

Title: Ueberveillance and Social Machines: The Case of Petajakarta.org

Abstract: The ability to collect data using sensor-based technologies is increasing within a public technical means. As governments in rapidly-urbanising developing nations seek to address the environmental, social and economic challenges of the 21st century, there is a progressive requirement to map and articulate civil infrastructure. When a local government needs to proactively react to impending and disruptive phenomena they increasingly look to data and technology to help them manage and respond accordingly. Mobile social media, in a citizens-as-sensors paradigm, offers the potential to collect data with which to advance our capacity to understand and promote resilience of cities to both extreme weather events as a result of climate change and to long-term infrastructure transformation as a process of climate adaptation. Location-based social media, in a big-data context, can drive rapid assessment processes of affected areas, and emerging patterns and trends can be revealing about “next steps” for situational awareness and management. This talk emphasises the positive uses of smart systems, drawing on research of infrastructure analysis using geosocial intelligence, in response to seasonal flooding in the city of Jakarta, Indonesia. Using a series of real-world examples, we argue that data collected from the field can be secured, anonymised and encrypted to support improved planning and civic co-management of megacities. The factors that affect such bi-directional information flows need to be built on sound principles of basic needs, privacy, and trust at the individual, neighbourhood and city scales. The risks associated with such a crowd-sourced personal environment for global application cannot be negated. In some ways the foundations are simultaneously being laid for an uberveillant society, where people may become autonomous data gatherers with skin-embedded technologies communicating with overlaying network nodes towards shared goals of sustainability. How to govern such a complex and interdependent network of auto-shaking nacks and acks becomes a global challenge.

Bio: Dr Katina Michael is a professor in the School of Computing and Information Technology at the University of Wollongong. She presently holds the position of Associate Dean – International in the Faculty of Engineering and Information Sciences. Katina is the *IEEE Technology and Society Magazine* editor-in-chief, and *IEEE Consumer Electronics Magazine* senior editor. Since 2008 she has been a board member of the Australian Privacy Foundation, and until recently was the Vice-Chair. Michael researches on the socio-ethical implications of emerging technologies with an emphasis on an all-hazards approach to national security. She has written and edited six books, guest edited numerous special issue journals on themes related to radio-frequency identification (RFID) tags, supply chain management, location-based services, innovation and surveillance/ uberveillance for *Proceedings of the IEEE*, *Computer* and *IEEE Potentials*. Prior to academia, Katina worked for Nortel Networks as a senior network engineer in Asia, and also in information systems for OTIS and Andersen Consulting. She holds cross-disciplinary qualifications in technology and law.



Links:

<https://scholar.google.com.au/citations?user=0oSenaUAAAAJ&hl=en>

<https://smart.uow.edu.au/index.html>

<https://petajakarta.org/banjir/en/>

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