STRATEGIC USE OF ICT IN DISASTER/CRISIS MANAGEMENT

I would like to first state that a disaster becomes a crisis if it is not harnessed. Though I am speaking to you on the strategic use of ICTs in Crisis Management. I would prefer to start from the use of ICT in disasters. let me for the purpose of the discussion borrow the definition of Crisis Management from the lucid form Ambassador Daniel Stanffacher and Sanjana Hattotwwa of ICT4Peace have described it. *"Crisis Management involves preparing, warning, supporting and rebuilding societies when natural or man made disasters occur. It is a civilian and or military intervention in a crisis that may be a violent or non violent with the intentions of preventing a further escalation of the crisis and facilitating its resolution. It is a process by which all individuals, groups and communities manage crisis in an effort to avoid or minimize their impact."* This being said it is obvious that there should be an effective flow of information in the process of effective disaster management.

Effective Crisis Management relies on integration of emergency plans at all levels of government and non government. It is evident that by no means, natural or man made disasters can be fully prevented. Only the loss caused by these events can be prevented or minimized.

ICT can be used to minimize this impact in many ways. In the disaster mitigation and preparedness process ICT is widely used to create early warning systems. An early warning system may use more than one ICT media in parallel and these can be radio, TV, telephone, SMS, cell broadcasting or the internet. In the immediate aftermath of a crisis, special software packages built for the purpose can be used for activities such as registering missing persons, administrating on line requests and keeping track of relief organization or camps of displaced persons. In addition GIS and remote sensing software / hardware are used effectively in all phases of disaster management. A spatial data infrastructure – a prototype web based system that facilitates spatial data collection, access, dissemination and usage for proper disaster management is a very handy tool.

Creation of a regional info system which is significant for assessing the damage and needs of all kinds is the action that is most dependent on the use of ICT. The data banks also save time since all of the information is gathered together and could be needed in coordination for the immediate action. Further more, communication is the key element in all of the phases in the process.

ICT is significant for successful implementation of post disaster management. The use of information technologies is increasing yet there are some problems. The lack of data and the weaknesses of those that exist, failure of the managers to consider the needs of the users, the lack of organization, weakness of available software, deficient quality and the content of the information especially on the chaotic nature of world wide web.

Forty years in the Army has taken me through many crisis management operations in India. Like the Tsunami in the Andaman and Nicobar Islands in Dec 2004, the

earthquake in Jammu & Kashmir, the floods in Assam and train blasts in Mumbai, earthquakes in Latur & Bhuj (Gujarat), they have all been learning experiences. As we had no worthwhile mechanism in place prior to 2005 the Army got sucked into it all. It was in 2005 that the Central Disaster Management Authority was raised with the ex Army Chief heading it. Over last couple of months going through the many documents posted by many of you on the internet one has learnt of the many problems in the disaster management process which if discussed could help us evolve ways of getting over them, some of them are:

a) A Lack of understanding at the political level to produce a policy for sharing information and implementation of ICT standards.

b) A lack of historic data to evaluate short falls in the last endeavors in order to avoid any repetition i.e. using historic data to learn lessons and better future efforts.

c) Lack of trust amongst the uniformed and non uniformed aid organizations.

d) Turf battles between aid organizations.

e) Standardization of one frequency to be used exclusively for disaster/crisis management, this must be coupled with the availability of trans/receivers, able to transmit from and receive this frequency with emergency response units cross agency.

f) ICT for disaster management and recovery should be disaster agnostic.

g) The most important factor in the success of ICT implementation within organizations is investment – not just financial and human resources, but also in terms of management support based on recognition of the strategic importance of it.

There are a number of key factors that will contribute to the successful introduction of ICT into the field. Amongst them are; Mobility, Ruggedness, Flexibility, Simplicity and Sustainability.

ICT only designed for crisis management in a standalone mode is unaffordable therefore partnership with business is a precondition for secure, sustainable and up-dated ICT solutions for crisis management. The cost of developing own ICT systems is enormous and this forces organizations to look very hard at what is commercially available right from the start.

ICT solutions for crisis management should be based on open standards and commercially available solutions and not tied to a certain provider / manufacturer.
In conclusion I would like to quote a self coined statement "The currency of power in the Twentieth Century was 'deterrence' the currency of the power in the Twenty First Century will be Knowledge and Information"