

Using
Mobile Data Collection
System (MDCS)
in
Disaster Response
Monitoring and
Evaluation



Anthony Alindogan

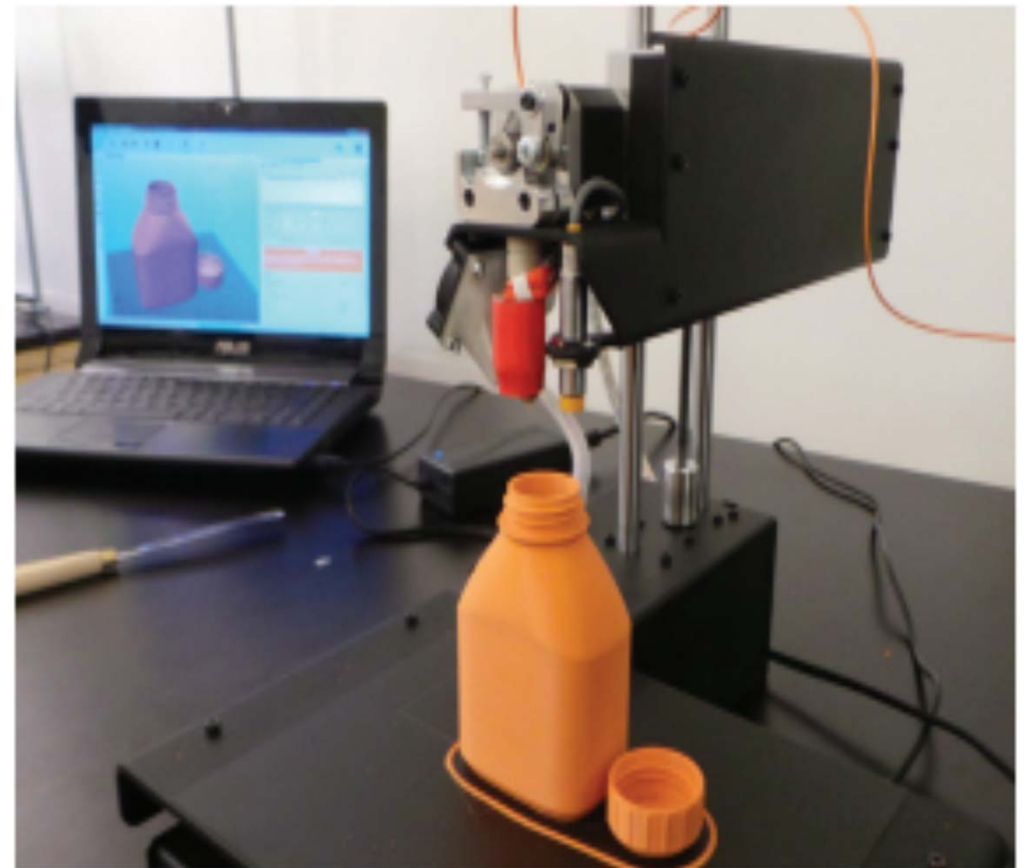
He on the side of
technology wins

- Napoleon

All the biggest technological inventions of man – the airplane, the automobile, the computer – says little about his intelligence, but speaks volume about his laziness

- Mark Kennedy





www.cdint.org

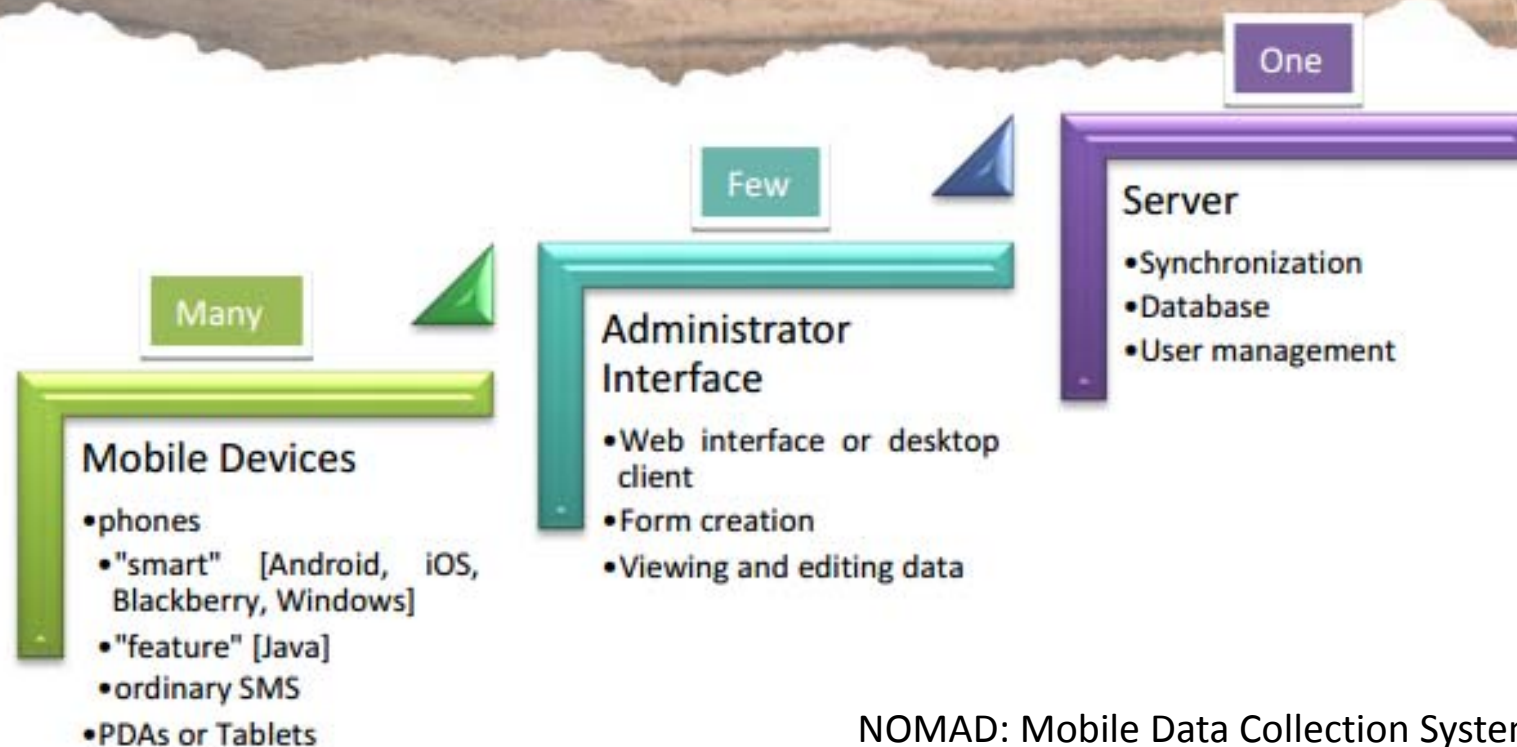


Mobile Data Collection – targeted gathering of structured information using devices such as smartphones, PDAs or tablets.

- Jung, 2011



HUMANITARIAN OPERATIONS
MOBILE ACQUISITION OF DATA



NOMAD: Mobile Data Collection Systems – A review
of the current state of the field



OPEN DATA KIT



Mobile Data Collection
and Messaging System

www.magpi.com



Ron Garan ▸ Public

Dec 24, 2011



A great example of how we can have a 2-way technology transfer between the space program and the developing world. If we are going to explore beyond Low Earth Orbit (which we should) we will need to adopt the engineering philosophy used in the developing world. Namely engineering solutions need to be: robust, and not need a great deal of training or resupply. It also shows how open source tech like the Open Data Kit (ODK) app on +Google Android phones can help the developing world. Cool Stuff!

<https://plus.google.com/+RonGaran/posts/b4oBaj3VTQW>

DTI maps entire Bohol Tourist Site with Galaxy Tabs

ABE OLANDRES · JULY 27, 2011

DTI-GIZ, under the Private Sector Promotion Program (SMEDSEP), came up with this pretty neat Google Mapping project to map the whole island of Bohol and all of its 700+ tourist sites and tourism-related establishments.

The map was collected using Samsung Galaxy Tab running Open Data Kit (ODK) applications. The Holy Name University (HNU) research department fielded staff/personnel to do the site interviews.



<http://www.yugatech.com/the-internet/dti-maps-entire-bohol-tourist-site-with-galaxy-tabs/>



[Home](#) > [About](#)

About

What is ELMO?

ELMO is The Carter Center's open-source **E**lection **M**onitoring data collection and reporting system, built specifically with election monitoring in mind. Equipped with ELMO, observers can submit evaluations of a process – via tablets (utilizing **Open Data Kit**), SMS, or directly online – in real-time to mission headquarters. ELMO's reporting system organizes observer findings, and is relied upon by The Carter Center missions around the globe to analyze data and to assess elections as well as broader political processes.

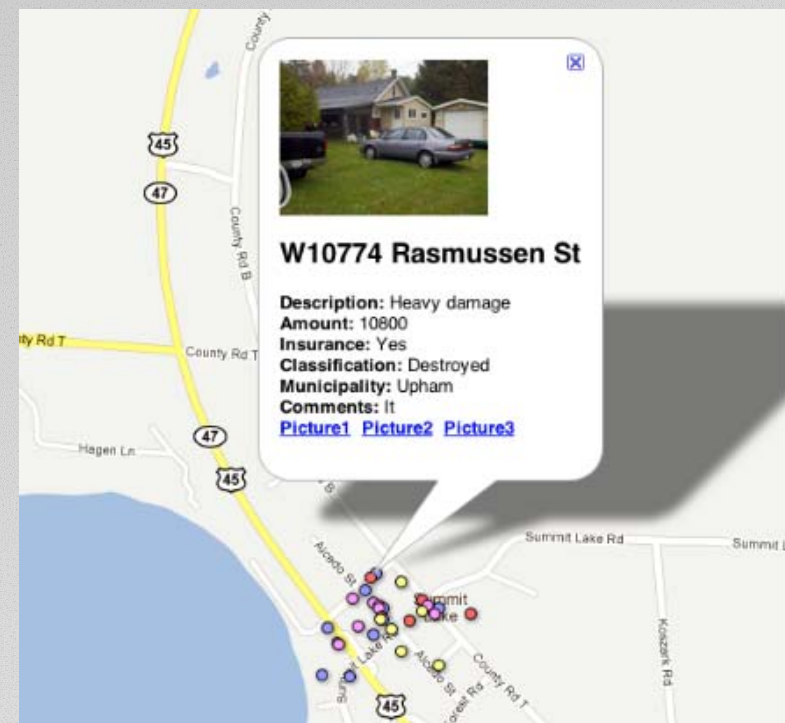
<http://getelmo.org/about//>

Wisconsin Using ODK For Natural Disaster Assessments

October 14th, 2011 by Yaw Anokwa

A few weeks ago, we wrote about [New York using ODK for health operations](#). Around the same time, we got a note from Andrew Faust of [North Central Wisconsin Regional Planning Commission](#).

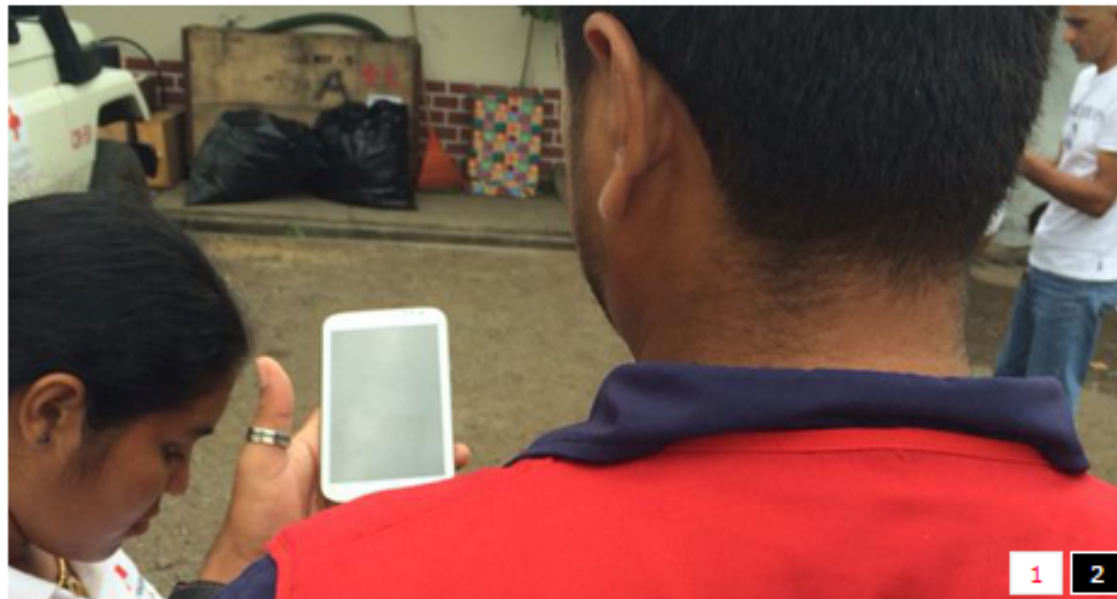
Andrew wrote, "Here in Wisconsin, we are using ODK to collect data in the field for assessment information after a natural hazard like storm, flood or tornado. This allows Emergency Response Professionals to collect information in the field in real time with an Android mobile device and map them in real time.



<https://opendatakit.org/2011/10/wisconsin-using-odk-for-natural-disaster-assessments/>

Panamanian Red Cross uses new technology to streamline distribution of humanitarian aid

Published: 18 July 2014 15:34 CET



Panamanian Red Cross volunteer reviews the information collected from beneficiaries using the ODK system on his mobile phone. Las Tablas, Panama, Alberto Cabrera IFRC.

<http://www.ifrc.org/en/news-and-media/news-stories/americas/panama/panama-red-cross-uses-new-technology-to-streamline-distribution-of-humanitarian-aid-66450/>





Source: Wikipedia

38 confirmed dead as Typhoon Rammason cuts across the Philippines

By Euan McKirdy, CNN

Updated 0604 GMT (1404 HKT) July 17, 2014



Source: CNN

Top stories



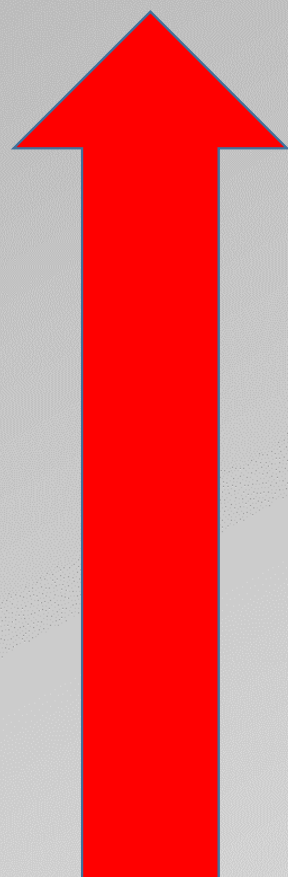
Car dangles off parking garage in Austin



Car bombs kill 11 in Baghdad; ISIS takes credit

Key Evaluation Questions

1. Are the items distributed during the project used for their intended purpose?
2. Are the items distributed of satisfactory quality?
3. Are the hygiene promotion activities conducted as part of the project effective?



Program or
project value
in monetary
terms

External Evaluation

Internal Evaluation

**Small-scale
evaluation reports**

METHODS

Surveys

Focus Group
Discussions

Key-Informant
Interviews

Document
reviews

Other methods
(quality
checklists, CBA,
etc)

StatCalc

StatCalc - Sample Size and Power

Population survey or descriptive study
For simple random sampling, leave design effect and clusters equal to 1.

Population size:

Expected frequency: %

Confidence limits: %

Design effect:

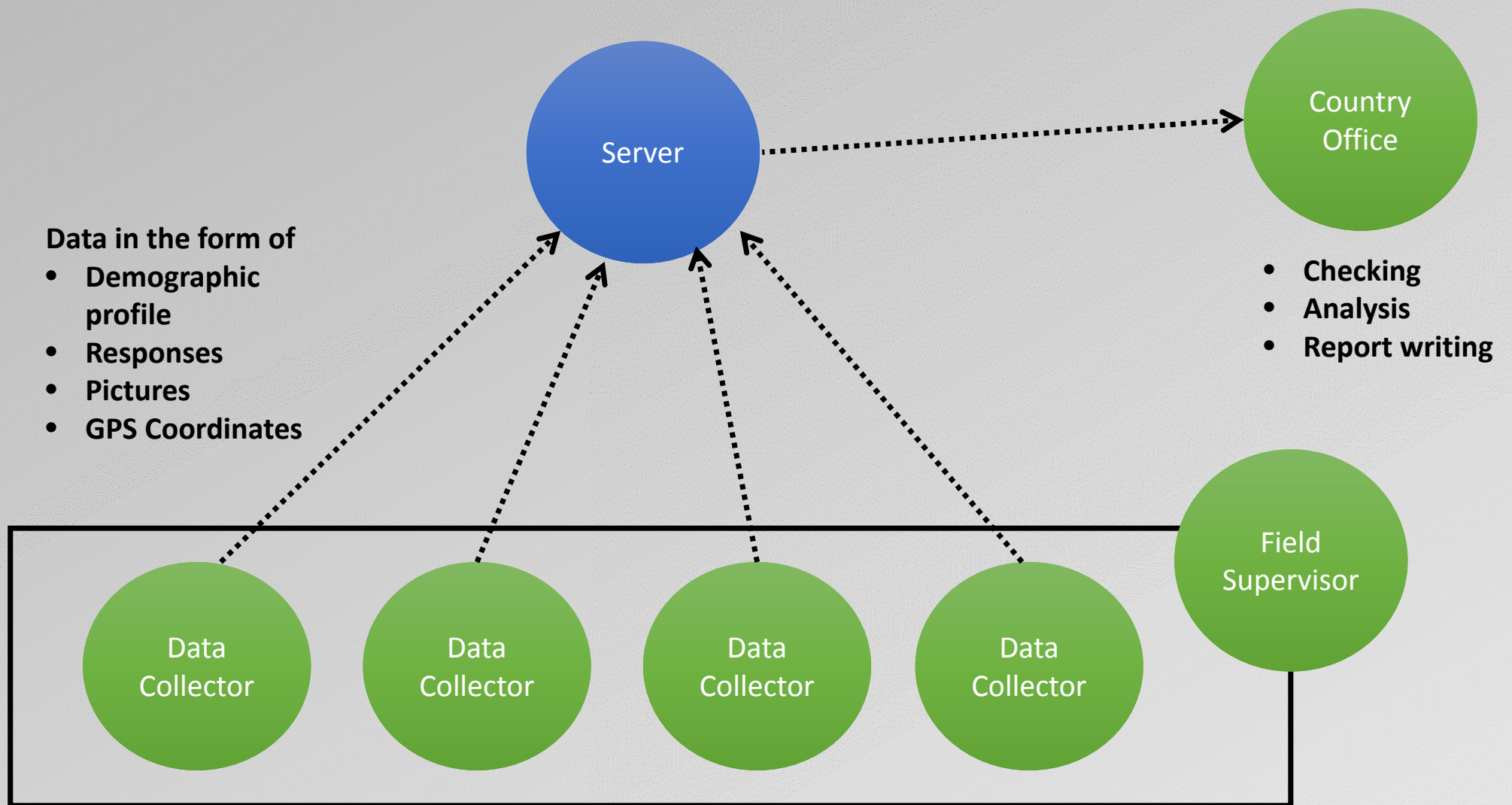
Clusters:

Confidence Level	Cluster Size	Total Sample
80%	152	152
90%	238	238
95%	322	322
97%	381	381
99%	497	497
99.9%	700	700
99.99%	858	858

Total sample size requirement = 1982 samples (95% CI)

Table 2: Allocation of Sample Proportional to Beneficiary Location

Location	%	Allocated sample size
<u>Tondo</u> , Manila	75	241
<u>Unisan</u> , Quezon	25	81
TOTAL	100	322





Question	Results		
	Hygiene kits	Tarpaulin/ Plastic Sheets	Hygiene Promotion
Were the kits used for their intended purpose?	Yes – 100% of the kits were used for their intended purpose	Yes - 87% of respondents used the tarps. 13% kept them for future use	N/A
Are items satisfactory from the community perspective?	Yes – 99% of respondents are satisfied	Yes – 100% of the respondents are satisfied	N/A
Are the hygiene promotion activities conducted as part of the project effective?	N/A	N/A	Yes- 97% of the respondents expressed understanding of proper hygiene 96% were able to answer correctly the knowledge question for proper hygiene

Key Lessons in Setting Up a MDCS in the Disaster Response Setting:

1. Having a free software does not mean that an organisation can simply just use it.
2. Consider cost vs benefit
3. Create a user guideline
4. Efficiency in questionnaire design
5. PRE-TEST!
6. Make sure you have a back-up
7. Safety first – use common sense

Thank you very much!