

We are a leading supplier of radio communications systems for mission-critical tasks. Governmental organizations deploy our systems for secure voice and data transmission in stationary and mobile applications worldwide. When the entire infrastructure brakes down due to some natural disaster, we are often called to provide for an emergency radio communications solution on site.

1) What is the impact of mobile HF Systems in emergency situations?

HF communication, which has long time been considered as an old fashioned is back on the stage. Today HF communication is not limited to voice communication only but also provides fax transmission, file transfer, chat and even e-mail transmission. Reliable communication lines can be established via HF over distances of hundreds of kilometres without the need for infrastructure such as telephone lines or base stations.

Mobile HF systems form Rohde & Schwarz are modular and made for easy transportation, fast set up and simple operation. Reliable communication can be set up in short time and voice calls, fax and e-mails can be sent, even if all other communication infrastructure still down.

2) What is the impact of mobile Trunked Radio Systems in emergency situations?

Trunked Radio based on the TETRA standard has becoming widely used now all over the world and is supported by more than 70 independent suppliers. Government organisations such as Police, Fire brigades, search and Rescue and Disaster control are using it.

In disaster scenarios where existing communication is destroyed or just not existing, mobile base stations can be set up within 30 min or less. Coverage area depends on antenna location but can be typically 5-15 kms. A huge number of personal from the various government and non government supporting organisations can be equipped with small, easy to carry and operate hand terminals.

Due to its small and modular design the TETRA based T-Cube solution from Rohde & Schwarz can be easily transported by car, helicopter and aircraft. The base station modules are so small and light weight that even 2 man can carry and install them.

3) What is the impact of mobile FM broad cast stations in emergency situations?

In emergency situations of catastrophic dimensions, it is a critical issue to keep the mass of the population in the effected area informed. Whereas public telephone lines are likely to be destroyed, RM radios operated on batteries still will be in operation.

Mobile, easy transportable FM stations installed in self contained shelters and running from mobile generators can transfer information from the disaster control center directly to mass of the affected population that is cut of from other information sources. This information might include rules of governance (e.g. how to disinfect water with primitive means), locations and times, where food and medical aid are available, meteorological warnings, etc. Also the aspect of keeping the spirit of the population high must not be under estimated. A local FM station that is back on air shortly after the disaster is at least a sign that not everything is lost.

4) What is the impact of mobile Air Traffic Control Towers in emergency situations?

When Airports infrastructure, especially the facilities for air traffic ground control is destroyed, aircrafts can not land in the numbers that are required. Urgently needed goods such as medical aid, communication equipment, rescue tools, food supplies, tents and others will not be available fast enough.

The Mobile ATC Tower MX-400 from Rohde & Schwarz can be transported by air, land and sea. As long as an airstrip is available that is sufficiently fair to allow the landing of aircrafts, the mobile tower can take care of all required Ground to Air control operations and safely guide aircrafts.

This will ensure that enough air transport capacity is available to bring in the urgently needed goods.

5) What is the impact of Cryptographic Equipment in emergency situations?

In emergency situations not all information should be available to everybody. Examples::

Information on availability, location and security measures for urgently needed goods would be highly interesting to looters. Also critical information sometimes needs the proper way to distribute it.

Encryption especially on the main communication lines between the local disaster control centres and the headquarters is essential to stay in control of the situation and prevent critical information from leaking to the public, the press or criminals.

6) What is the impact of Mobile Radio Monitoring in emergency situations?

There are various aspects in which radio monitoring can be helpful. Small portable, battery operated receivers like the PR-100 of Rohde & Schwarz can not only be used to monitor all international distress frequencies at the same time. It can scan the complete radio spectrum from HF up to 7.6 GHz and identify radio emission, from mobile and cordless phones, pagers, emergency beacons and other emitters. Together with a directional antenna homing in to those emitters is possible. This can be useful to locate and save buried persons after earthquakes. Another application is the use in naval environment for the homing in to persons in distress situation.