New Design for the 2020 Census
What Role for the SDC Network?

New York State Data Center Meeting
June 2-4, 2014

Cornell University
Program on Applied Demographics

Outline

- Mandate for the Census to Cut Costs and Maintain Quality
- Census Design in 2010
- Re-Designed Census in 2020
- What Role for the SDC Network?

Cut Costs and Maintain Quality

- 2010 Census cost $13 Billion
- Basic design has not changed since 1970
  - Mail-Out / Mail-Back
  - Personal Interviews for Non-Response Follow-Up
- US is larger, more diverse, and resistant to surveys
- Modern Census using industry standard IT and management procedures

Major Phases of 2010 Census

- Address Listing Operation
  - Master Address File (MAF)
  - LUCA
  - Address Canvassing ($$$)
- Data Collection
  - Mail-Out / Mail-Back for Most Residents
  - Separate operations for Group Quarters and transitory housing
  - Non-Response Follow-Up – NRFU ($$$)

Re-Designed Census for 2020

- Field Re-Engineering
- Response Options
- Administrative Records
- Geographic Resources

Field Re-Engineering

"Reengineer the approach and management of field enumeration by streamlining and automating operations and more efficiently planning and controlling field activities"

Burton Reist, Chief,
2020 Census Research and Planning Office

Key Elements of Field Reengineering

- Automating Field Activities

  Using commercially available software that will work on any common mobile device for a variety of field operations from address canvassing to non-response follow-up.

- Workload Management Systems

  Real time, centralized workload management system

- Commercial Mobile Devices

  Test the feasibility and privacy issues in relying on BYOD (Bring Your Own Device) for Census field workers

Response Options

- Optimizing Self-Response
  - Using modern communications technology—such as the internet and web—as the primary means for data collection
  - Use of Internet Push Strategy
  - Pre-Census registration providing preferred mode of contact
  - Evaluating differences in use of various technologies across different demographic and geographic groups.
- Using the ACS to Test Internet Response

Geographic Resources

- Address List Development
- Targeted Address Canvassing

2010 Address Canvassing Assessment

Table 11.7
The 2010 Census Address Canvassing Operation:
Results compared to the Census 2000 Block Canvassing operation

Final Address Actions	2010 Census Address Canvassing		Census 2000 Block Canvassing	
	Count*	Percent of total+	Count*	Percent of total+
Total	156,703,156	100.00	97,894,639	100.00
Add	10,776,894	6.88	6,389,271	6.53
New	6,624,155	4.23	4,536,234	4.63
Matches to Existing Record	4,152,739	2.65	1,853,037	1.89
Change	19,608,785	12.51	2,295,168	2.34
Move	5,450,563	3.48	2,948,414	3.01
Verify	97,635,517	62.31	81,115,466	82.86
Negative Actions	21,143,737	13.49	4,972,041	5.08
Does Not Exist (Double Delete only)	15,819,921	10.10	4,452,888	4.55
Duplicate	4,085,556	2.61	154,869	0.16
Nonresidential	1,238,260	0.79	364,284	0.37
Uninhabitable	551,566	0.35	174,279	0.18
Rejected Records	1,536,094	0.98		

*Counts and percentages are unweighted.
+Percentages may not sum to 100 due to rounding.
The Census 2000 Address Listing operation, an independent listing not depicted above, added 23,271,819 new Stateside and Puerto Rico records to the MTdb. Adds from Address Listing combined with Block Canvassing represent 25 percent of the total actions to update records on the MTdb.
Verify in this table means that the address was found in AC and there were no changes to the address component of the record.
Negative Actions and Uninhabitable in this table is the same as "Delete" category in Burcham, 2002.
Sources: GQV Extract Files, as defined by the matched MAFSRC and ACTION operation variables, GEO AC Listed Records Tally File, Ruhnke, 2002, and Burcham, 2002.

MAF Error Model

- Based on the 2010 address canvassing and MAF develop a statistical model that estimates the amount of “adds” and “deletes” for Blocks
- Possibly use the model to target Blocks and accept MAF for the rest

Administrative Records

- NRFU workload in 2010: 47 Million cases
- Objective for 2020 is to use Administrative Records to get responses for the “Hard to Enumerate”
- Estimate that use of Administrative Records will reduce NRFU workload by 40%
- Types of cases removed (unoccupied including vacant and deleted units)
- Determine optimal timing of removal of cases (1 visit; 3 visits)

Potential Cost Savings by Design Category

Potential cost of repeating the 2010 Census design

- $17.830 billion

Potential Cost of the 2020 Census after Design Changes

- $12.720 billion

Range of Potential Cost Savings

- $5.110 billion – $5.360 billion

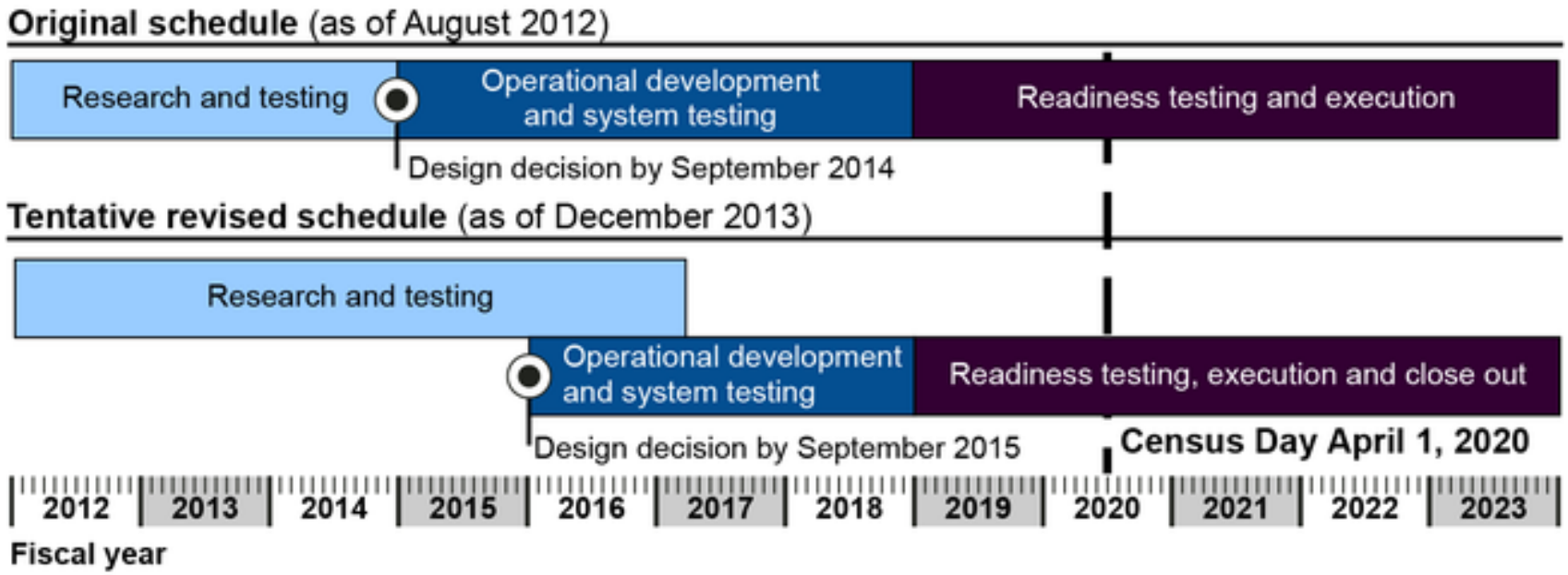
Potential Cost Savings by Design Category (cont.)

Census Design Categories

- Targeted Address Canvassing
- Field Reengineering Related to Address Canvassing
- Optimizing Self-Response: Internet, Data Capture, Printing, Postage
- Using Admin Records to Remove Vacants from Nonresponse Followup (NRFU) Workload
- Field Reengineering Related to NRFU Training, Supervisory Ratios
- Field Reengineering Related to NRFU Automation/No Paper
- Field Reengineering Related to Local Census Office Space and Staff
- NRFU Reengineering Related to Admin Records, Adaptive Design
- Eliminating Coverage Follow-Up and Vacant Delete Operations Using Admin Records

Timetable to 2020

- Extensive test for elements of new design: July 1, 2014



Source: GAO analysis of Census Bureau data.

What Role for the SDC Network?

- Previous Efforts
  - LUCA
  - Full Count Review
  - Count Question Resolution
- Call for Cooperation
  - Nancy Potok, Deputy Director, at SDC Training Conference
  - Administrative Records
- Coordinate State and Local Government
  - Continuous Address Updating
  - Identify potentially useful state and local administrative records
  - Be Proactive!