

Census Short Form Web Design Decisions and Rationale

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Overview

- Literature Review
- 2004 Usability Testing: Topic-Based Prototype
- 2005 National Census Test Internet Design
- Next Steps

Internet Design Literature Review¹

- Web design should deviate from paper to take advantage of the technology
- Topic-based vs. person-based orientation
- Alternate presentation of instructions

¹Conrad, F., Couper, M. (2004), "Usability, Comparability, and Data Quality Across Modes and Technologies in Census Data Collection: A Discussion of Relevant Findings and Gaps in the Literature," Memorandum prepared for the U.S. Census Bureau, March 31, 2004

2004 Topic-Based Prototype Usability Testing

- Non-functional “wireframe” screens
- Test for serious obstacles to successful completion of topic-based survey
- First step for controlled experiment

Results from 2004 Topic-Based Prototype Usability Testing

Did not realize it was available for help

U.S. Census Bureau *10 Years on the Web*

? What is the full name of everyone living or staying in this house, apartment, or mobile home?

	First Name	MI	Last Name
Person 1	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 2	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 3	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 4	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 5	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 6	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 7	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 8	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 9	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 10	<input type="text"/>	<input type="text"/>	<input type="text"/>

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Results from 2004 Topic-Based Prototype Usability Testing

Topic-based version of DOB worked well

U.S. Census Bureau *10 Years on the Web*

? What is the sex, and date of birth (DOB) of each person?

	Sex	DOB (mm/dd/yyyy)
Person 1	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>
Person 2	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>
Person 3	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>
Person 4	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>
Person 5	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>
Person 6	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>
Person 7	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>

Results from 2004 Topic-Based Prototype Usability Testing

- Perceived Time
 - Participants asked about how long they thought it took to complete the form
 - 9 of 13 participants estimated their times to be about the same or less than their actual times
- Satisfaction
 - Participants completed a questionnaire about their satisfaction with application
 - Mean ratings for all items were moderately high to very high

2005 National Census Test: Internet Design Objective

- Make improvements to the Internet data collection application taking advantage of the technology while capturing quality data
- One version of questions selected for Internet
- Research questions
 - Topic-based vs. person-based?
 - Enhanced functionality and item non-response?
 - Demographics and timing of returns?

2005 National Census Test: Evaluation Measures

- Ease of submission
 - Time to complete
 - Use of edits/help
 - Number of successful submissions
- Cooperation rates
- Item non-response
- Demographic distributions

Design Changes: Wording

Person-
Based

U.S. Census Bureau

Household Persons Review/Submit

Name Sex/Date of Birth/Age Origin Race Ancestry Residence

[Mickey](#)

Person 2

Person 3

? What is Person 2's name?

First Name MI Last Name

Topic-
Based

U.S. Census Bureau

Household Names Relationship Sex/Date of Birth/Age Origin Race Ancestry Residence Review/Submit

? What is the name of each person living or staying in this house, apartment or mobile home?

	First Name	MI	Last Name
Person 1	<input type="text" value="Mickey"/>	<input type="text" value="M"/>	<input type="text" value="Mouse"/>
Person 2	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 3	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 4	<input type="text"/>	<input type="text"/>	<input type="text"/>

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Design Changes: Navigation

Person Navigation Bar

U.S. Census Bureau

Household Persons Review/Submit

Name Sex/Date of Birth/Age Origin Race Ancestry Residence

What is Person 2's name?

First Name MI Last Name

Mickey

Person 2

Person 3

This screenshot shows a form for Person 2. A red circle highlights the 'Person 2' label in the left-hand navigation bar. Another red circle highlights the 'Persons' tab and the 'Name' field in the top navigation area.

Navigation Tabs

U.S. Census Bureau

Household Names Relationship Sex/Date of Birth/Age Origin Race Ancestry Residence Review/Submit

What is the name of each person living or staying in this house, apartment or mobile home?

	First Name	MI	Last Name
Person 1	Mickey	M	Mouse
Person 2			
Person 3			
Person 4			

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Next >>

This screenshot shows a form for multiple persons. A red circle highlights the 'Names' tab in the top navigation area. Below the form is a table with columns for First Name, MI, and Last Name. At the bottom, there are 'Previous' and 'Next' buttons.

“Previous” Button

“Next” Button

Household Screen

General Help

U.S. Census Bureau 2005 National Census Test

[Help](#) | [Privacy Policy](#)

Household | Names | Relationship | Sex/Date of Birth/Age | Origin | Race | Ancestry | Residence | Review/Submit

Before you answer the first question, count the people living at your address using our guidelines.

- We want to count people where they usually live and sleep.
- For people with more than one place to live, this is the place where they sleep most of the time.

[EXCLUDE these people](#)
We will count them at the other place. [INCLUDE these people](#)

? How many people were living or staying in this house, apartment or mobile home on September 15, 2005?
 people

? Were there any additional people staying here September 15, 2005 that you did NOT include in the question above?
 No Yes

- Children, such as newborn babies or foster children
- Relatives, such as adult children, cousins or in-laws
- Nonrelatives, such as roommates or live-in baby sitters
- People staying here temporarily

? Is this house, apartment or mobile home -
 Owned by you or someone in this household with a mortgage or loan?
 Owned by you or someone in this household free and clear (without a mortgage or loan)?
 Rented for cash rent?
 Occupied without payment of cash rent?

? What is the name of the person who owns, is buying, or rents this house, apartment or mobile home? If there is no such person, start with any adult living or staying here. We will refer to this person as Person 1.

First Name MI Last Name

? What is Person 1's telephone number?
Area Code + Number
() - -

? Does everyone in this household have the same last name?
 Yes
 No

[Next >>](#)

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Question Specific Help

Household Screen: Residence Rules

U.S. Census Bureau 2005 National Census Test

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Household | Names | Relationship | Sex/Date of Birth/Age | Origin | Race | Ancestry | Residence | Review/Submit

Before you answer the first question, count the people living at your address using our guidelines.

- We want to count people where they usually live and sleep.
- For people with more than one place to live, this is the place where they sleep most of the time.

[EXCLUDE these people](#) [INCLUDE these people](#)
We will count them at the other place.

? How many people were living or staying in this house, apartment or mobile home on September 15, 2005?
 people

Household Screen: Same Last Name Question

? What is the name of the person who owns, is buying, or rents this house, apartment or mobile home? If there is no such person, start with any adult living or staying here. We will refer to this person as Person 1.

First Name MI Last Name

? What is Person 1's telephone number?

Area Code + Number
() - -

? Does everyone in this household have the same last name?

- Yes
 No

Next >>

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Name Screen

U.S. Census Bureau 2005 National Census Test

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Household | Names | Relationship | Sex/Date of Birth/Age | Origin | Race | Ancestry | Residence | Review/Submit

 What is the name of each person living or staying in this house, apartment or mobile home?

	First Name	MI	Last Name
Person 1	<input type="text" value="Mickey"/>	<input type="text" value="M"/>	<input type="text" value="Mouse"/>
Person 2	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 3	<input type="text"/>	<input type="text"/>	<input type="text"/>
Person 4	<input type="text"/>	<input type="text"/>	<input type="text"/>

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Relationship Screen

U.S. Census Bureau 2005 National Census Test

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Household | **Names** | **Relationship** | Sex/Date of Birth/Age | Origin | Race | Ancestry | Residence | Review/Submit

 **How is each person related to Mickey ?**

	Related	Not Related
Minnie	<input type="radio"/> Husband or wife <input type="radio"/> Biological son or daughter <input type="radio"/> Adopted son or daughter <input type="radio"/> Stepson or stepdaughter <input type="radio"/> Brother or sister <input type="radio"/> Father or mother <input type="radio"/> Grandchild <input type="radio"/> Parent-in-law <input type="radio"/> Son-in-law or daughter-in-law <input type="radio"/> Other relative	<input type="radio"/> Roomer or boarder <input type="radio"/> Housemate or roommate <input type="radio"/> Unmarried partner <input type="radio"/> Foster child or foster adult <input type="radio"/> Other nonrelative
Donald	<input type="radio"/> Husband or wife <input type="radio"/> Biological son or daughter <input type="radio"/> Adopted son or daughter	<input type="radio"/> Roomer or boarder <input type="radio"/> Housemate or roommate <input type="radio"/> Unmarried partner

Sex/Date of birth/Age Screen

U.S. Census Bureau

2005 National Census Test

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Household Names Relationship **Sex/Date of Birth/Age** Origin Race Ancestry Residence Review/Submit

? What is each person's sex, date of birth, and age? Please report babies as age 0 when the child is less than 1 year old.

	Sex	Date of Birth (mm/dd/yyyy)	Age (on 09/15/2005)
Mickey	<input checked="" type="radio"/> Male <input type="radio"/> Female	04 / 30 / 1975	30 years
Minnie	<input type="radio"/> Male <input type="radio"/> Female	/ /	years
Donald	<input type="radio"/> Male <input type="radio"/> Female	/ /	years
Goofy	<input type="radio"/> Male <input type="radio"/> Female	/ /	years

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Hispanic Origin Screen

U.S. Census Bureau 2005 National Census Test

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Household Names Relationship Sex/Date of Birth/Age **Origin** Race Ancestry Residence Review/Submit

? Is each person of Hispanic, Latino or Spanish origin? [Examples](#)

	Yes	No
Mickey	<input type="checkbox"/>	<input type="checkbox"/>
Minnie	<input type="checkbox"/>	<input type="checkbox"/>
Donald	<input type="checkbox"/>	<input type="checkbox"/>
Goofy	<input type="checkbox"/>	<input type="checkbox"/>

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Race Screen

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Household | **Names** | **Relationship** | **Sex/Date of Birth/Age** | **Origin** | **Race** | **Ancestry** | **Residence** | **Review/Submit**

? **What is each person's race? Select one or more races.** [Examples](#)
For this census, Hispanic origins are not races.

	White or Caucasian Examples	Black, African American or Negro Examples	American Indian or Alaska Native Examples	Asian Examples	Native Hawaiian or Other Pacific Islander Examples	Some Other Race Examples	
Mickey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Minnie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Donald	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Goofy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Ancestry Screen

U.S. Census Bureau 2005 National Census Test

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Household | **Names** | **Relationship** | **Sex/Date of Birth/Age** | **Origin** | **Race** | **Ancestry** | **Residence** | **Review/Submit**

? People in the United States are from many countries, tribes, and cultural groups. What is each person's ancestry or tribe? [Examples](#)

Enter as many as fit in the spaces provided.

Mickey	<input type="text"/> <input type="text"/> <input type="text"/>
<input type="checkbox"/> Don't Know	
Minnie	<input type="text"/> <input type="text"/> <input type="text"/>
<input type="checkbox"/> Don't Know	
Donald	<input type="text"/> <input type="text"/> <input type="text"/>
<input type="checkbox"/> Don't Know	
Goofy	<input type="text"/> <input type="text"/> <input type="text"/>
<input type="checkbox"/> Don't Know	

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Residence Screen

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[Household](#) [Names](#) [Relationship](#) [Sex/Date of Birth/Age](#) [Origin](#) [Race](#) [Ancestry](#) [Residence](#) [Review/Submit](#)

 Do any of these people sometimes live or stay somewhere else?

Mickey No Yes

- To attend college
- To be closer to work
- While in the military
- To stay at a seasonal or second residence
- For a child custody arrangement
- While in jail or prison
- While in a nursing home
- For another reason

Minnie No Yes

- To attend college
- To be closer to work
- While in the military
- To stay at a seasonal or second residence
- For a child custody arrangement
- While in jail or prison
- While in a nursing home
- For another reason

Review/Submit Screen

U.S. Census Bureau 2005 National Census Test

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Household | **Names** | **Relationship** | **Sex/Date of Birth/Age** | **Origin** | **Race** | **Ancestry** | **Residence** | **Review/Submit**

Please review the information for each person in the household and make sure we have recorded your responses correctly.

To change a response or complete an answer left blank:

- Click on the underlined answer or on the [Blank] to return to that question.
- Enter your answer.
- Click on the Review/Submit tab to return to this page.

To send your information to the Census Bureau:

- Click the "Submit Census Information" button.

Question	Answer
Number of persons	<u>2</u>
Additional people	<u>Yes, Children</u>
Ownership	<u>Owned, free and clear</u>

Person 1 [Mickey M Mouse](#)

Phone [\(202\) 555-1212](#)

Sex [Male](#)

Date of Birth [04/30/1975](#)

Age (on 09/15/2005) [30](#)

Origin [No](#)

Race [\[Blank\]](#)

Ancestry [Chordata Vertebrata Mammalia Rodentia](#)

Residence [none selected](#)

Person 2 [Minnie M Mouse](#)

Relationship [Husband/wife](#)

Sex [Female](#)

Date of Birth [\[Blank\]](#)

Age (on 09/15/2005) [26](#)

Origin [No](#)

Race [\[Blank\]](#)

Ancestry [\[Blank\]](#)

Residence [No](#)

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Edit Messages

- Soft Edits
 - Allow user to continue without changing
- Interactive
 - Allow for potentially better data
- Different approaches for topic- and person-based versions

Edit Messages: Person-Based and Household Screen (Topic)

U.S. Census Bureau

2005 National Census Test

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Household Names Relationship Sex/Date of Birth/Age Origin Race Ancestry Residence Review/Submit


Before you answer the first question, count the people living at your address using our guidelines.

- We want to count people where they usually live and sleep.
- For people with more than one place to live, this is the place where they sleep most of the time.

[EXCLUDE these people](#)

[INCLUDE these people](#)

We will count them at the other place.

 Please enter the number of people. If there are no people to report, enter zero. Please continue.



→ How many people were living or staying in this house, apartment or mobile home on September 15, 2005?

people



Were there any additional people staying here September 15, 2005 that you did NOT include in the question above?

Edit Messages: Topic-Based Screens

U.S. Census Bureau

2005 National Census Test

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Household Names Relationship Sex/Date of Birth/Age Origin Race Ancestry Residence Review/Submit



There is a problem with the following:

- Mickey - Please select male or female.
- Minnie - Please enter the date of birth as a two-digit month, two-digit day and four-digit year.
- Donald - Please enter the date of birth as a two-digit month, two-digit day and four-digit year.

If you have provided your best answer, or if you don't know the answer, please continue to the next question.



What is each person's sex, date of birth, and age? Please report babies as age 0 when the child is less than 1 year old.

	Sex	Date of Birth (mm/dd/yyyy)	Age (on 09/15/2005)
→ Mickey	<input type="radio"/> Male <input type="radio"/> Female	04 / 30 / 1975	30 years
→ Minnie	<input type="radio"/> Male <input checked="" type="radio"/> Female	/ 28 / 1979	years
→ Donald	<input checked="" type="radio"/> Male <input type="radio"/> Female	/ /	years
Goofy	<input checked="" type="radio"/> Male <input type="radio"/> Female	5 / 4 / 2001	4 years

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Next Steps

- Round 1 Usability Testing: April 2005
- Go live: September 2005
- Round 2 Usability Testing: October 2005
- Preliminary results available: May 2006
- Design for Census Dress Rehearsal: 2006
 - Includes data capture and assistance

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