Survey Management Challenges

- Panel 1:

Top three challenges organizations are encountering in technology and survey computing

- Panel 2:

Challenges and achievements in using AI and data science approaches

Top three challenges organizations are encountering in technology and survey computing

Panelists will identify the top challenges facing their organizations today given the changing survey technology, data systems, and programming environments. Projects today often include innovative survey technologies, the use of specialized programming customizations, incorporate administrative and extant data sources, and the integration of different devices and technologies to support data collection. The panelists will discuss the ways that their organizations are dealing with the environmental changes that they have identified, and offer examples and lessons learned in addressing these challenges.

Top three challenges organizations are encountering in technology and survey computing

Moderator: Karen Davis – RTI

Panelists:

- Bryan Beverly, BLS
- James Berry, EIA
- Kyle Fennell, NORC
- Gregg Peterson, University of Michigan

The Top Three Challenges in Technology and Survey Computing

FedCASIC 2021
April 13th, 2021

Bryan Beverly
Data Collection Branch
Current Employment Statistics
US Bureau of Labor Statistics

Current Employment Statistics (CES)

- The Current Employment Statistics (CES) program of the U.S. Bureau of Labor Statistics is a monthly payroll survey of 142,000 businesses and government agencies representing approximately 689,000 individual worksites.
- Provides detailed industry data on employment, hours, and earnings of workers on nonfarm payrolls.

Challenge #1

- SITUATION: Ad hoc applications developed with open-source tools become assets for production and program management.
- SIGNIFICANCE: End users are creating mission support assets that may not be supported by the central technology office, thus creating a risk of sustainability.
- SOLUTION: At the institutional level, create a process and a governing board for managing the integration of open-source tools.

Challenge #2

- SITUATION: Telephone service providers are increasing the deployment of SPAM blockers.
- SIGNIFICANCE: SPAM blockers benefit phone users but create an impediment to telephone-based data collection.
- SOLUTION: Investigate the possibility of having data collection telephone numbers ‘whitelisted’.

Challenge #3

- SITUATION: The growth of ad hoc surveys is fostering ‘survey fatigue’; people are becoming turned-off to answering surveys.
- SIGNIFICANCE: This dynamic has a negative impact on response rates.
- SOLUTION: Survey managers will need to explore ways of keeping legacy responders engaged and getting buy-in from new responders.

SUMMARY

- The overarching challenge in technology and survey computing is the decreasing control over the resources needed to conduct surveys in a sustainable manner.
- Survey respondents have a 24/7 competition for their time and attention.
- It is increasingly challenging for surveys to keep pace with the advances in technology and survey computing.
- Managers will have to create and market ‘brands’ for their surveys to ensure that they receive the resources and attention needed to sustain success.

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U.S. Energy Information Administration (EIA): IT, Computing, and Data Collection Challenges

For
FedCASIC
April 13, 2021

By
Chip Berry, EIA Residential Demand Team Lead

EIA is the independent statistical agency within the Department of Energy

- Mission includes data collection, analysis, and forecasting to promote sound policy making, efficient markets, and public understanding
- 50+ supply-side surveys; 3 demand-side programs (residential, commercial, industrial)
- Many programs collect data under mandatory authority
- Monthly, annual, and quadrennial surveys + unique HOURLY data collection
- Survey and analysis programs supplement surveys with third-party and administrative data sources

3 Challenges

#1: Modernizing legacy systems

#2: Leveraging technology to address collection and analysis challenges

#3: Recruiting, hiring, retaining, and training the right staff

#1: Modernize legacy survey and processing systems

- Multiple systems and protocols for respondents to interact with EIA, and EIA staff to process and disseminate data
- Systems are outdated (no longer supported), subject to security risks, and/or costly to maintain
- Require “experts” to submit and maintain data

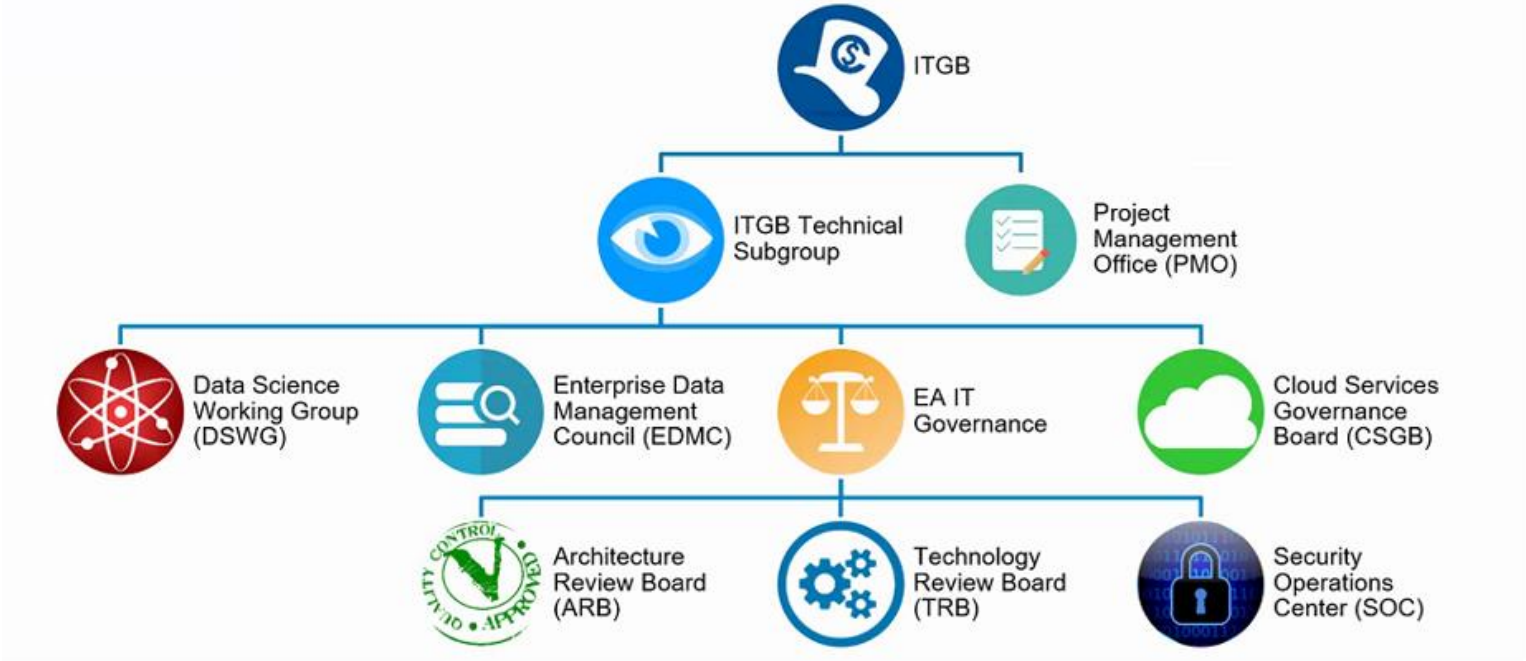
Modernization will enable EIA to collect, process, and disseminate higher quality data at a lower cost

- Guiding principles
  - Integrated business process
  - Transparency
  - Efficient
  - Positive User Experience
- Consistent and standard methods based on best practices (e.g., GSBPM)

Replacing legacy systems faces obstacles and questions

- Culture change
- Resource and budget constraints running legacy and modernized operations concurrently
- Can pace of agency change keep pace with technology change? Can we modernize at a fast enough rate?
- Innovative projects on hold while we modernize baseline projects

EIA’ s new IT Governance Structure fosters staff and management culture change



#2: Leverage new technologies, methods, and data sources

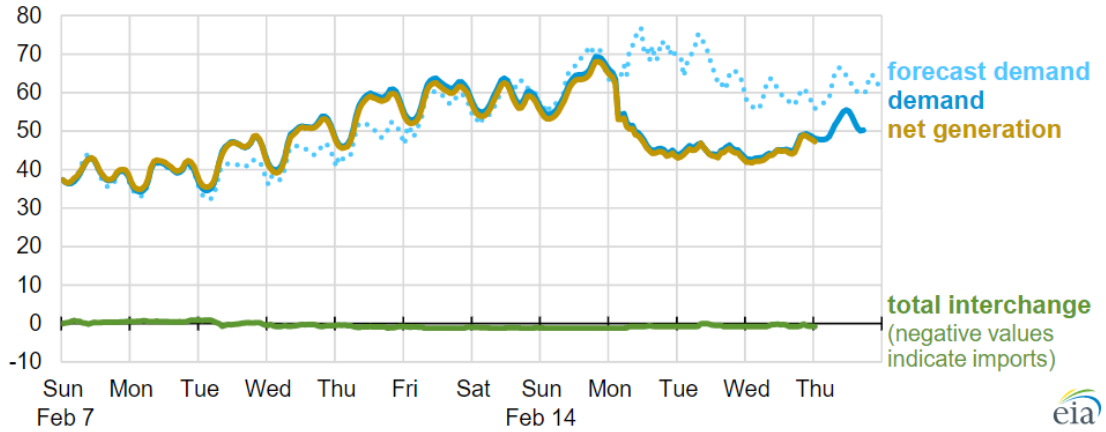
- Modernizing programs while modernizing systems
  - B2B solutions to replace or supplement core programs
  - EIA's 930 "survey" is an hourly data collection from U.S. electricity balancing authorities
- Engaging with EIA's demand-side respondents (e.g., households) when and how they expect to be contacted
  - Residential Energy Consumption Survey transition from CAPI to Web and Paper modes
  - Using paradata for real-time monitoring to assess and alter (if necessary) field operations

EIA's hourly electricity generation "survey" leverages U.S. balancing authority data streams and relationships

FEBRUARY 19, 2021

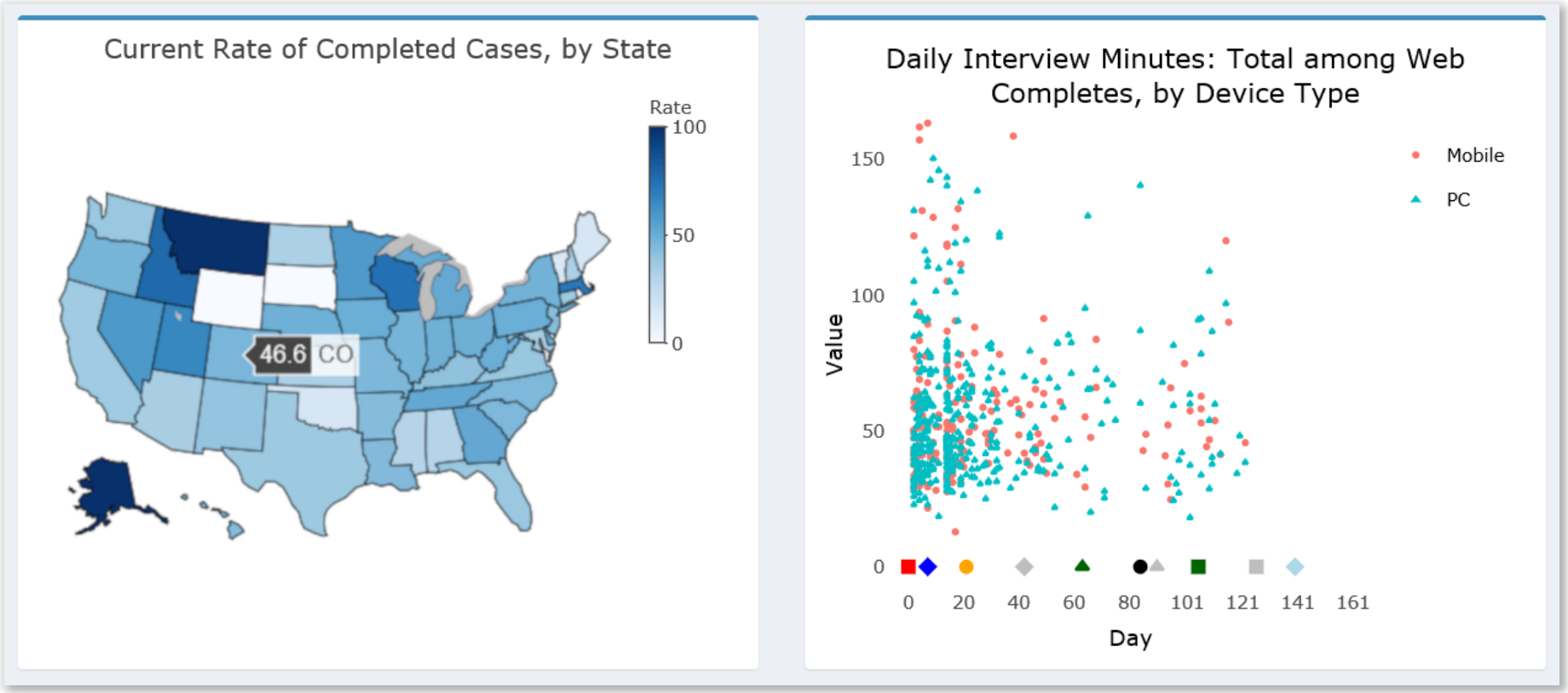
Extreme winter weather is disrupting energy supply and demand, particularly in Texas

Hourly electricity demand, net generation, and total interchange (Feb 7–Feb 18, 2021)
Electric Reliability Council of Texas, Inc (ERCOT)
gigawatts



Source: U.S. Energy Information Administration, *Hourly Electric Grid Monitor* (ERCOT demand, net generation, and interchange)

RECS Adaptive Total Design (ATD) site leverages paradata to monitor collection in near-real time



#3: Assembling the right staff

- Current staff
  - Strategic training plan and periodic engagement with staff on training needs
  - Informal workgroups/communities (e.g., Data Science, Data Viz, Python)
  - Identify technical leaders and managers

- For new hires:
  - Adaptable hard skills: technology solutions
  - Adaptable soft skills: work within and across teams
  - Speak the multidisciplinary language
  - Can they tell you why their work matters?

Challenges NORC is encountering in technology and survey computing

Non-pandemic version

04.13.21 : Version 1.2

Kyle Fennell

NORC at the University of Chicago

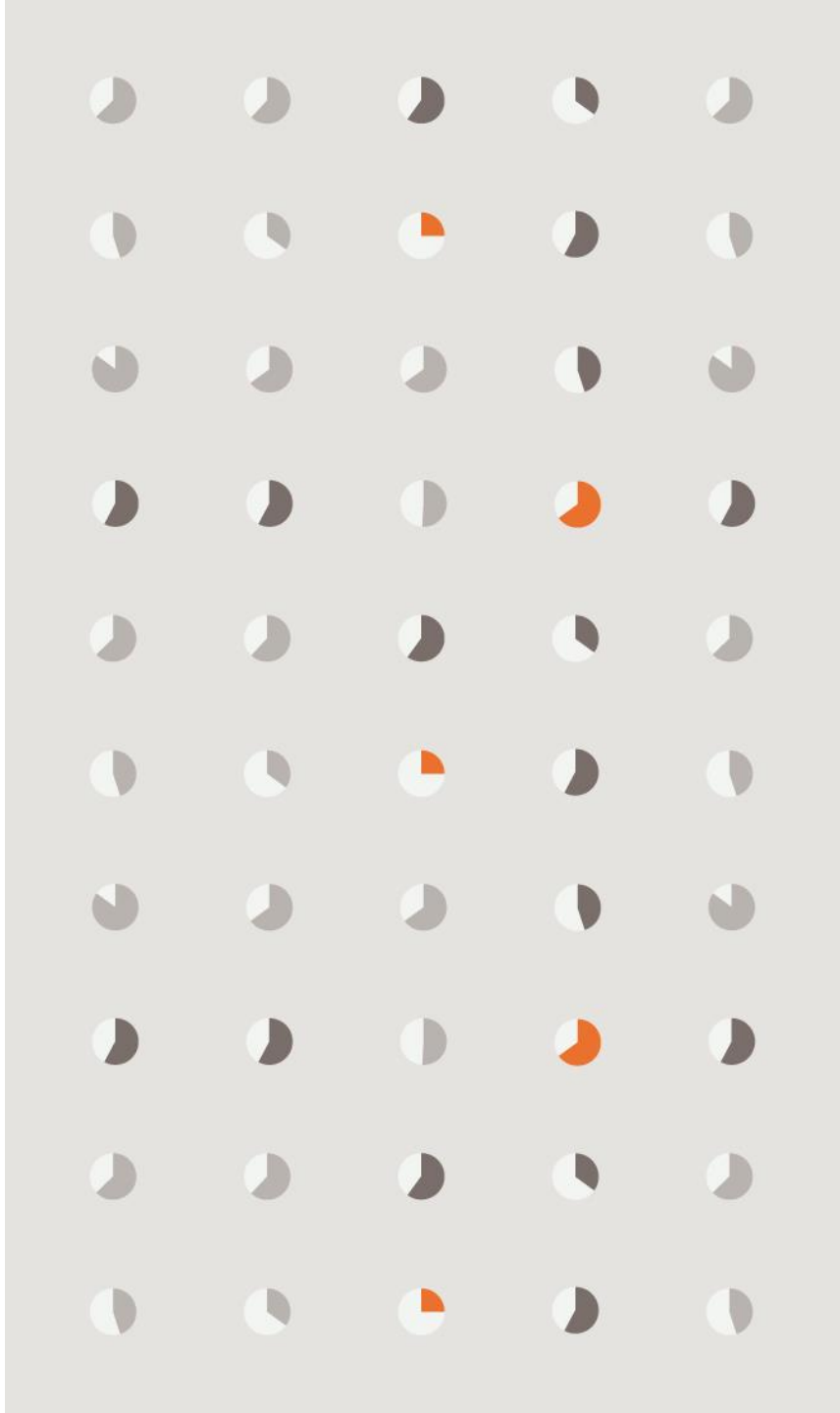
Agenda

01 A few thoughts about our pandemic year

02 Vanishing public spaces

03 Increasing complexity

04 Our workforce



A few thoughts about our pandemic year

NORC at the University of Chicago

Vanishing public spaces

NORC at the University of Chicago

SECTION : VANISHING PUBLIC SPACES

We have seen public “spaces” become privatized, with a profound impact on our ability to reach study participants.

Public

- Landline
- City street
- Shared sidewalk spaces

Private

- Cell phone
- Gated community
- Ring doorbell, access controlled apartment
- Social media
- Next door and other private groups

Increasing complexity

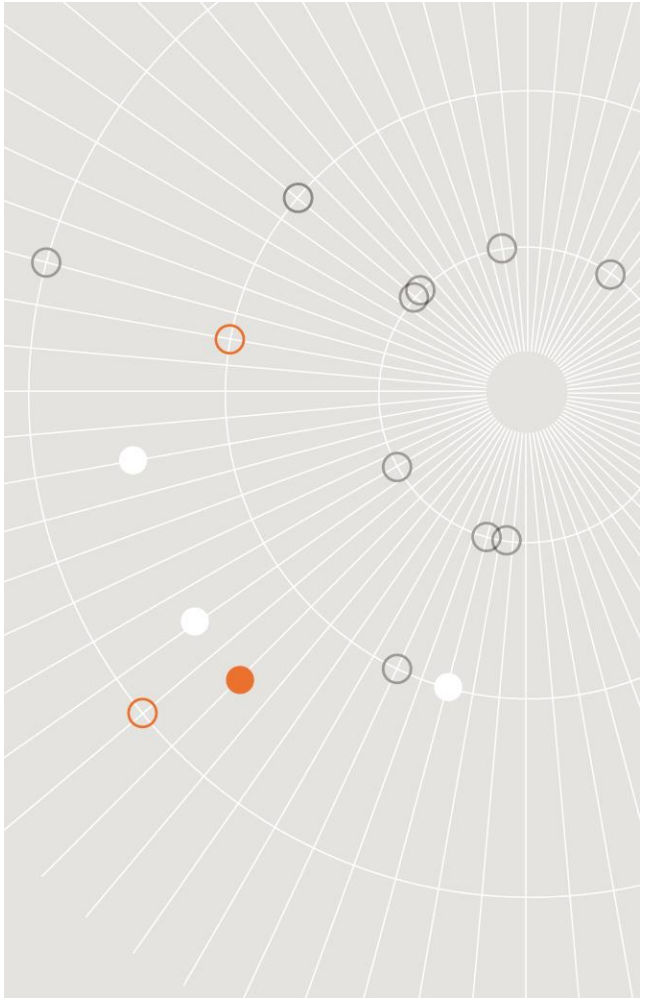
NORC at the University of Chicago

SECTION : **INCREASING COMPLEXITY**

We can do more than ever before, but increased capabilities mean more complexity and risk.

New capabilities/new headaches

- Multimode data collection
- Responsive/Adaptive design
- Interview + ….
- The Cloud
- BYOD



Our workforce

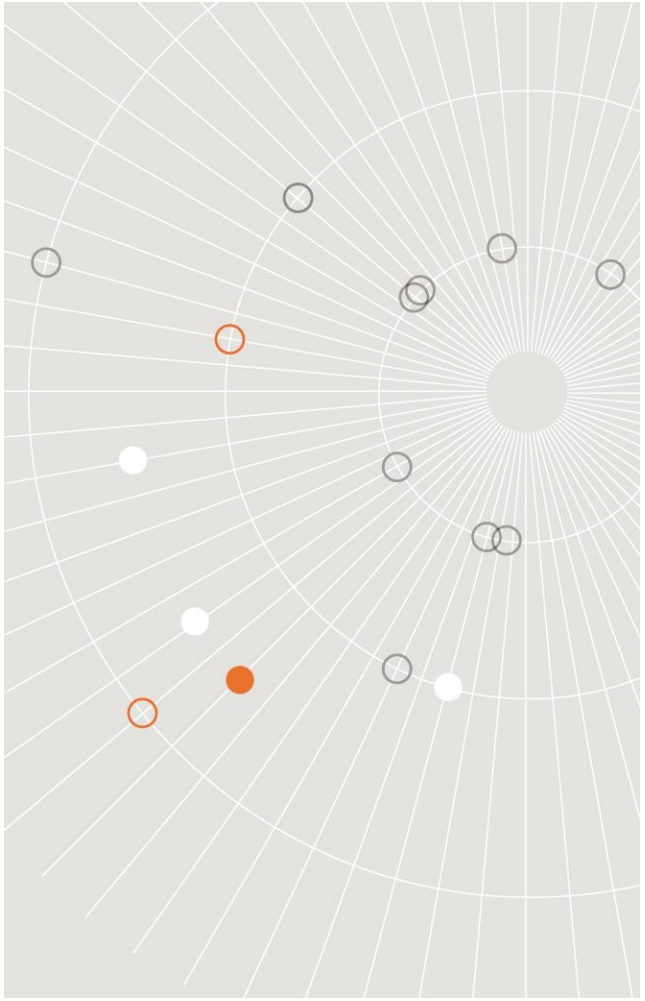
NORC at the University of Chicago

SECTION : **OUR WORKFORCE**

Our team of managers and data collectors is an asset which is difficult to maintain and grow.

Challenges with maintaining a field team

- Feast or famine scheduling
- Nurturing diversity
- Skill development
- Shifting employee expectations
- Managing retirements



Thank you.

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Top 3 challenges in Technology and Survey Computing

Gregg Peterson
University of Michigan

FedCASIC workshops
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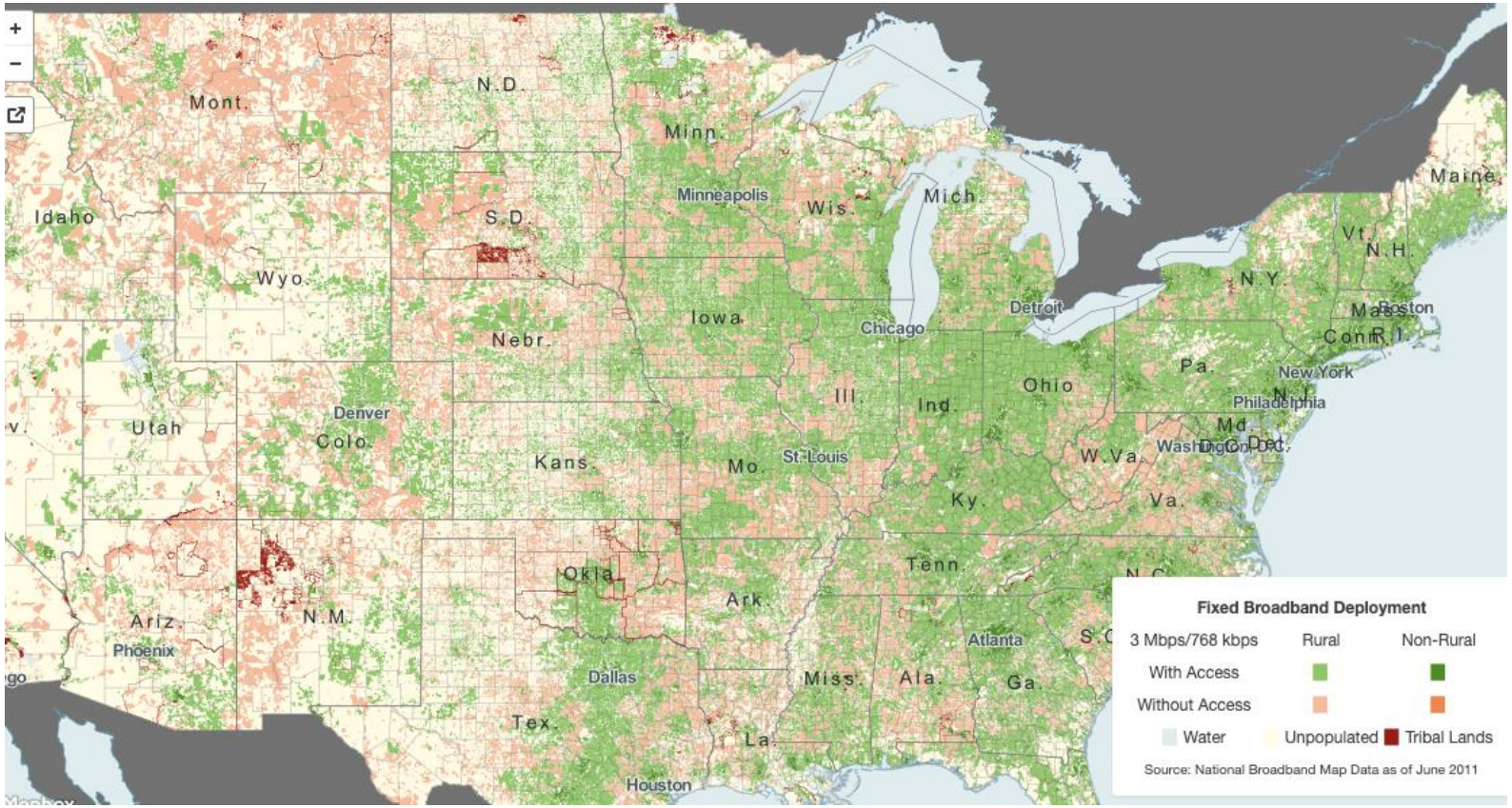
Top 3 Challenges

The Internet is not ubiquitous

The Telephone Consumer Protection Act (TCPA)

Interviewer administered surveys in the era of COVID-19

The Internet is not ubiquitous



Broadband deployment in the US (unreliable data)

The Internet is not ubiquitous

Challenges

- Some of our best interviewers do not have reliable broadband
- Many panel respondents live in areas with unreliable data coverage
  - *Concurrent* Mixed-Mode data collection (Web + offline CATI/CAPI) is a requirement for some studies
- Cannot rely on Internet for large survey administrations in school settings

Some solutions

- Most decentralized interviewing designed to work offline, with syncs as often as practical—including survey data and sample management data
- *Concurrent* mixed-mode supported through "write-interceptor" adjudication
- Large-scale deployment of tablets for school admins (pre-pandemic)

The Telephone Consumer Protection Act (TCPA)

Challenges

- Conservative approach to use of automation when text messaging (consenting) Rs
- No up-to-date source for changes to mobile # ownership status
- Complex texting protocols: authenticated links, many templates, many "fills"
- Non-TCPA: Data security on mobile phones

Some solutions

- Provide Interviewers with context-specific texting templates in SMS platforms
- Programmatically construct QR codes using interviewer selected inputs
- Use custom SMS app to scan, auto-populate and manually send complex text messages

- Use FCC-ordered Reassigned Numbers Database (RND) as a source of truth about changes in ownership; reviewing April 1st SCOTUS ruling (Facebook, Inc. v. Duguid et al.)
- Auto delete texting history on a scheduled basis, MDM

Interviewer administered surveys in the era of COVID-19

Challenges

- Centralized, call-center-based CATI not possible
  - Mostly Windows-based interviewing systems mean...
  - "Brokering" physical remote machines; fighting with the limits of Terminal Servers
- No in-person data collection means protocol changes (and revenue decreases)
- Large school on-site admins not possible
  - Web options may decrease response rates, increase measurement error

Some solutions

- Deployed many new remote desktop machines
- New call center dashboards allow for cross-project production and quality monitoring
- Rewriting applications to account for limitations (recordings, file mover utilities)
- Hands-on monitoring of school-based Web admins; teaching new skills to veterans

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Thank you

Discussion