

Natural Disaster Aid Compodium

Muhammad Faizal Che Leh

Natural disaster is unpredictable and government authorities must be prepared to face it when it happened. Disasters such as earthquake, typhoon and landslide are natural catastrophe to mankind. Even man-made marvels such as buildings, tunnels, mega constructions could collapse unintentionally. During such disasters, the main target for rescuers is to locate and save as many lives the soonest possible. Rescuers must ensure that they do it properly and with the use of right equipments. The idea to create this composite survival pod device was derived from the Kashmir's earthquake which occurred in October 2005 with a magnitude of 7.6. Richter scale. This natural disaster affected an area covering 80 km from the epicentre and caused over 80,000 deaths with 70,000 more injured.

Mohd Faiz's design could support the search and rescue team to identify, locate and perform rescue operation. Inspired by the movement and form of the centipede and the worm, this device is meant to slip deep inside a building's wreckage and foundation which would have been destroyed or collapsed in an earthquake. Its functions are controlled by remote-control via a split external monitor. The device can manoeuvre deep inside the rubbles through pockets of air safely without causing more damage to the already weakened structures. The worm-like movement would enable the device to be directed to a victim's position.

■ Mohd Faiz Abdul Khair

Co-inventors: Hasri Yunardi Hassan, Nik Aizan Nik Abdullah & Shahrul Azman Shahbudin



Picture Source:
<http://cires.colorado.edu>

The front consists of a drilling part and can drill a hole for allowing the device to slip through. The rotating ball-bearing system allows the device to manoeuvre around a collapsed area. The body is made up of several compartments that could function as water containers or storage for emergency supplies to the victims trapped underneath the wreckage. The natural disaster aid compodium has its own build-in microphone which enables the search and rescue team to communicate with a victim. In summary, the device is designed with a form follows function concept where the centipede and worm design concept become metaphors to move and live within tiny spaces in developing the design and its functionality.