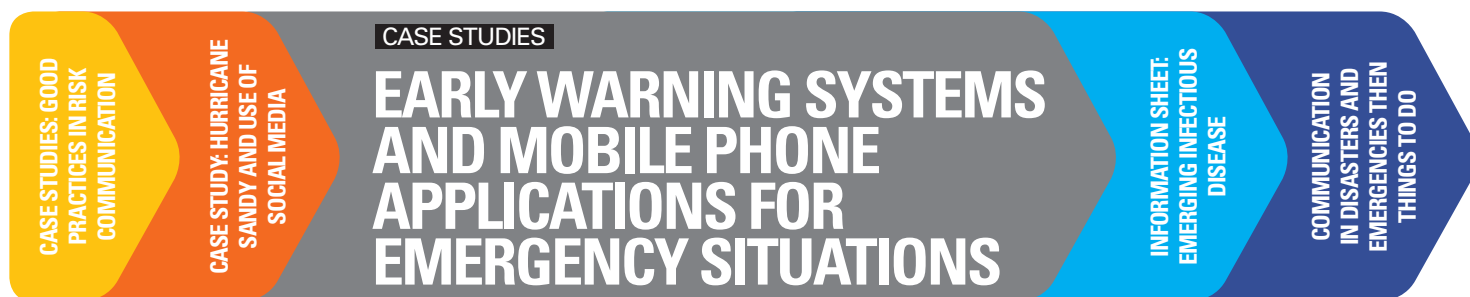


# C4D IN EMERGENCY RESPONSE



## SASMEX (SISTEMA DE ALERTA SÍSMICA MEXICANO)

### What is it?

SASMEX is an early warning system developed by the government of Mexico. SASMEX stands for Sistema de Alerta Sísmica Mexicano or SASMEX. A series of sensors installed along Mexico's fault-riddled West Coast enables its early warning system – SASMEX, to deliver an alert within seconds of an earthquake. Mexico's government pushed for the development of this early warning system after a devastating 1985 earthquake—an 8.0—that may have killed up to 40,000 people. SASMEX has given residents seconds of warning before several large earthquakes.

### How does it work?

Residents can download the SASMEX mobile phone application to receive alerts of an earthquake. In addition to the mobile phone application, the alert is broadcast on television and radio, and over speakers installed in public areas, schools, and buildings.

### Is it effective?

By 1991 the country had the public-announcement system in place, and in 2013 it launched the smartphone app, which now has millions of users. Mexico was rocked by an 8.1 earthquake in early September 2017 and 32 were reported dead by the next day. SASMEX gave Mexicans over one minute's warning about the recent Earthquake that hit Mexico in September 2017.

It is said that the mortality impact of the disaster may have been substantially lessened thanks to SASMEX. The quake hit at 11:49 p.m. local time and was epicentered off the Pacific Coast near the Guatemalan border. However, Mexico City, located about 320 miles away from the epicenter, had more than 86 seconds to

prepare for the impending shaking thanks to SASMEX. In addition to an app on residents phones, the alert broadcast on television and radio, and over speakers installed in public areas, schools, and buildings. Even this amount of time (a minute) can help people leave their buildings and reduce deaths and injuries.

### What are the challenges?

This public warning system does not cover all parts of Mexico. The state of Chiapas for instance isn't part of the alert system. So while Mexico City received a warning, the residents of Chiapas, where 16 people died in the quake, had no warning at all. Critics also argue that the system can be modernized and offer more information rather than a single alert. If dissemination and training campaigns for the population exposed to natural hazards continue to be insufficiently funded in Mexico, any early warning system will be exposed to failure to comply with its main objective for which it was designed.

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## RAPIDFTR

### What is it?

RapidFTR stands for rapid family tracing and reunification. RapidFTR is an open-source mobile phone application designed to reunite children with their families in rapidly developing disaster situations. This application helps humanitarian action workers to quickly collect vital information from children who have been separated from caregivers in disasters, and to share it securely with people who can get them help and find their families. Because this application is open source, it can be used and adapted by different teams on a range of different platforms.

### How does it work?

This open source mobile application is used to record key information about the child's identity, including a photo and information about their separation. The data is then shared on a central database for family members to look for a missing child. Before RapidFTR, humanitarian action workers had to use paper and fill out lots of forms which took a lot of time. Humanitarian workers will need android mobile phones, internet routers, and laptops to use this application.

### Is it effective?

RapidFTR was successfully tested in a Congolese transit refugee camp in Uganda and in the Philippines after typhoon Haiyan. The Philippines app team needed 200kg of equipment to support their effort, which includes 20 androids, four routers and 10 laptops.

### What are the challenges?

Reliable power supply can be one of the biggest challenges in disaster areas. Hence, emergency response teams will have to carry solar packs and power clips, which connect car batteries to USB ports wherever they go. In future, Unicef wants RapidFTR to become a standard tool in emergency supply kits.

## REFERENCES

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- Image - <http://unicefstories.org/tools/rapidftr/>

## I'M OK! WEB AND MOBILE APPLICATION

### What is it?

"I am OK!" is a web and mobile phone application that allows you, by one single click on your mobile phone, to tell your friends and relatives that you are OK. The application will send a message with your location to Facebook and Twitter as well as by SMS to the persons you have previously selected. With this application, you can, in a few seconds, via internet and via SMS, reassure all your friends by letting them know that you are well.

### How does it work?

Once you sign up for I'm OK! You will add your emergency contacts and receive a verification text message from a phone number you will want to save. In an emergency situation, you will send a text message to that number and your contacts will be notified almost immediately. The message can be anything you want, but sending #imok or #needhelp will register the correct status with the I'm OK! service and be more useful. Additionally, you can use the #loc hash tag to send latitude and longitude coordinates along with your message in case you need someone to come find you. I'm OK! works from any phone via SMS, but you can also download an app for Android phones.

### What are the challenges?

Lack of power supply for mobile phones and internet connection for web-based application can act as challenges.

## REFERENCES

<https://lifehacker.com/5814762/im-ok-helps-you-quickly-notify-many-people-in-case-of-emergency>

## FACEBOOK I'M OK

### What is it?

Facebook has launched Safety Check, a new feature that makes it easy for people to confirm that they're okay. Facebook switches on this crisis response service following a disaster or emergency event.

### How does it work?

When something catastrophic happens, Facebook will determine a user's location and send them a push notification if it thinks that they were in an affected area, asking if they are safe and well. Facebook determines a user's location based on where people have checked in, their last location shared through the "Find Friends" feature and where they're accessing the internet from. Once they get that notification, users can respond that they're okay, or that they're not in the affected area. Once you tick an option which says "I'm safe", Facebook will place a post on your News Feed to alert friends or family. You can also select an option which allows you to tell people you weren't in the area affected by the disaster. People who are with their friends and family can also mark them as okay. Users with friends Facebook identifies as being in the affected area will get notifications when they check in as okay, and can also view a dashboard with the status of all their affected friends.

### What are the challenges?

Lack of power supply for mobile phones and internet connection can act as challenges.

## REFERENCES

Facebook Safety Check.  
<https://www.facebook.com/about/crisisresponse/>

## OTHER APPLICATIONS THAT CAN HELP DURING A DISASTER

### Kenya Red Cross Society's iVolunteer initiative

It is well established that quick response time is critical; that earlier a disaster is reported the faster a response can occur.

iVolunteer is a tool to engage digital volunteers on social media platforms such as Twitter, Facebook, LinkedIn and Bloggers to help with rescue and recovery efforts in an emergency situation digitally (2012). Digital platform allows individuals in any location in Kenya to interact with others during an emergency in real time. Volunteers reported the 2013 Westgate and the 2015 Garissa University attacks

### SIGNAL

In preparation for Hurricane Irene in the U.S, National Grid — a Northeast utility company — along with their agency, Kelliher Samets Volk, knew that communicating with their customers by phone or Internet might be a challenge. They decided to focus on SMS for information delivery for power outage updates and other service notices. Reaching out through Facebook, Twitter and email using the Signal application, the company prompted their customers to opt in to receive SMS updates. Nearly 100,000 National Grid customers chose to receive those updates over the next four days, and the company integrated SMS messaging into its outreach efforts as it worked to return power to millions of customers in the wake of the hurricane.

### LIFE360

Life360 lets a family set up a private network, then with a click of a button, they can let each other know where they are and if they're safe. Any Android or iOS user can download the application for free. You are then prompted to create a private network with your family, and after setup, you simply launch the app and tap the "Check In" button. The app notifies your contacts of your location and safety status. The "Check In" button sends a clear message that you're okay. You can also enable background tracking so everyone in your private network can continuously share their locations with one another. The app also has a panic alert feature you can activate to immediately contact family members via text, email and a voice call to give your location at the moment you need help. For family members without a phone, there is an additional GPS device that can be provided for a fee. This application was used by thousands of U.S residents during hurricane Irene. Life360 has more than 4.5 million registered families, and according to Hulls, that number is growing at over 100,000 new families each week.

## PLERTS (FORMERLY BUDDYGUARD)

Plerts (a mashup of "Personal Alerts") is a free iOS app created by security programmers Tony Alagna and Colin Anawaty to help in any emergency situation. As soon as the Plerts app is launched, it captures images and audio every 8-10 seconds, transmitting the data and GPS to the Plerts secure servers. In the case of an accident or an emergency situation such as a natural disaster, you can hit an SOS button and all the data gathered is sent to your emergency contact list including a feature-rich map of your location. The app also sends your contacts email and SMS messages with a feature-rich map of your GPS coordinates. Then the app places an automated conference call to them so everyone hears a recorded message that you have placed a distress call and can all be on the same page to assist you. Even if the cell network crashes, when it comes back live, your location and any recordings will be sent out to your emergency contact list, including your GPS location.

Plerts was launched (as "BuddyGuard") just before the South by Southwest Interactive 2011 conference, where the app was set to debut. The day after launch, the earthquake hit Japan, followed by the tsunami. Through the company's contacts, a number of journalists downloaded the app and used it to transmit data while in Japan and later in the Middle East, particularly at times where they thought they might be in danger. In areas where there was no cell signal, the application was used over satellite phone. Used solely as a precautionary measure during that time, members of the media were able to transmit information that could have been critical if they required help in an emergency situation. Plerts has also been tested with 911 emergency services in Texas, proving the app could enhance critical data provided to law enforcement officers prior to arriving at the scene of a crime.

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- <https://www.life360.com>
- <https://plerts.com>

## DIGITAL MAPPING TECHNOLOGY TO REDUCE DISASTER RISKS – UNICEF

### What is it?

Located just above sea level, Rio de Janeiro is vulnerable to floods and landslides, natural disasters that are expected to increase with climate change. The city's favelas are largely situated along mountainsides, and are already prone to both disasters and socio-environmental risks, such as poor infrastructure. In recent years, heavy rains have caused hundreds of casualties and destroyed houses in favelas like Morro dos Prazeres. In 2011 UNICEF staff in New York and Rio de Janeiro joined with a team of digital innovators, government officials, community leaders and other partners on a mission: to train young people to create maps which depicted the social and environmental risks in their surroundings using UNICEF-GIS. This cutting-edge mapping platform enables real-time data collection through web and mobile applications.

### How does it work?

In 2011 the first training of young digital mappers took place in Prazeres with UNICEF, the Public Laboratory for Open Technology and Science and the MIT Mobile Experience Lab. Adolescents use mobile phones loaded with UNICEF-GIS to photograph problems; the photos are automatically tagged with global positioning system (GPS) coordinates, enabling researchers and officials to pinpoint the problem areas. The adolescents then use cameras attached to kites to gather aerial images, helping to identify the presence or absence of drainage systems, the availability of sanitation facilities, impediments to evacuation, and other issues. This process of training youth to map and participate in the improvement of their neighborhoods is Voices of Youth Maps, a UNICEF initiative which promotes the use of digital mapping to empower young people.

### REFERENCES

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