

SOLUTION USE CASE

NATIONAL DISASTER AND EMERGENCY SOLUTION



CODAN
COMMUNICATIONS

CODANCOMMS.COM

SUMMARY

Climate, geological, industrial (including nuclear), accidental and biological disasters can occur, more often than not, in a short time frame, bringing strain on the remaining communications infrastructure. A rapid and effective **emergency and disaster communications** solution is paramount to ensure response and relief efforts are coordinated efficiently to; aid the preservation of life, contain the effected/contaminated area, support response efforts.

DEFINITION

Disaster can be defined as a serious disruption of the functioning of a community or a society. Usually involving widespread human, material, economic or environmental loss whose impact exceeds the ability of the contaminated community or society to cope using its own resources. A disaster can be of natural occurrences, e.g. Typhoon Yolanda, which hit the Philippines in 2013, or human occurrences, e.g. Chernobyl Nuclear accident in northern Ukraine in 1986.

THE CHALLENGE

When disaster strikes, be it human or natural, a swift and adaptable response is required to support the contaminated area to ensure a reduction in the loss of life, containment and confinement of the affected area and coordination of relief efforts. Communications is a key component in any response situation. It facilitates the coordination of all the required efforts, and often allows the interoperability of various agencies, governmental and non-governmental.

Dependant on the nature of the disaster or emergency, this can dictate the communication requirements. More often than not, if a significant natural disaster has taken place, communications infrastructure will have been significantly damaged or even destroyed, hence the requirement for a system which is easy and quick to install independently, while fully satisfying the operational need.

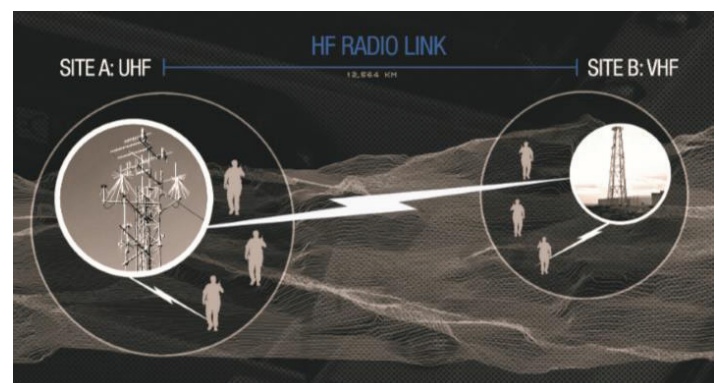
CODAN COMMUNICATIONS SYSTEM SOLUTION

Codan Communications can provide a tailored complete system solution, which allows flexibility to allow integration of other vital communications technology to support disaster and emergency responses.

Fundamentally, a robust and practical communications “back bone” network is required. A network that allows

for the passage of vital information, including casualty reporting, situational reports, meteorological data and a network from first responders at the front line all the way up the communications chain to the District, Regional and even National command posts. All this information is vital to ensure an effective response to the incidents.

Codan Communications is a leading designer and manufacturer of premium communications equipment. The Codan MRAY™ is a unique, innovative, self-contained solution that combines these two powerful communications platforms into one lightweight, ruggedized and compact deployment package. The MRAY™ provides both on-site radio coverage, via the self-contained analogue or P25 repeater, and long range linking of the local communication via the included Envoy Software Defined Radio (SDR) High Frequency (HF) transceiver. This flexible and robust design allows a number of options such as AC or DC power sources, quick deployment solar power, and a versatile antenna system.



If we look at the image above, site B has the recently deployed Fast Disaster Response Team supporting relief efforts to the local community immediately after a devastating earthquake has hit. All the communication towers in and around the locality have been destroyed. A thousand kilometres away the Regional Emergency and Disaster Management Cell Staff are deployed around the city. Site A portrays rescue staff on their LMR radios, discussing the situation with other agencies.

Usually the distance between the two locations is far too great for typical LMR technology to overcome, and therefore, personnel at each location are unable to communicate with each other. Both the Regional Management Cell and the Fast Disaster Response Team, have installed the Codan MRAY™ systems, allowing the LMR repeaters at each site to be easily cross-patched, utilising the Codan Crosspatch. They are linked together via the Envoy SDR transceiver, thus, overcoming the physical propagation restrictions. Allowing relief coordination efforts to be efficiently managed to support the affected area.

POSSIBLE USE CASE SCENARIO

On the evening of the 7th November 2013, one of the most powerful tropical cyclones ever recorded, hit the coastal town of Tacloban, in the Leyte province of the Philippines. It completely decimated the town, and the surrounding areas. For several days after the initial landfall, the damage remained unclear due to the lack of communication in and out of the area. Flooding extended roughly 1km inland and 90% of the city was destroyed. The devastation was comparable to the 2004 Indian Ocean tsunami. The region was completely cut off without power, water and communications including Global System for Mobile communications (GSM).



Thousands of tons of aid poured into the capital, Manila, and the requirement for rapidly deployable communications was paramount, to assist the logistics of moving aid and relief workers in, and the sick, injured and increasing number of dead, out.



Within 48 hours, in the capital, a National Emergency Centre for the aid was set up at the airport, with various Non-Government Organisations (NGO) processing the food, water, medical supplies and clothing to be dispatched. However, coordination was needed between all agencies, including government, emergency services and the military, both locally and remotely.

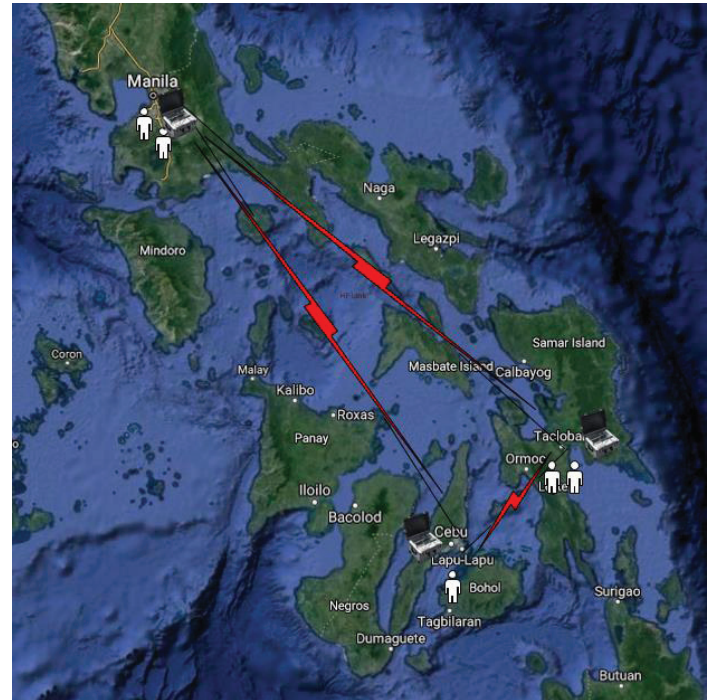
In this situation, the Codan Communications MRAY™ solution would have been the perfect response to ensure coordinated relief operations between all agencies involved.

A HF link could have been established between the headquarters in Manila, the forward operating base at Cebu and at Tacloban. The HF network would then tie into the LMR network at all three locations, ensuring that agencies and support staff were able to coordinate relief efforts in an effective manner. This could have been achieved without large scale, costly and most importantly time-consuming infrastructure requirements.

The Codan MRAY provides a rapidly deployable and autonomous self-sustaining system to support vital relief efforts.

Codan Communications MRAY™

- Up to 1000 channels Envoy & 32 Channels for LMR
- 1.6-30MHz for Envoy & LMR 700/800/900 MHz.
- 125W PEP Envoy & LMR 3 to 30W
- Lightweight 25kg
- 100 to 240V AC @ 50/60Hz.
- Battery Life up to 66 hours (100Ah SLA battery)



ABOUT CODAN COMMUNICATIONS

Codan Communications is a leading international designer and manufacturer of premium communications solutions. We deliver our capability worldwide for the military, defence, humanitarian, peacekeeping, commercial, security and public safety markets.

Our mission is to provide communications solutions that enable our customers to **be heard** – to ultimately save lives, create security and support peacekeeping worldwide. With over 60 years in the business, Codan Communications has garnered a reputation for quality, reliability and customer satisfaction, producing innovative and industry-leading technology solutions.

We know that every deployment of a communications solution is different, having deployed our solutions in more than 150 countries. And when lives are on the line, it's critical that each deployment is right and that every stakeholder is heard. That's why it's important to truly understand your situation, your infrastructure, your environment and your stakeholders.

At Codan Communications, that's what we're best at. Not fitting your situation into our products, but really understanding what's at stake. So whenever you work with Codan, you know that right from the start you'll **be heard**.

CONTACT US

codancomms.com
sales@codancomms.com

Australia: +61 8 8305 0528
Canada: +1 250 382 8268

US: +1 571 919 6432
UAE: +971 44 53 72 01