

# An Exploration of User Map Preferences

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*Disclaimer: Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.*

# Motivation

- Nonresponse followup to the 2010 Census cost \$1.6 billion (Walker et al., 2012)
- 30% of the homes enumerated during followup were vacant
- Reducing visits to vacant homes in future censuses could save the Census Bureau money

# Motivation (cont.)

How can we learn that a home is vacant?

1. Enumerators' observation during personal visits
2. Existing administrative records and data
3. Neighbors
  - Proxy responses collected by enumerators
  - **Crowdsourcing**

# Crowdsourcing

- “The practice of obtaining **needed services, ideas, or content** by soliciting contributions from a **large group of people** and especially from the **online** community rather than from traditional employees or suppliers” (Merriam-Webster)
- In this case, we would ask census respondents to identify vacant homes near them using an online instrument

# Research Questions

1. How knowledgeable are respondents about homes near them?
2. How do respondents feel about being asked to identify vacant neighboring homes?
3. How familiar and comfortable are respondents with different types of maps?
4. What types of maps do respondents prefer for this kind of task?
5. Do responses vary by demographic and housing characteristics?

# Present Study

- Exploratory study on Qualtrics to inform subsequent testing
- Question topics
  1. Frequency, familiarity, and comfort with online maps
  2. Map style preferences
  3. Knowledge of surrounding and distant homes
  4. Willingness to provide vacancy information to the Census Bureau
  5. Demographic and housing questions

# Data Collection

- Census Bureau opt-in nonprobability panel (n = 156, 5.5% response rate)
  - Members of public who signed up to participate in research studies on [census.gov](https://www.census.gov)
  - Initial email invitation with link followed by up to 2 reminders
- Qualtrics quota nonprobability sample (n ≈ 300, forthcoming)
  - Diversity in housing characteristics (own/rent, urban/rural, type of home)

# Demographics

Suburban	49% (76)
Urban	31% (49)
Rural	17% (26)
Own	62% (96)
Rent	38% (59)
One-family house detached from any other house	58% (91)
One-family house attached to one or more houses	10% (15)
Building with 2 or more apartments	26% (40)
Mobile home	4% (6)
Some other type of residence	3% (4)



# Results: How knowledgeable are respondents about homes near them?

1. Can you see the next closest home to you?
  - **Almost everyone (91%) said yes**
2. Picture your neighbor to the right. Is anyone living in that home?
  - **Only a few people (4%) reported the home as vacant**
  - **1% not sure**
3. Do you know the street address of that home?
  - **Most (71%) said yes**

# Results: How do respondents feel about being asked to identify vacant neighboring homes?

Would you be willing to provide this information to the Census Bureau in 2020?

<b>Definitely would</b>	60% (93)
<b>Probably would</b>	21% (32)
<b>Might or might not</b>	12% (18)
<b>Probably would not</b>	5% (8)
<b>Definitely would not</b>	3% (5)

# Results: How familiar and comfortable are respondents with different types of maps?

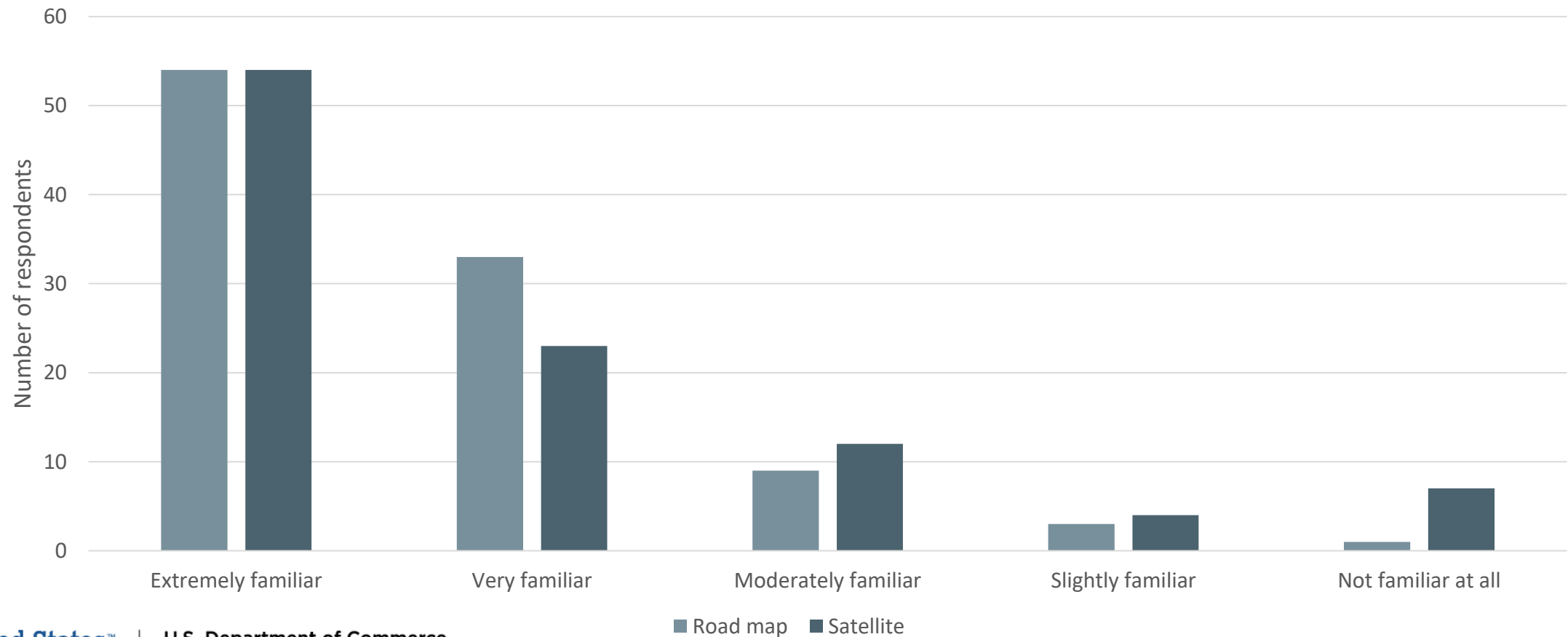
Satellite map



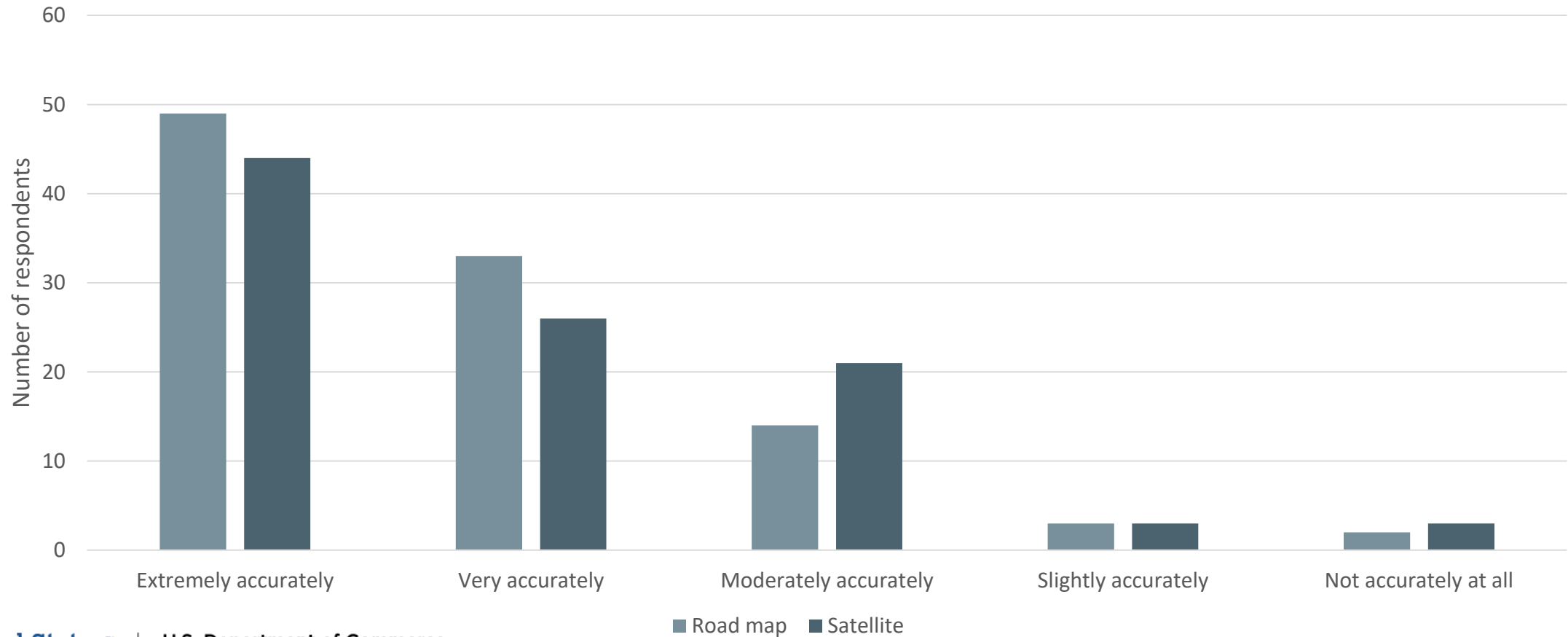
Road map



# Results: How familiar are you with this type of online map?



# Results: How accurately do you think you could locate your home and your neighbors' homes on this type of map?

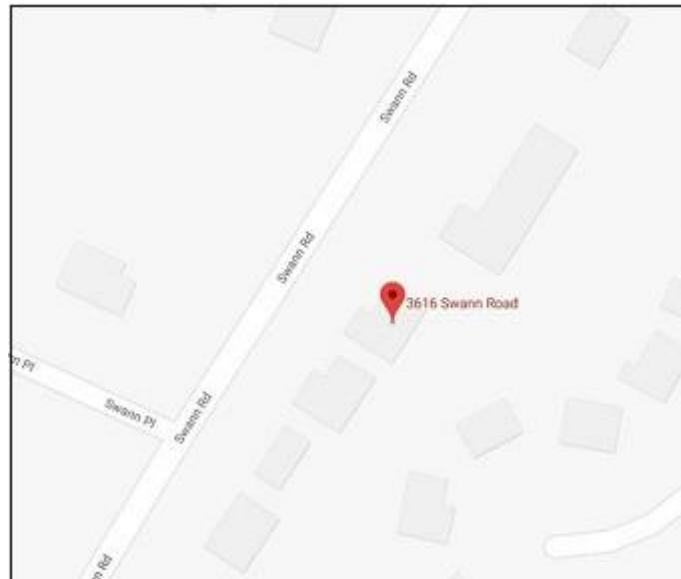


# Results: What types of maps do respondents prefer for this kind of task?

## Satellite map



## Road map



## List

Your Address: 3616 Swann Road
Address
3618 Swann Road
3619 Swann Road
3620 Swann Road
3621 Swann Road
3622 Swann Road

# Results: Satellite map

1

2

3



# Results: Road map

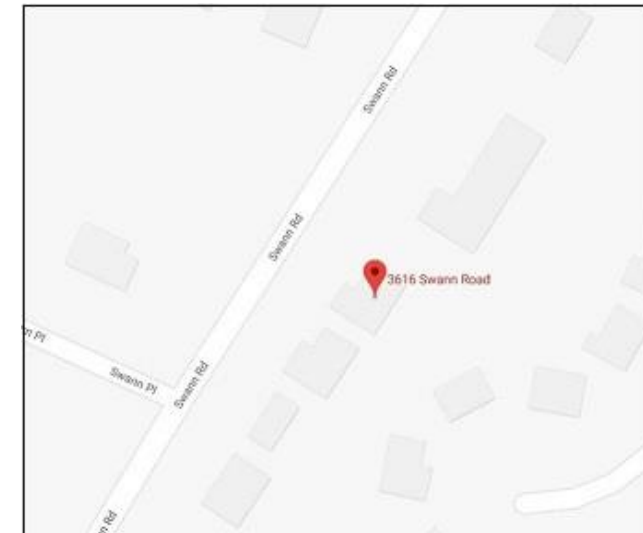
1



2



3





# Results: List

1

Address	Image
3618 Swann Road	
3619 Swann Road	
3620 Swann Road	
3621 Swann Road	
3622 Swann Road	

2

Your Address: 3616 Swann Road
Address
3618 Swann Road
3619 Swann Road
3620 Swann Road
3621 Swann Road
3622 Swann Road

# Conclusion

- Respondents may be able and willing to report vacancy information
- Respondents are familiar with both satellite and road style maps and believe they can use them accurately
- When asking respondents to report information about neighboring homes, more detailed maps are better

# Limitations

- Census Bureau nonprobability panel = Census nerds!
- Satellite map v. road map v. list
- Map preference may not be the same as map behavior

# Next Steps

- Qualtrics quota sample
  - Own/rent, urban/rural, type of home
- In-person qualitative (cognitive/usability) testing
  - Measure of map behavior
- Proposed 2020 Census experiment

Thank you!

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