Role of technology in emergency communications

Technology

However, EM has over the years struggled with communication networks that are often jammed or destroyed in the event of adverse natural disasters. In the case of Hurricane Katrina, for example, many of the wireless base stations were grounded and telecommunication cables were destroyed (Coombs & Holladay, 2012). Jamming of the networks is occasioned by overloading of call centers such as the boosters installed exceed their capacity to complete incoming or outgoing calls. This is a serious challenge that not only impacts the direct victims of the disasters but also the emergency teams working to rescue lives and properties. Evidently, therefore, the conventional forms of communication, which mostly comprise of cable and wireless networks, are prone to jamming and distraction of pre-requisite infrastructure. The problem has further been aggravated by government reduction of budget allocated to FEMA which could have, otherwise, benefitted their efforts to reinforce telecommunication infrastructure within the agencies involved in emergency management.

2. How has technology benefitted or hindered progress toward a solution?

Despite the above challenges occasioned by over-reliance in conventional communication systems, advancements in information and technology appear to offer a solution to this same communication challenge. Undoubtedly, the advent of social media platforms of communication has tremendously resolved the barriers of jammed networks and the destruction of infrastructure. As it stands at the moment, Facebook and Twitter are the two online social platforms with the highest number of subscribers. In the event of a disaster, the victims can easily update their statuses and, therefore, friends and family members can easily establish the location of each other. Similarly, through the hash-tag feature that permits a trending

topic to be easily accessed by millions across the globe, the various rescue agencies working in collaboration with FEMA can easily establish the location and the needs of the victims. It is also through feedback received on Facebook and Twitter that these agencies can ascertain the gravity of the disaster and plan their response (Sellnow & Seeger, 2013).

Basically, interoperability of different communication systems letting in the internet, cell phone, e-mail, TV, and radio have progressively offered solution during emergency management.

3. How will you implement technology into the solution?

Social media platforms such as Facebook and Twitter, in addition to conventional communication channels including radio, television, mobile phones, and landlines have offered an enormous possibility to enhance disaster management. Through local campaigns, citizens would be encouraged to " like" the pages of local emergency agencies. In the event of an emergency, these pages would be easily accessible for victims to " tweet" or update their statuses. Officials of the agencies would then monitor and harmonize the varied information received as they roll out their rescue mission.

As the old adage states, " Prevention is better than cure," another critical step in the implementation process would be to locate telemetry devices across areas prone, for instance, to atmospheric and oceanic storms. This would monitor the state of the climate of such areas and immediately relay information to disaster management centers for the interpretation process. Secondly, this national forecast should be downscaled to the local level through the immense opportunities offered by social media. Understandably, the social platforms have the hah-tag feature that permits the trending of a

particular topic which could also be localized to a given area. For instance, EM centers, in conjunction with news media channels that command massive following can initiate a trending topic that would certainly trickle down to the endangered residents. These actions serve to mitigate adverse impacts in the event of a disaster.