Role of *Twitter* to Enhance Citizens' Participation with Decentralized Coordination in Disaster Management

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ABSTRACT

We are entering a new era of the networked world. Technology has enabled us to interact, innovate and share knowledge in whole new ways – creating a dynamic shift in mind-set. People are empowered, business is liberated and society is more connected than ever. Exploiting the benefits of this Networked World, there has been growing interest in the use of social media during disasters as a communications and news dissemination tool. Twitter is an instantly updated social media site that provides a "real-time" information network that connects users to the latest information about what they find "interesting". Twitter based disaster communication increases the exposure of the crisis to citizens with the purpose to enhance their participation in disaster relief and information dissemination.

The most relevant work has been done by Palen, Hughes and colleagues on the 2008 Hurricanes Gustav and the 2007 wild fires in Southern California, USA. The use of Twitter during earthquakes in Japan was analyzed and an algorithm developed to monitor tweets in order to detect such an event. These studies specifically focus on the use of Twitter in a natural disaster or crisis situation. Twimight is a Twitter Android application relying on *opportunistic communication* to spread tweets and sensor data in an epidemic fashion using Bluetooth. Twimight is becoming one of the highly popular Twitter based application for Crisis Management.

In this paper we discuss the utilitarian features of Twitter that has catapulted it to an exponentially evolving aid for disaster management in today's world that is facing one disaster after another. We compare the usage of Twitter in emergency situations from different studies. The goal is to clarify the use of Twitter and the particular gap this technology filled. We summarize suggested directions for future research with the long-term goal of placing this work in the larger context of social media use in mitigating crises.