

Author's Accepted Manuscript

Mobile applications in crisis informatics literature:
A systematic review

Marion Lara Tan, Raj Prasanna, Kristin Stock,
Emma Hudson-Doyle, Graham Leonard, David
Johnston



www.elsevier.com/locate/ijdr

PII: S2212-4209(16)30713-0
DOI: <http://dx.doi.org/10.1016/j.ijdr.2017.06.009>
Reference: IJDRR584

To appear in: *International Journal of Disaster Risk Reduction*

Received date: 18 November 2016
Revised date: 5 June 2017
Accepted date: 6 June 2017

Cite this article as: Marion Lara Tan, Raj Prasanna, Kristin Stock, Emma Hudson-Doyle, Graham Leonard and David Johnston, Mobile applications in crisis informatics literature: A systematic review, *International Journal of Disaster Risk Reduction*, <http://dx.doi.org/10.1016/j.ijdr.2017.06.009>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Mobile applications in crisis informatics literature: A systematic review

Marion Lara Tan^{a*}, Raj Prasanna^a, Kristin Stock^b, Emma Hudson-Doyle^a, Graham Leonard^c, David Johnston^d

^aJoint Centre for Disaster Research - Massey University

^bInstitute of Natural and Mathematical Sciences – Massey University

^cJoint Centre for Disaster Research – GNS Science

^dJoint Centre for Disaster Research – GNS Science/Massey University

* **Corresponding Author.** Massey University, Building T20, 94 Tasman Street, 6021, Wellington, New Zealand. **Phone:** +64 4 979 3799. M.L.Tan@massey.ac.nz

Abstract:

How members of society interact during disasters has significantly changed because of technological innovations and new media evolution. The modality changes in crisis communications, such as the popular rise of mobile applications use, may pose risks to the public if not properly studied, with results adopted and utilised. Crisis informatics, as an emerging field of research, studies the socio-technical advancements in disaster management. The purpose of this review is to summarise the involvement of mobile applications (apps) in crisis informatics literature and to scope needs and opportunities for further research on citizen's use of mobile apps during disasters.

This review uses a scoping process to identify and analyse 49 crisis informatics articles that focus on mobile apps in disaster situations. The study investigates the various mobile apps that engage with the crowd during disaster situations. Findings show that apps used in disasters can be general-purpose apps or built-for-disaster-purpose apps. This review further focuses on the built-for-disaster-purpose apps and shows the various interactions these apps foster with the public and the apps' value-added contributions throughout the disaster life cycle.

Communication during disasters between the public and authorities has become more dispersed. To fully augment disaster resilience through technology it is important that future research should engage in user-centred studies to gain more insights from the citizens' on using mobile apps. This study highlights three areas of need for future research: engagement of apps prior disaster response stage, public behaviour and motivation towards the use of apps, and usability of mobile apps.

Keywords: Mobile applications; crisis informatics; disaster communication; disaster management

1 Introduction

Communication is a crucial component in managing disasters, as communication can aggravate or alleviate the impact of disaster situations (Haddow & Haddow, 2014b; Rodriguez, Diaz, Santos, & Aguirre, 2007). In disaster scenarios, numerous people and agencies become linked, creating complex information demands in constrained supply capacities, thus generating large and unique problems (Andersen & Spitzberg, 2009). How members of society interact during disaster situations has significantly changed because of technological advancements and new media evolution (Andersen, 2016). With the ubiquitous presence of social media and mobile devices in our networked world, the influence of Information and Communications Technology (ICT) on social phenomena cannot be ignored (Ngai, Tao, & Moon, 2015).

Crisis informatics, as termed by Hagar (2010, p. 10), is "broadly defined as the interconnectedness of people, organisations, information and technology during crises. Informatics often relates to the development of new uses for information technology and focuses on how people transform technology and how technology transforms people." Two important movements in communications

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات