A Social Media Tsunami: 
The Approaching Wave

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The widespread use of social media in the aftermath of the recent Iran Election is a testament to their ability to be used as a critical tool for important communication needs during a crisis. Used initially by a few individuals, social media’s use provided a way to disseminate the information that otherwise would not have been as rapidly spread. As a result, the situation quickly exploded into a mass outcry at the local level against injustice, resulting in a global protest (Newsweek, 2009). This illustrates the potential for social media to be used for emergency management, but is only a small wave compared to the Tsunami of social media, which will flood every facet of society changing the way information is exchanged and used in the emergency domain.

Many communication needs can be met by collaborative Web 2.0 technologies which can increase community resilience so the communities can rebound more quickly from a disaster. The influence and power of social media like Twitter and YouTube demonstrate that if correct information can be delivered to the right people, pressure from a social network community can extend its influence to other entities such as the news media, resulting in changes that may otherwise not have occurred. Situations such as what occurred during Hurricane Katrina at the Ernest N. Morial Convention Center, where more than 20,000 people were stranded and their whereabouts unknown to the rest of the world, although they were in the heart of New Orleans, might have been different had social media been more at the forefront as it is today (Haygood & Tyson, 2005; Callari, 2009). The pressure from the public through the use of social media would have compelled the government to respond more quickly. The two events described above were only five years apart, demonstrating the rate of speed at which communications technologies are changing.

Society can benefit in many ways if these technologies are used strategically by the stake-
holders in an extreme, urgent, or important circumstance. When groups or individuals have the ability to bring information to the attention of the right people, it empowers their voices, setting into motion a series of events. It’s through videos, text, pictures, audio and other such rich media, that messages are transferred and voices are heard that would otherwise be silenced. With the pervasiveness of the social media, on the receiving end is a global ear!

ONLINE SOCIAL NETWORKS TO SUPPORT COMMUNITY RESILIENCE THROUGH COLLABORATIVE WEB 2.0 TECHNOLOGIES

In June of 2009, a workshop entitled Online Social Networks to Support Community Collaboration was held as part of the Communities and Technologies conference. The idea for this special journal issue was born as a result of the activities and papers of that workshop. During the workshop, a frequency count of Tweets regarding the Iran elections was monitored. We observed an average of 6,000 tweets per hour. Where a Tweet is a short message of 140 characters or less, it is the capacity to move that much information, that quickly, and to that many people, which is the power of social media.

Although these technologies were not created for such uses, groups are appropriating these existing free technologies to fill a set of needs (White, Plotnick, Kushma, Hiltz, & Turoff, 2009). Biz Stone, co-founder of Twitter said, “It’s not about the triumph of technology, it’s about the triumph of humanity, it’s about what people will do with it” (2009). Homeland Security, emergency management agencies, first responders, public officials, and others acknowledge the potential impact such technologies. (The Department of Homeland Security Office for Interoperability and Compatibility, Office of Emergency Communications, FEMA National Preparedness Directorate and the Center for Homeland Defense and Security recently hosted “The Ogma Workshop: Exploring the Policy and Strategy Implications of Web 2.0 on the Practice of Homeland Security”, Monterey, CA, July 2009.) Guidelines with regard to the use and security of these technologies have been recently published by the United States Government, permitting local and state level government entities to use social media (ISIMC, 2009).

During the Communities and Technologies 2009 workshop, discussions generated an understanding of the various ways social media can help satisfy the needs of emergency management. Collectively, a view of the capacity of Web 2.0 technologies to enhance numerous facets of emergency management came to light. In this special issue, we present state-of-the-art work on this trend.

The participants of the Communities and Technologies 2009 workshop and others have prepared articles for this special issue that explore the phenomenon of social media in emergency management. Gideon For-Mukwai is a practitioner who examines ways that social media are transforming Emergency Management. Miriam Belblidia studies community resilience. Guido Lang and Raquel Benbunen-Fich developed a framework for understanding e-participation. As chairs of the workshop, Connie White and Linda Plotnick describe a framework to develop best practices in using social media in the emergency domain. Additional, relevant work is presented by Murali Raman, Terry Ryan, Murray E. Jennex, and Lorne Olfman who examine the use of wikis in emergency response.

In this special journal issue, a practitioner in the field, Gideon For-Mukwai discusses The Transformative Power of Social Media on Emergency Management. For-Mukwai describes the ways that social media are transforming all phases of emergency management. As a result, this can promote collective intelligence amongst the public, inform professionals of information that would be inaccessible without social media, and enable effective activism. The changes described include embracing the public as part of the solution; a perspective which supports the Federal Emergency Management Agencies (FEMAs) vision as described by Craig Fugate. FEMA recognizes that families prepared for disaster will need less outside resources, freeing them up to help those who truly cannot help themselves (Fugate, 2009).

Miriam Belblidia, in her contribution to this issue, Building Community Resilience through Social Networking Sites: Using Online Social
Networks for Emergency Management, argues that social media can be used to support community resilience. Belblidia provides an overview of the role social media can play during mitigation for emergency planning. She proposes that the use of such sites can help to build community resilience and suggests a research agenda to further effective use of social networking sites.

Guido Lang and Raquel Benbenen-Fich identify and discuss A Framework for Citizen e-Participation in Disaster Management. This is a theoretical framework using morphology of e-participation mechanisms based upon the variables of participant selection, information elicitation, response mode, and information aggregation. This framework can inform the choice of ICT tools to use in an emergency. The usefulness of such a morphology is demonstrated through case studies by the examination of recent emergencies.

Connie White and Linda Plotnick offer new strategies advancing the use of social media and its usefulness in their article titled, A Framework to Identify Best Practices: Social Media and Web 2.0 Technologies in the Emergency Domain. From surveying crisis system developers and scientist, a list of useful untapped benefits was aggregated in order to offer further implementation and gain more benefits from existing systems. Dimensions are presented that further define how social media can be accommodating to targeted groups with specific uses given a particular set of emergency situations taking into account numerous factors that influence how social media could be implemented.

Murali Raman, Terry Ryan, Murray E. Jennerx, and Lorne Olfman conducted action research to examine how the design and implementation of a wiki-based knowledge system can improve emergency response. As they describe the action research that resulted in a wiki-based knowledge management system designed for improving emergency response, insights are given as to requirements for systems to support emergency response and why and how wiki technology is a good choice for such a system. The authors conclude that knowledge management systems that are wiki based should also be able to be integrated into an overall social network site to be as effective as possible.

“More than two-thirds (67%) of the global online population now goes online to visit social networks and blogs” (Harris, 2009). Much more research is required in this area where growth is viral. Not only is the use of social media expanding, but within each social media, content is spread far and wide. Social media is being used by some emergency management officials, but much more research is required. Given the domain, security and vulnerability studies need to be conducted to develop requirements that can be met by the developers (Harris, 2009; Krishnamurthy & Wills, 2009; White et al., 2009). Research questions needed to be further explored include:

- How do you get a population to join and interact?
- What information should be distributed when and to whom?
- What all social media is needed and for what?
- Will social media prove beneficial during catastrophic events?
- How will the information be organized and managed?

These and other questions and issues remain to be studied, understood and answered.

Given the newness of social media, groups are trying out uses and seeing what works. The players and their perspectives will need to be taken into account. Eventually, new emergency management positions will be required to be developed for information specialist who crawl the web for information on social media sites, and then filter then disseminate the information to the correct people. This will be one of the biggest challenges as the use of social media matures. The regulation of sites will be able to use methods ranging from fully automated filtering to humans reading through sifting for details using reasoning that, at this present time, only humans have. It’s these instances described in White and Plotnick’s article where the many dimensions influencing the state, where the best social media to be implemented will require rigorous research in order to fully achieve usability as an effective tool.

We hope that you enjoy the articles and take away a deeper understanding of the uses and potential of social media in the emergency domain.
REFERENCES


