SIMEX) to test capturing and resolving issues in real time by using simulated data to support conceptual decisions in the 2015 Census Test.

2. **Address Validation Test:** This test enables us to assess the performance of the methods and models that will help us develop the 2020 Census address list and define the address canvassing workloads.

3. **2015 Optimizing Self-Response Test:** Test reaching and engaging respondents to have them opt into a ‘Notify Me’ campaign for the Census Tests.

4. **2015 Census Test:** Our 2015 Census Test was conducted in two locations (Savannah, Georgia and Maricopa County, Arizona) to employ a variety of new methods and advanced technologies under consideration for 2020 Census.

5. **2015 National Content Test:** Evaluate and compare different versions of questions that will be asked in the 2020 Census as well as test different contact strategies for optimizing self-response.
2015 Census Test
Optimizing Self-Response

• Savannah, Georgia media market area

• Continue testing “Notify Me” and “Non-ID” response to determine if we can optimize self and Internet response rates

• Research how advertising, outreach, and promotion can engage and motivate respondents for action

• Key Findings
  • Partnerships and advertising continue to be successful mechanisms for motivating self-response
  • While pre-registration was not an effective means for motivating self-response, mailing invitation letters and postcards were effective
  • We achieved high match rates for non-ID cases, and our real-time non-ID processing approach worked well
2015 Census Test
Reengineering Field Operations and Utilizing Administrative Records

• 165,000 Housing Units in Maricopa County, Arizona
• Reengineer the roles, responsibilities, and infrastructure for field data collection
• Test and implement routing and navigation
• Test a “Bring Your Own Device” component
• Determine how administrative records can reduce the NRFU workload
• Improve efficiency with alternative contact strategies

Preliminary Findings
• Overall self-response rate was about 56.2 percent
• New training approach reduced the allotted training from 32 hours to 18 hours
• The COMPASS application was easy to use; however, experienced some freezes and crashes
• Enumerators experienced challenges specific to our procedures, the interactions with the COMPASS application, and the management of assignments
• Area Operations Support Center well run and alerts, entry of work availability, and routing successful
2015 National Content Test

In Progress

- September 1, 2015 Census Day
- Use a large nationally representative sample, including Puerto Rico
- Evaluate and compare different census content, including race and Hispanic origin, relationship, and within-household coverage
- Refine estimates of national self response and Internet response rates and continue testing different contact strategies for optimizing self response
- Conduct content re-interview that includes a subsample of respondents, to measure accuracy of race/origin and coverage
# 2015 National Content Test

## Key Content Areas

<table>
<thead>
<tr>
<th>Race and Hispanic Origin</th>
<th>Separate questions vs. combined question</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“Middle Eastern or North African” (MENA) category</td>
</tr>
<tr>
<td></td>
<td>Instruction wording and question terminology</td>
</tr>
<tr>
<td></td>
<td>Web-based questionnaire designs to improve question understanding and optimize reporting of detailed racial and ethnic groups</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationship</th>
<th>2010 relationship response categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New relationship response categories</td>
</tr>
</tbody>
</table>

| Within-Household Coverage | Rules-based approach |
|                          | Question-based approach |
### 2015 National Content Test

#### Contact Strategies

<table>
<thead>
<tr>
<th>Panel</th>
<th>#1</th>
<th>#2 (7 days later)</th>
<th>#3* (7 days later)</th>
<th>#4* (7 days later)</th>
<th>#5* (7 days later)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Internet Push (Control)</td>
<td>Letter</td>
<td>Postcard</td>
<td>Postcard</td>
<td>Mail Q’nnaire</td>
<td></td>
</tr>
<tr>
<td>2 Internet Push with Early Postcard</td>
<td>Letter</td>
<td>Postcard</td>
<td>Postcard</td>
<td>Mail Q’nnaire</td>
<td></td>
</tr>
<tr>
<td>3 Internet Push with Early Questionnaire</td>
<td>Letter</td>
<td>Postcard</td>
<td>Mail Q’nnaire</td>
<td>Postcard</td>
<td></td>
</tr>
<tr>
<td>4 Internet Push with Even Earlier Questionnaire (Low response stratum only)</td>
<td>Letter</td>
<td>Mail Q’nnaire</td>
<td>Postcard</td>
<td>Postcard</td>
<td></td>
</tr>
<tr>
<td>5 Internet Choice (Low response stratum only)</td>
<td>Mail Q’nnaire</td>
<td>Postcard</td>
<td>Postcard</td>
<td>Mail Q’nnaire</td>
<td></td>
</tr>
<tr>
<td>6 Internet Push with Postcard as 3rd Reminder</td>
<td>Letter</td>
<td>Postcard</td>
<td>Postcard</td>
<td>Mail Q’nnaire</td>
<td>Postcard</td>
</tr>
<tr>
<td>7 Internet Push Postcard</td>
<td>Postcard</td>
<td>Postcard</td>
<td>Letter</td>
<td>Mail Q’nnaire</td>
<td></td>
</tr>
<tr>
<td>8 Internet Push with Early Postcard and 2nd Letter Instead of Mail Q</td>
<td>Letter</td>
<td>Postcard</td>
<td>Postcard</td>
<td>Letter</td>
<td></td>
</tr>
<tr>
<td>9 Internet Push with Postcard and Email as 1st Reminder (Same time)</td>
<td>Letter</td>
<td>Postcard</td>
<td>Postcard</td>
<td>Mail Q’nnaire</td>
<td></td>
</tr>
</tbody>
</table>

*Targeted to Nonrespondents*
2016 Census Test

• April 1, 2016 Census Day
• A site test in parts of Los Angeles County, CA and Harris County, TX
  • Language diversity
  • Demographic diversity
  • High vacancy rates
  • Varying levels of Internet usage
  • Multiple locations across different time zones
  • Approximately 225,000 housing units in each test area

• Test Objectives
  • Refine technologies and methods for assigning cases to field staff conducting nonresponse follow-up
  • Explore self-response options
  • Provide non-English support for respondents with limited English proficiency – both in terms of our contact strategies and response options (Internet, paper, NRFU)
  • Study partnerships and outreach efforts to reach historically hard to count populations
  • Use of text messaging and Real Time Non-ID processing methods
2016 Address Canvassing Test

• Address Canvassing
  • Deliver a complete and accurate address list and spatial address database for enumeration
  • Determines the type and address characteristics for each living quarter
  • Combination of In-Office and In-Field methodologies and Quality Control processes for test areas in the United States and Puerto Rico

• Test Objectives:
  • New In-Office and In-Field Address Canvassing methods
  • Utilization of Listing and Mapping Instrument (LiMA)
  • Use of the Basic Collection Unit instead of traditional collection geography
  • Updates to the MAF/TIGER System and address matching and updating software for Puerto Rico
  • Reengineered methods for quality control
  • Updates to the MAF/TIGER System with address and spatial data
2020 Census

Future Tests

- 2017 Census Test
  - April 1, 2017 Census Day
- 2018 End-to-End Test
  - Test critical systems and operations simultaneously to ensure readiness for the 2020 Census operations
  - Includes field data collection components
  - Timing of field operations will mimic the 2020 Census
2020 Census Operational Plan

Documents the major design decisions for the 2020 Census, which includes:

- 2020 Census Concept of Operations
  - Four Key Innovation Areas
  - Thirty-four 2020 Census Operational Areas
- Supporting documentation, including:
  - Lifecycle Cost Estimates
  - IT Architecture
  - Acquisition Strategy
- Communication materials

2020 Program Management Review:
October 6, 2015
www.census.gov/2020census
2020 Census Operational Plan
Operational Overview

The 2020 Census: A New Design for the 21st Century

Motivate People to Respond
- Conduct a nation-wide communications and partnership campaign
- Work with trusted sources to inspire participation
- Maximize outreach using traditional and new media
- Target advertisements to specific audiences

Count the Population
- Collect data from all households, including group and unique living arrangements
- Make it easy for people to respond anytime, anywhere
- Encourage people to use the new online response option
- Use the most cost-effective strategy to contact and count nonrespondents
- Streamline in-field census-taking
- Knock on doors only when necessary

Establish Where to Count
- Identify all addresses where people could live

Release Census Results
- Process and Provide Census Data
- Deliver apportionment counts to the President by December 31, 2020
- Release counts for redistricting by April 1, 2021
- Make it easier for the public to get information

United States Census Bureau
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
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Thank you!