Mobile Survey Data Collection and Management Using Participants Own Smartphones

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Overview

- Different approaches to implementation
  - PDA approach
  - Local app approach
  - **SMS distribution approach**
- Introducing **SurveySignal**
  - Core features
  - How it works
  - User experiences
  - Security/Ethical issues
  - Resources

Common approaches

1. The PDA approach

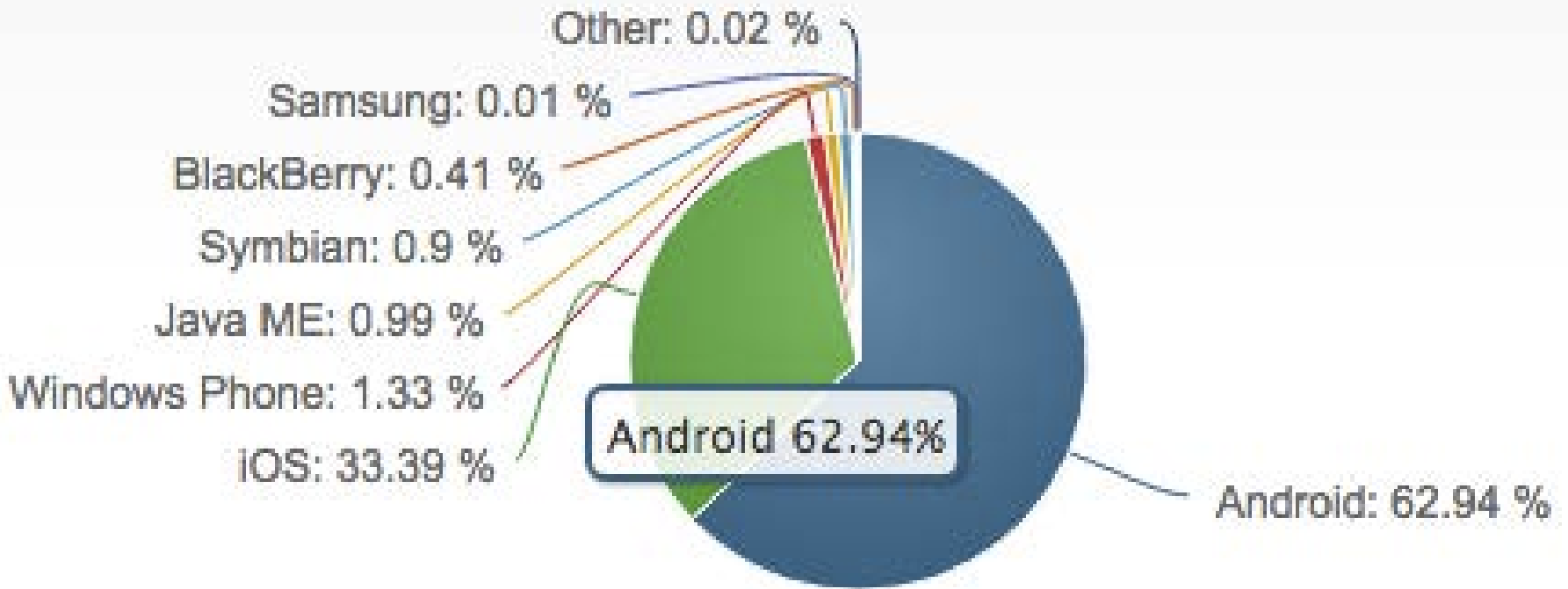| Criteria (various costs and efforts)	
Device costs	High
(Programming) effort involved in setting up customized protocol	Typically high, although some software exists (e.g., ESP)
Online access/data plan	Not needed (local storage), unless results need to be fed back in real-time
Compatibility issues	None (only one operating system)
Need to meet before and after experience sampling phase?	Yes
Special participant burden	Need to carry extra device and learn how to use it

Common approaches

2. The local-app approach

Criteria (various costs and efforts)	
Device and other costs	No device costs (if using participant's smartphone)
(Programming) effort involved in setting up customized protocol	Moderate to high, depending on application
Online access/data plan	Not needed (local storage), unless results need to be fed back in real-time
Compatibility issues	Yes (e.g. Android vs. iOS vs. Blackberry vs. Windows Mobile)
Need to meet before and after experience sampling phase?	Not necessarily, if people download and install app on their own
Special participant burden	Need to download and install the app

Common approaches

3. The SMS approach

Criteria (various costs and efforts)	
Device and other costs	No device costs; Text messaging costs
(Programming) effort involved in setting up customized protocol	None (when user-friendly survey software is used)
Online access/data plan	Required
Compatibility issues	Minimal (mobile surveys display well on most smartphone browsers)
Need to meet before and after experience sampling phase?	Not necessarily
Special participant burden	None

2017 Operating Systems Market Shares (US)

Other: 0.02 %
Samsung: 0.01 %
BlackBerry: 0.41 %
Symbian: 0.9 %
Java ME: 0.99 %
Windows Phone: 1.33 %
iOS: 33.39 %
Android 62.94%
Android: 62.94 %

Development of easy-to-use web-based Software

(*SurveySignal*; Hofmann, W., & Patel, P. V. (2015), *SSCR*)

SMS distribution approach, combining

(1) A simple and fast signup and smartphone verification system

(2) Text messaging as a signaling and reminder device, according to fixed, random, or mixed schedules

(3) Seamless integration with mobile-compatible survey software such as Qualtrics or SurveyMonkey

How it works

SurveySignal

Create mobile-compatible online surveys →(Feed in Links)→ Create Survey Project

Create Survey Project → Phone Registration Page

Phone Registration Page ←(Recruitment/Screening)

Phone Registration Page →(Verification Consent)→ Survey Panel

Create Survey Project → Sampling Schedule

Survey Panel → Sampling Schedule → Text messages or Survey Links

Sampling Schedule →(Signaling Reminding Communicating Intervention Engaging)→ Text messages or Survey Links

Response Registration →(Monitoring)→ Sampling Schedule

Text messages or Survey Links →(Response)→ Response Registration

Response Registration → Create mobile-compatible online surveys

Embedded Data
• Participant ID
• Day/Signal Number
• Send/Response Time

(Mobile Phone screen)
chicagobooth.qualtric... ⟳ Google
(Day1 Signal4 15:40)
How much did you try to resist this desire?
not at all   very much
0 1 2 3 4 5 6
BACK   NEXT

From:admin@SurveySignal.com;SUBJ: You have a new survey to take (sent at 12:28):
http://www.SurveySignal.com/sms.aspx?SMS=1366
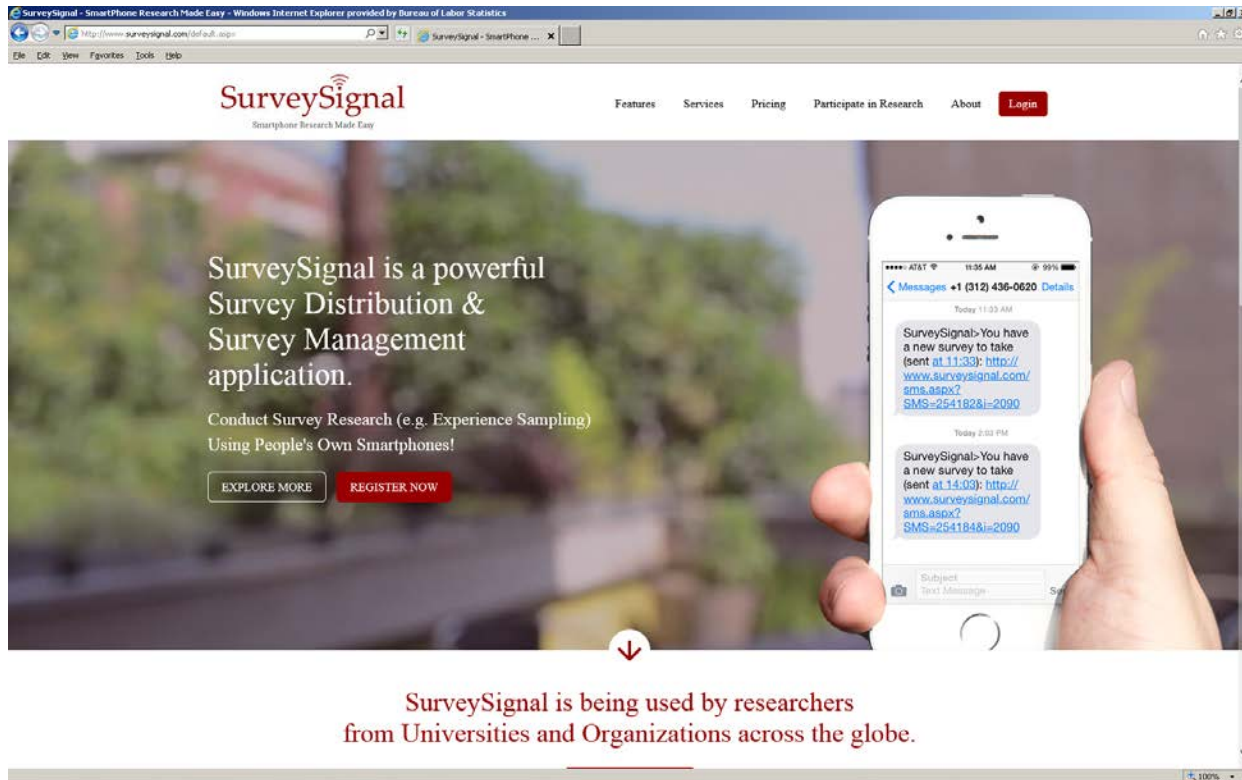
SurveySignal Account

- Registering an account and exploring the system is free

Account Interface

Create an unlimited number of survey projects within a free online account

Customize the Schedule

Edit Survey Links

Specify which daily signal is connected with which individual survey

Administration and Response Monitoring Tools

Participant Engagement

Participant Custom Reminders

Security/Ethical Issues

- Signup Security
  - Wireless phone check (optional)
  - Each phone number can be registered only once per study
  - Opt-in procedure during registration
- SurveySignal Participant Information
  - Protected within server architecture
  - Phone numbers never fully displayed (e.g., 77****4326)
- Actual Survey Response Data
  - Collected within secure survey environment of choice (e.g., Qualtrics, SurveyMonkey, etc.)

SurveySignal

Benchmark data
(across 10 studies, n = 1,852)

- Mean response rate: 77%
- Median response delay: 8 minutes
- Survey completion rate: 96%
- Reminders effective
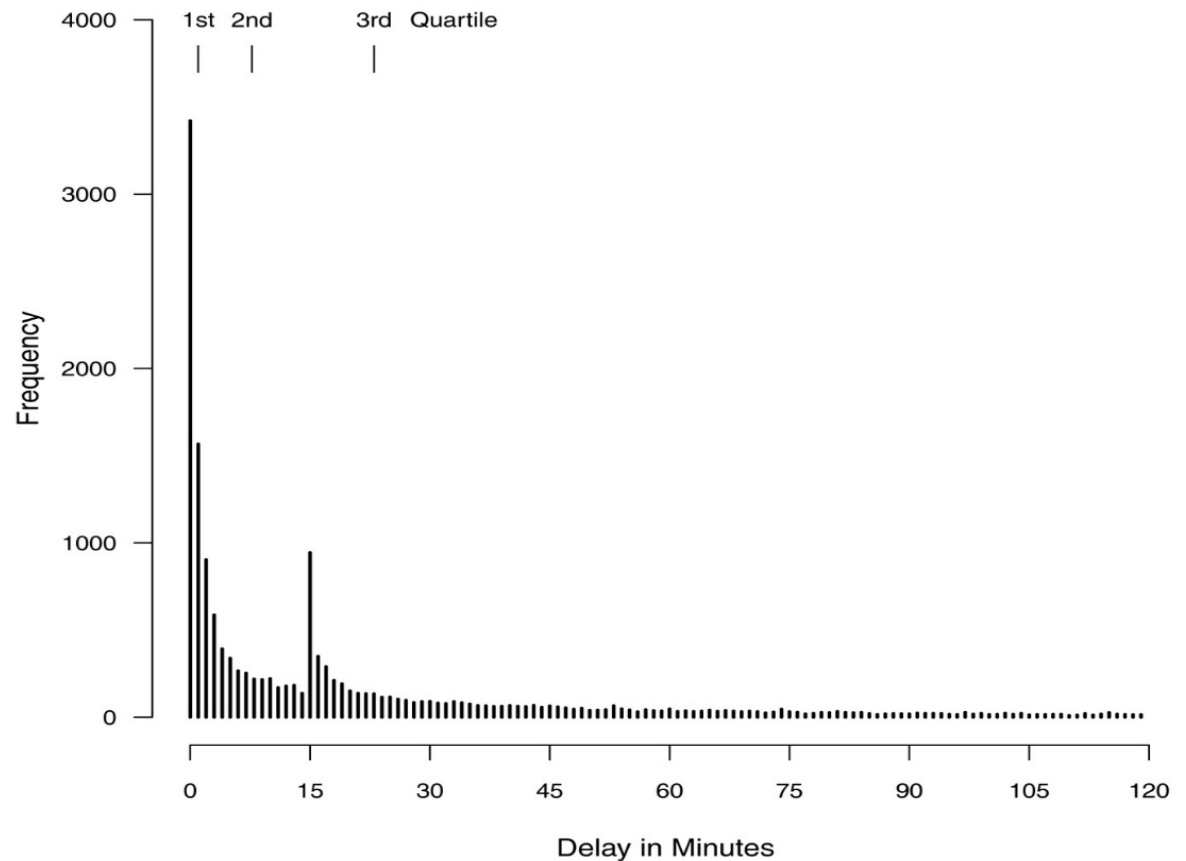
Current Research Examples

- **Example 1: Assessment**
  Hofmann, Wisneski, Brandt, & Skitka (2014, *Science*):
  sampled morality in everyday life, including connections to
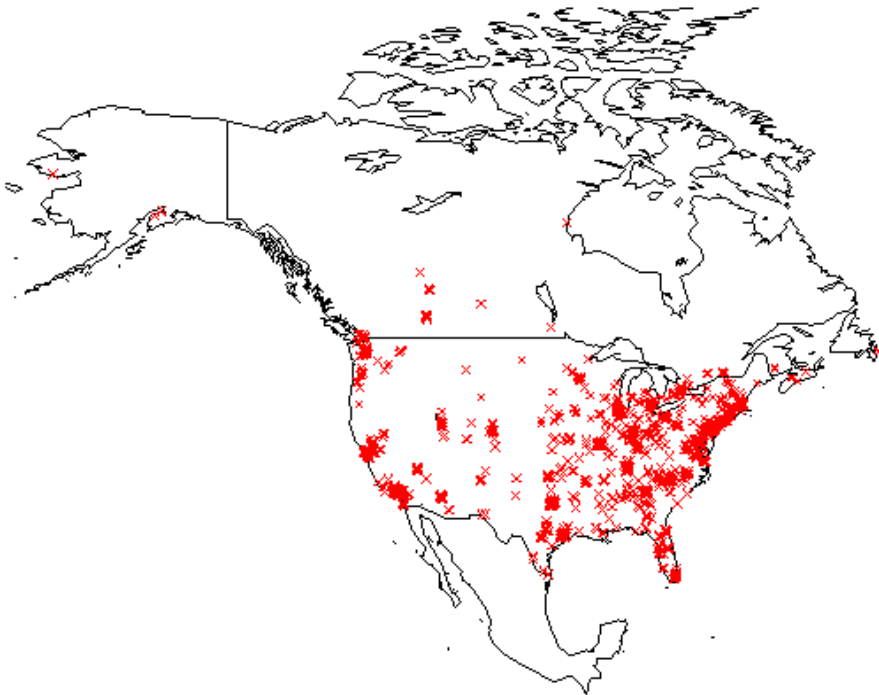 momentary happiness   N=1,252

Potential Federal Uses of SurveySignal

- Bureau of Labor Statistics
  - Current Employment Statistics Survey
  - Quarterly Census of Employment and Wages Survey
  - Job Opening and Labor Turnover Survey
- Census Bureau
  - Current Population Survey
  - Survey of Income and Program Participation
- Energy Information Administration
  - Monthly Natural Gas Marketers Survey

SurveySignal

Resources

- www.surveysignal.com
- Email Support (support@surveysignal.com)
- Custom Solution (paresh.patel@surveysignal.com)
- Online resources (within account)
  - Manual
  - FAQs
  - Parameter cheat sheet
  - Example survey project

Thank you very much for your attention!