

# Editorial

## Disaster Management

The mankind increasingly relies on the technology in managing the important aspects of life. The safety provided by the modern society could optimistically be taken for granted, especially in the urban centers where the artificial constructions dominate over the planetary environment. Living within the technological paradigm, one may temporarily forget about the forces of nature. Then whenever a disaster happens, like earthquake, tsunami, flood, mudslide, severe storm, tornado, etc., one realizes the seriousness of the matter and the importance of having a reliable disaster management system.

There are four stages of witnessing a disaster from the point of view of an unprepared person: 1) This could never happen to me. 2) I cannot believe this is happening! 3) Why me? 4) I want to forget it as soon as possible.

The level of commitment of oneself towards the others makes the difference. An experienced individual would act according to an alternative scheme involving the four basic phases of disaster management: mitigation, preparedness, response, and recovery. The response phase within 72 hours after the event is the most sensitive one. At that time, one realizes that none of the high-technology devices that make the normal life easier could be of an essential help in a critical situation.

The technology follows the standard business trends and the consumer's desires of having big house, fast car, attractive clothes, the latest digital devices, etc., shift the efforts of the manufacturers in the direction of producing fashion items rather than a life-saving equipment.

During the critical hours before the arrival of rescue teams, the destiny of the affected citizens depends on their personal skills in coping with unpredictable circumstances. This is the time to act, alone or together with others, using the equipment available at sight. For the ones trapped in a confined space, wireless devices are an option only if the signal can penetrate through the surroundings.

The modern technology seems to be indebted to the single man/woman who is being confronted unexpectedly by various disasters which occur at an accelerating rate.

An example of a prospective telecommunication technology which could be used in critical situations is the establishment of ad hoc networks, so that in the absence of an infrastructure network one could possibly connect to neighbors located in a close proximity to each other. Although thousands of research papers have been written on the topic, a little has been done for the practice. One can ask whether common wireless devices can be used in ad hoc mode and in the majority of cases the answer is negative.

Some steps have been made in this direction with the development of passive devices like GPS (global positioning system) and RFID (radio-frequency identification) chips. However, the role of said devices during the response phase is limited. It appears that there is a lack of interactive decentralized wireless equipment to be used by the ordinary people in extreme cases. The said equipment should be available to the masses in the same way as common centralized services already operate, such as E-mail, Internet, multimedia, etc.

The stress of knowing to be unprepared is subconsciously accumulated after watching television or reading newspapers about natural events happening frequently all around the globe. There are certain psychological aspects of the interaction between the individuals and the media as reports about global cataclysms regularly sink into the mind of the ordinary person, thus indirectly affecting his/her behaviour and perception about the physical reality. The confidence of knowing that some personal equipment is specifically designed to help in critical moments could make the difference for many concerned men and women.

The role of the academic institutions in collaboration with affiliated technology centres is to demonstrate that feasible solutions for disaster management problems can be found and implemented for the benefit of humanity.

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