

Mobile technologies to support field research

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Reliable data collection in highly disconnected environments using mobile phones

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Cutting costs, boosting quality and collecting data real-time –
**Lessons from a Cell Phone-Based Beneficiary Survey to
Strengthen Guatemala's Conditional Cash Transfer Program**

by Christian Schuster and Carlos Perez Brito

http://siteresources.worldbank.org/INTLAC/Resources/257803-1269390034020/EnBreve_166_Web.pdf



Mobile phones and the power of data collection

Posted by **Ken Banks** of National Geographic Emerging Explorer on November 17, 2011

<http://newswatch.nationalgeographic.com/2011/11/17/mobile-phones-and-the-power-of-data-collection/>

World Academy of Science, Engineering and Technology 70 2010

Mobile Phone as a Tool for Data Collection in Field Research

Sandro Mourão and Karla Okada

<http://www.waset.org/journals/waset/v46/v46-43.pdf>

Researcher interviews and shadowing

- field environment
- data collection practices
- data storage
- use of mobile devices
- data management upon return

Researcher interviews/shadowing



http://www.ips.org/TV/wsf2010/library/Milagros_SalazarIPSjpg.jpg

Researcher interviews/shadowing



Researcher interviews/shadowing



<http://www.uoguelph.ca/atguelph/07-04-11/featureshoney.shtml>

Researcher interviews/shadowing

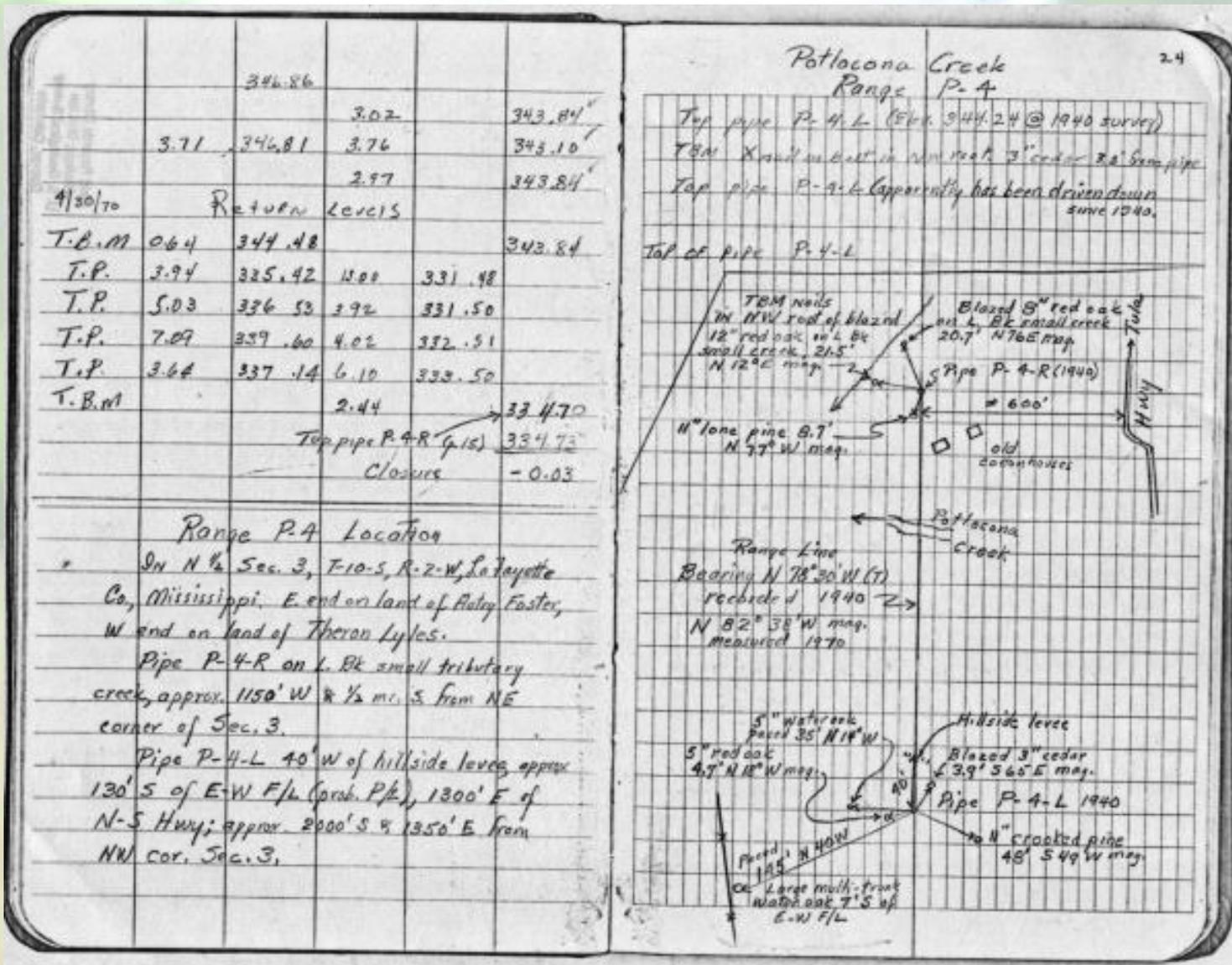


Researcher interviews/shadowing



<http://atguelph.uoguelph.ca/2011/12/dairy-bush-takes-learning-outside/>

Current practices



Physical damage



<http://www.padgadget.com/2012/08/07/top-5-rugged-cases-for-ipad/>

Security: theft, loss, hacking



Protecting your identity

Identity theft protection for mobile device users



Know what security software you need to keep yourself safe.

If you use complex passwords for your online accounts, have a firewall on your PC's Internet connection and only shop at secure websites, you may think you're doing a good job protecting yourself from identity theft. Those precautions are a good start, but don't overlook another important opportunity for identity thieves - your mobile devices.

sponsored

Millions of Americans access the Internet and social media every day with handheld devices, from smart phones to tablets. Yet more than half of us (54 percent)

Protecting your data, data encryption



<http://www.protectyourdata.ca/protect-your-data/>

Ann Cavoukian, Ph.D.
Information and Privacy Commissioner/Ontario

Fact Sheet

Encrypting Personal Health Information
on Mobile Devices



<http://www.defendingthenet.com/newsletters/isdataencryptionreallysecure.htm>

Data collection via apps



ODK Collect > Widgets

decimal widget
only numbers > 10.51 and < 18.39

18.31

1 2 3 4 5 6 7 8 9 0
@ # \$ % & * - + ()
ALT ! " ' : ; / ? DEL
ABC , _ . Done

<http://opendatakit.org/help/form-design/examples>



MOTOROLA

doForms > Good Dogs

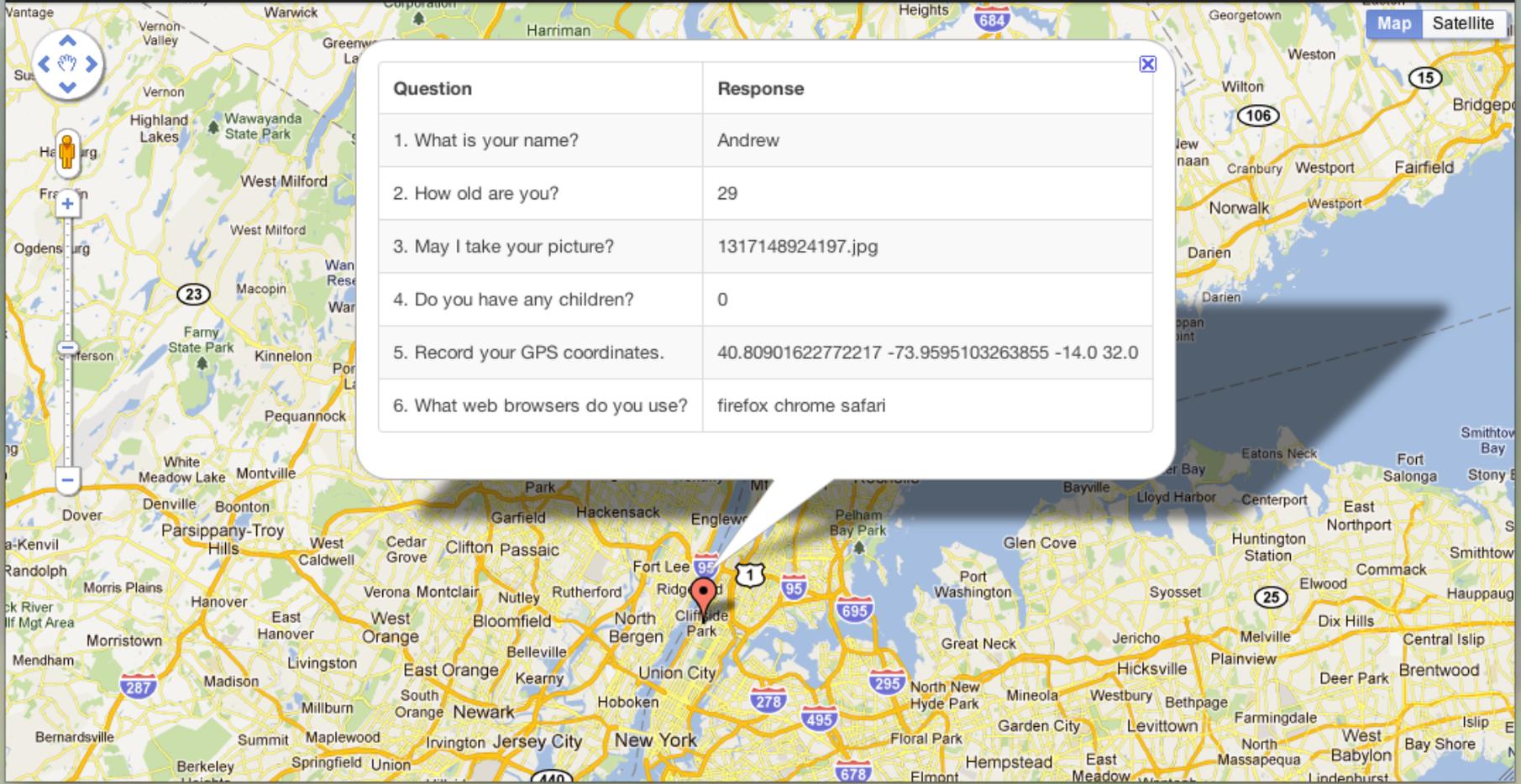
GPS Location
Use to capture a GPS location.

Replace Location

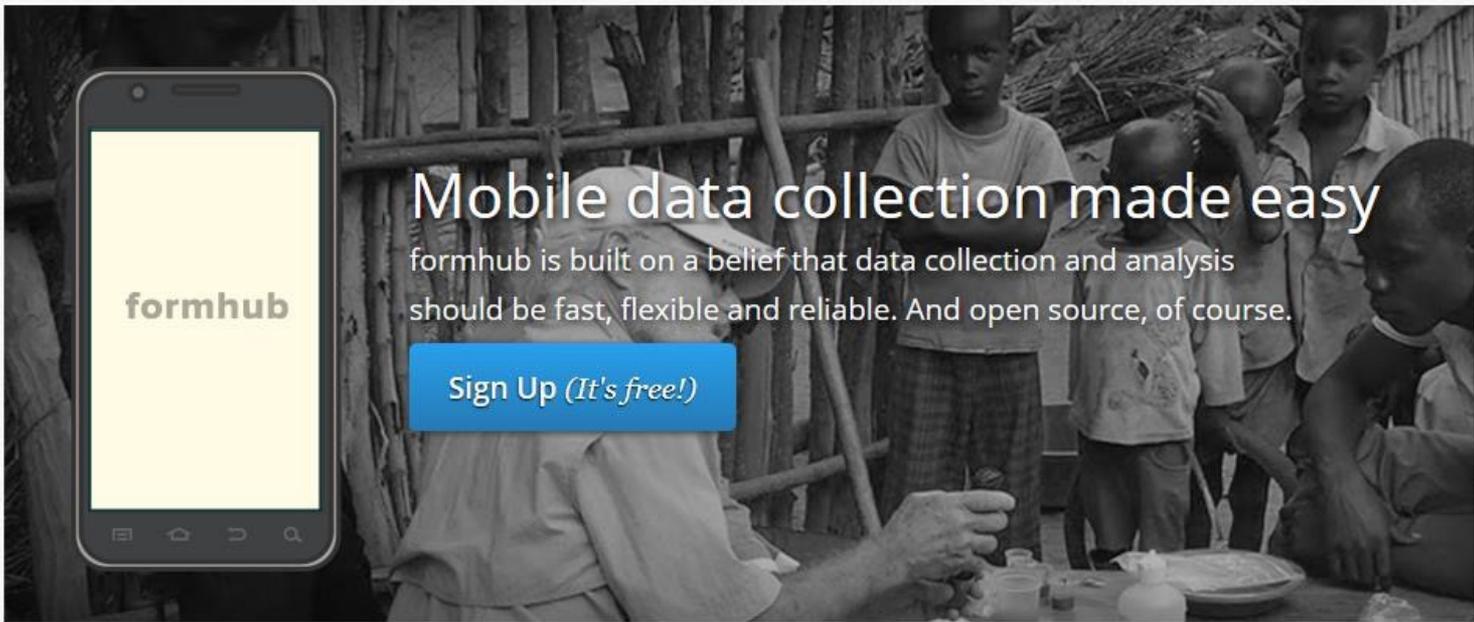
Latitude: N 44°44'54"
Longitude: W 68°49'46"
Altitude: -13.0m
Accuracy: 13.856406m

Swipe screen horizontally to navigate

<http://www.doforms.com/features-video-tour.htm>



| Question | Response |
|----------------------------------|--|
| 1. What is your name? | Andrew |
| 2. How old are you? | 29 |
| 3. May I take your picture? | 1317148924197.jpg |
| 4. Do you have any children? | 0 |
| 5. Record your GPS coordinates. | 40.80901622772217 -73.9595103263855 -14.0 32.0 |
| 6. What web browsers do you use? | firefox chrome safari |

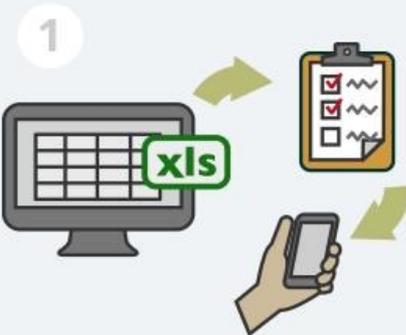


Mobile data collection made easy

formhub is built on a belief that data collection and analysis should be fast, flexible and reliable. And open source, of course.

[Sign Up \(It's free!\)](#)

How it Works



Design

Author surveys quickly and easily in Excel and have instant access on your Android phone. No advanced technical degree required.



Collect

Easily distribute your survey on an Android device or on the web. Data connection not needed.



Analyze

Visualize your data as it is collected, and gain understanding with our powerful insights tools.

Data collection via web form



<http://www.lukew.com/ff/entry.asp?1000>

Data collection via DBMS



Data collection via SMS



RapidSMS

An open source framework for SMS and Web integrated applications

RapidSMS allows data collection, logistics coordination and communication allowing any mobile phone to interact with the web via SMS text messages.

<http://www.dimagi.com/rapidsms/>

Feasibility study on application of GSM–SMS technology to field data acquisition

doi: 10.1016/j.compag.2006.03.005

Data storage



Dropbox



iCloud

Specialist devices



Mobile electronic laboratory notebooks (ELNs)



eCAT

The flexible electronic lab notebook that includes sample management

<http://www.researchspace.com/electronic-lab-notebook/index.html>



Sciency[®]
Electronic Laboratory
Notebook

<http://www.ruoro.com/software/sciency-eln/overview>

Support strategies

- develop knowledge base for recommendations and support
- develop project-specific solutions
- offer enterprise solutions

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