

63 Million Bednets to be Distributed with Rapid SMS

In some African villages, bed nets are used as wedding veils—and water strainers and window screens. It's a big worry for aid workers: in Nigeria every year, 30% of deaths of children under 5 are attributable to Malaria; across Africa, a million people die from it annually. "The road map to get rid of this disease involves many things," [Bill Gates told TED2009](#) earlier this month, "...including the work of social scientists, so we know how to get not just 70 percent of the people to use bed nets, but 90 percent."

Enter [social media](#), instead. Christopher Fabian and his colleagues at [UNICEF's two-year-old Innovations unit](#) [along with tech-for-change developer [Dimagi](#)] have created something called [Rapid Android](#)—a new software application for [Google's Android phone](#) that turns it into a high-speed data collector and analyzer to help relief workers bust through paper-based bureaucracies to distribute health and food aid more quickly. Using Rapid Android, Fabian and crew also can train villagers, themselves, to use inexpensive cell phones to text in their community's health, food supply, and bed net usage statistics to authorities. How rapid is this new mobile supply chain system? Think minutes versus months: aid workers can collect and process data anywhere there's a wireless connection. With faster knowledge of what's working [and what isn't], aid workers can intervene faster and more effectively.

Two weeks ago, the team launched Rapid Android to help the World Bank, USAID, and other partners start monitoring the deployment of [tens of millions of bed nets in Nigeria](#). It's also launching [a five-month pilot project in Malawi that will use simple cellphones and text-messaging](#) to more rapidly and accurately track children's health and malnourishment data—before it's too late to intervene. "Right now," Fabian says, "it takes months to get simple information from many of these villages to a centralized place." The team created [RapidSMS](#) last fall, following a famine in Ethiopia, to speed food supply data from remote areas.

Cause Global caught up with Fabian, his UNICEF colleague Adam McKaig, and Sean Blaschke of Columbia University, at Saturday's [MobileTech4SocialChange bar camp](#) in Manhattan. What follows is an edited transcript of that conversation:

Why this and why now?

FABIAN: In Africa, we are finding there are systemic failures in public health and supply in terms of getting reliable information quickly from the field. Ninety percent of the developing world has access to a cell phone, so we're experimenting with the use of instant messaging to make a difference. We're finding that we can train people in villages to be data collectors and help us by using cell phones to text information to central authorities; we and governments can then respond faster to specific needs. In some places, it takes months just to get a piece of paper from the field. Mobile phones and SMS technology can help surmount that hurdle.

Your team just created [Rapid Android](#). What's this?

FABIAN: We're very excited about the Google Android phone. Android is an open source operating system for a mobile phone. Our developers wrote Rapid SMS, an open source version of the instant messaging software, for the Android phone, specifically. This means that at UNICEF, there's no need any longer to send a server or any complicated (computer) hardware into a country, and there's no need to send in a person just to set it up. Now, you can simply bring a \$200 phone into a country, plug it into power, and start immediately using it to collect data—on that phone, itself. This obviates a lot of overhead for set-up, and it also allows people who wouldn't otherwise be data collectors to gather information about their communities from any \$10 cell phone. In [Nigeria](#), there are [774 local government areas](#). Each one of them could use hardware like an Android phone to collect bed net data through SMS and have interventions very quickly rather than having to go to central source and wait 6-7 months for a report to come out. This means you can help people faster during emergencies and disasters.

What's the cost advantage, if any?

FABIAN: We found in Ethiopia, for example, just after a famine had struck about four months ago, that to collect 3,000 data forms over two weeks via RapidSMS cost less

than 40 U.S. dollars. That's incredibly cheap. This is a technology that saves on fuel, there's no people time and no travel. In Ethiopia, we've trained local people to report what's happening using the technology, and it's very cool how they've been able to take control over their own reporting in this way versus having foreigners come in and do it for them. It's very empowering.

In Nigeria, how will Rapid Android work in bed net distribution?

FABIAN: The challenge, again, like in Ethiopia and Malawi, is how we can get information from a wide swath of the population very, very quickly back from the field. We're working with the [World Bank](#), [USAID](#) and a group of other partners in Nigeria to deploy the largest bed net distribution in history —63 million bed nets by 2010, which is something like 36 kilometers of trucks back-to-back. This will start in two regions in Nigeria, north of Abuja. That's where the first set of bed nets will be distributed. There will be 6 million nets given to these regions by the end of this summer, and then another 57 million will be distributed throughout Nigeria by 2010. We're sending six developers to Nigeria to work with local programmers, developers and universities to develop reporting capacity so we can start helping authorities make sure these nets are used effectively.

We're looking at reporting on the mobilization and distribution outputs of nets in Nigeria, and how these systems can help. Later in the process, we've discussed sending out questions like: Are people using their nets correctly? Have they been notified of when the distribution will occur in their village? Do they know what to do if they're not getting their nets? We're working with the federal health ministry in Nigeria—and also with mobile phone providers there—to get SMS into the hands of the local population so people in the villages can text in the information we need. This way, we also can provide access to information that can help in malaria prevention.

Do villagers need incentives to text in data?

McKAIG: We've been looking at the possibility of using a number of incentives, including offering people two free SMS calls for each call they make to us. We think this might help; we're still testing a number of options.

In Malawi, you're using cellphones and SMS to help stem malnutrition. How is this working?

BLASCHKE: Health authorities in Malawi are very excited by the potential of using simple, \$20 mobile phones to revamp, revitalize and basically improve a system that has been floundering. It had been taking, at best, three months to get data from the field through the regional governments to the central government. We at Columbia asked UNICEF Innovations to work with us to help. If you're trying to identify early trends in malnutrition, a best-case scenario of three months doesn't cut it. Three months can be the difference between life and death.

McKAIG: In Malawi, one of the biggest things we're finding is not a problem with communicating nutrition measurements, but that those measurements are very inaccurate to begin with. People have been touching the hair of children to “feel” if they are malnourished rather than using government formulas for measuring height and weight to determine it. And in some places, we've found people measuring children's height by having them stand up against a wall with a board balanced on their heads. These children are being told to stand as still as they can so as not to drop the board while people read measurements from the edges of it.

Measurements can vary for each child by as much as 5-10 centimeters, just due to changes in the angle of the boards from any one month to the next. So we have programmed our RapidSMS system there to help detect wild fluctuations in children's height. Our system also lets health authorities send back questions if they see data that seems suspect. We think this new feedback mechanism is very important. We're also now asking workers to simply text in the height and the weight of each child; our system will do the rest to determine the math behind what those numbers mean. This will improve the quality of the data from the field and make it easier for local health care workers to perform their jobs better.

Ref: <http://mobileactive.org/net-speed-unicef-distributes-70-million-bednets-nigeria-sms>