Open Data Kit
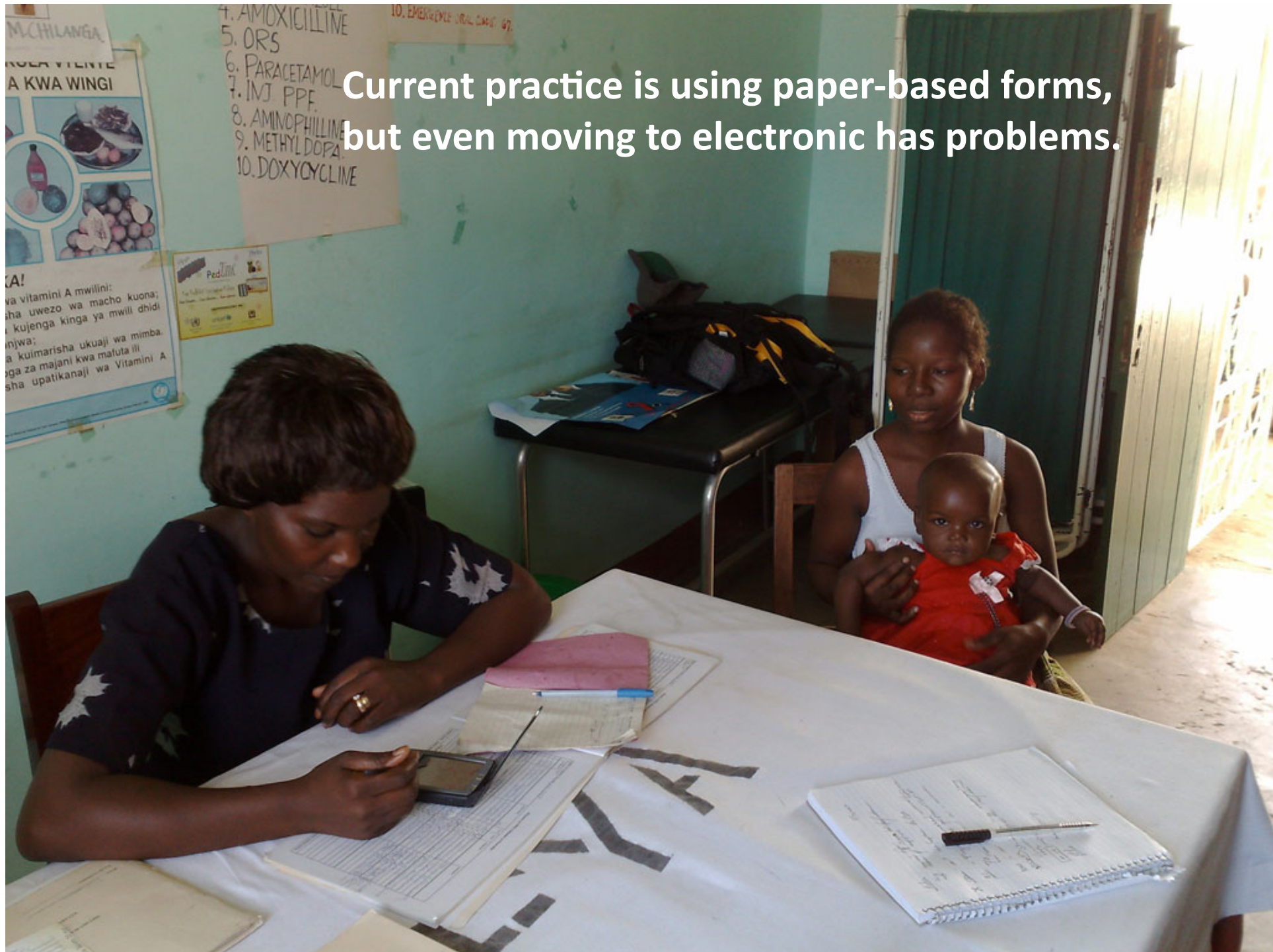
a suite of open source tools to help organizations collect, aggregate and visualize their data.

http://code.google.com/p/open-data-kit

Current practice is using paper-based forms, but even moving to electronic has problems.

Data Collection Problems

- Current practice is paper-based forms
  - Physical collection of completed forms
  - Data transcription fraught with errors
  - Long time-lag to usable data in office
  - Difficult to supervise
- Moving to electronic, but still has problems
  - Limited processing and storage
  - Restricted input and output options
  - No access to inputs like location, photos, audio

ODK Goals

- Make tools modular and customizable so they can be composed appropriately.

- Exploit open interfaces and standards so that solutions are not expensively "siloed".

- Establish data collection tools at the cutting edge of technology.
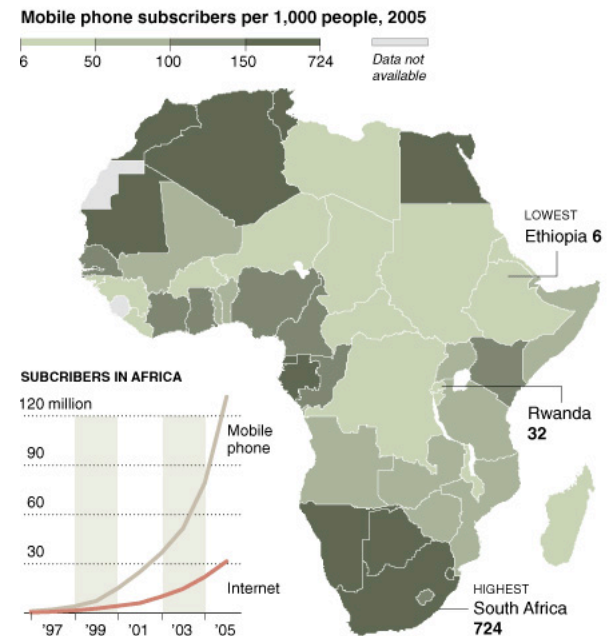
How do you collect rich data?

ODK Collect

ODK Collect, our Android client, renders a form, survey, or algorithm into prompts that provide navigation logic, entry constraints, and repeating substructures.

Forms are based on the XForms standard and support a variety of data types, like location, photos, audio, video, and barcodes.

Data be sent to any XForms-compatible server.

Where do you store the data?

ODK Aggregate

ODK Aggregate is a ready-to-deploy server that hosts forms and submitted results and provides standard interfaces to extract data such as spreadsheets, queries, and maps.

Aggregate is currently implemented on Google's App Engine, a free, reliable and scalable Web service.

So does it work?

Shared phone operator in Uganda collects customer feedback.

Grameen AppLab in Uganda

- ODK Collect has been used by AppLab since November 2008 by shared phone operators (SPO) in rural Uganda collecting 1000s of surveys.

- The SPOs survey their customers about available phone-based services and the results are used to guide the development of services like Google's Clinic Finder and Farmer's Friend.

- One user noted that unlike their old paper surveys, "*The survey process is real time as opposed to the paper forms where we had to wait for a month to be picked up...*".

A Kenyan counselor scans a patient's demographic information into ODK Collect.

HIV Counselors in Kenya

- AMPATH is the largest HIV treatment program in sub-Saharan Africa and is Kenya's most comprehensive initiative to combat HIV.

- Over the next two years, ODK Collect will be used in a home-based testing and counseling program where hundreds of phones will be used to reach millions of people.

- The collected data will be submitted to OpenMRS, a medical records system, for analysis and followup.

Examples include deforestation monitoring in the Amazon, decision support for patients in Tanzania, documenting war crimes in the Central African Republic, and monitoring school attendance in India.

Other Deployments

- Surveying animals in Zanzibar
- Creating tools for entrepreneurs in Columbia
- Studying businesses in South Africa

Live Demo

Patient checks his personal phone for calls and text messages.

Upcoming Tools

- Ensure forms and applications are on each device
- Voice based forms for automated follow up
- Task assignment and workflow management
- Send feedback to the data collectors
- Visualization of collected data
- Offline database synchronization
- Usable encryption for storage and transfer
- Reporting framework