

LSE Works: LSE Complexity Group

An App That Can Save Lives

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LSE events

Suggested hashtag for Twitter users: #LSEworks





Mobile Apps Technology for Emergency and Civil Protection

Paul Lukowicz

DFKI/University of Kaiserslautern

Germany



**The
Economist**

30.10.2012



Special report: Technology and geography ▼

Life off- and online

The new local

The physical and the digital world are becoming increasingly intertwined



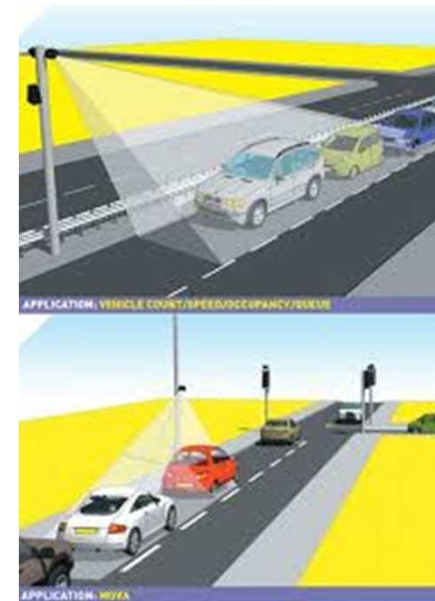
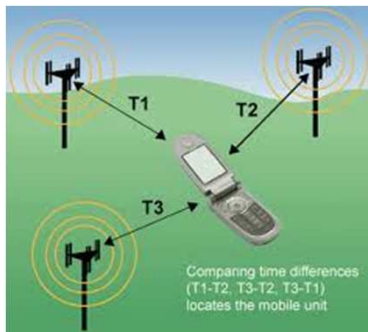
Sources of Information



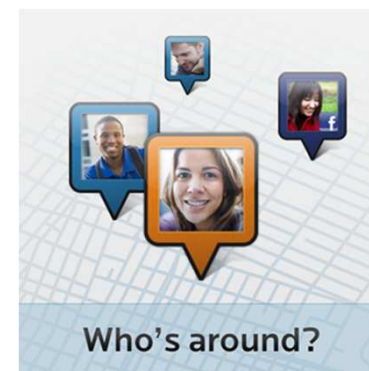
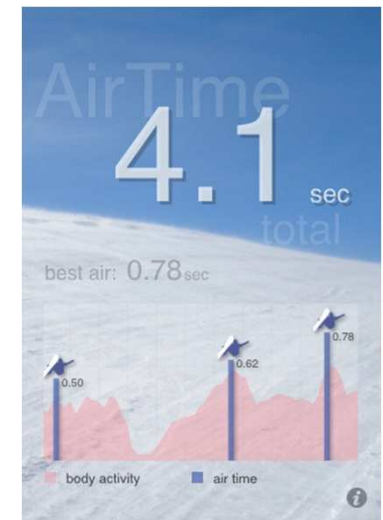
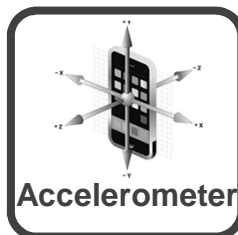
Sources of Information



Google

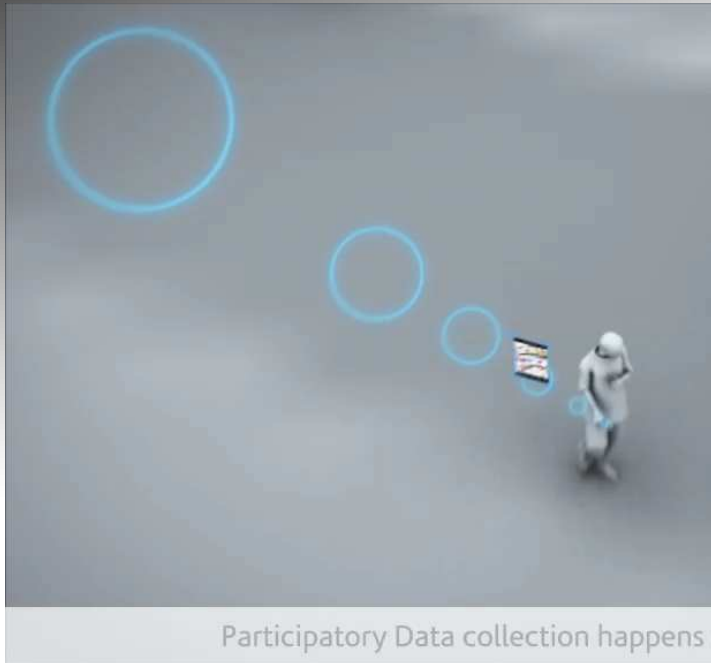


Smartphone-Sensors

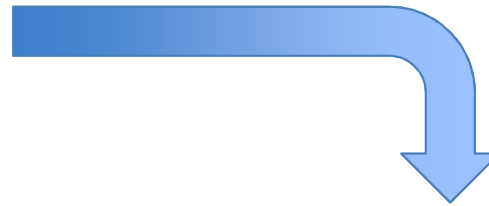




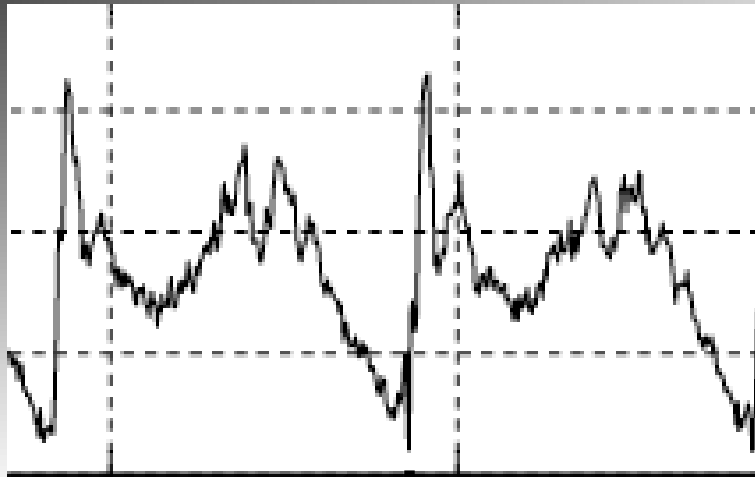
GPS Location



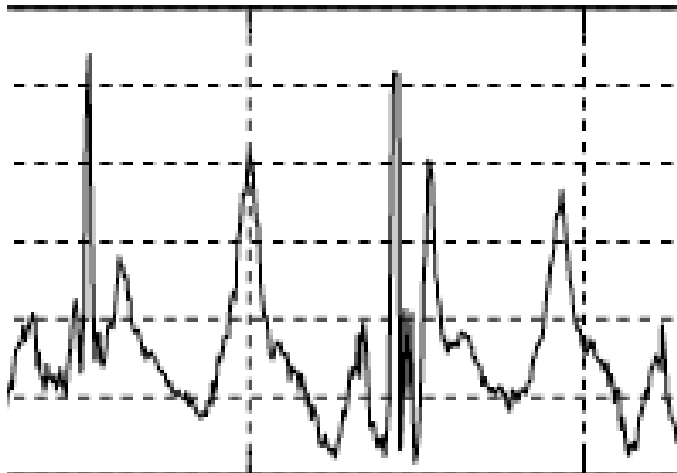
Participatory Data collection happens



Motion State



up stairs



down stairs

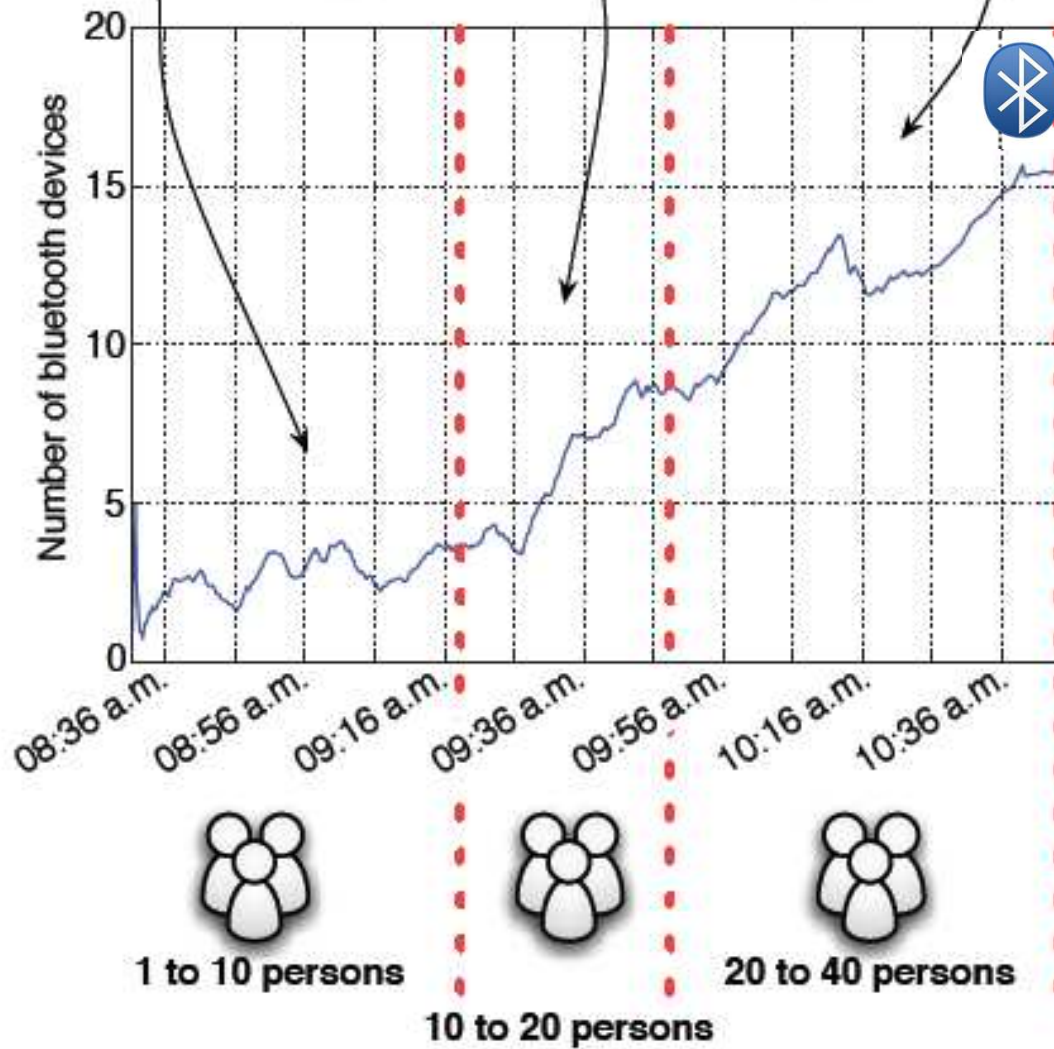


acceleration





Octoberfest 2010



Scene Analysis





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The Digital Shadow



News

Microsoft Patents Bad Neighborhood Detection

1 Comment | [David Chernicoff](#), [BYTE](#) | January 07, 2012 05:06 PM

Category: [Smartphones](#)



Today



- The Internet made any piece of digital, archival **knowledge** instantly, globally available
 - searchable, connected, easy to correlate



Today...



- The Internet made any piece of digital, archival knowledge instantly, globally available
- We are now at the verge of any **real life event** becoming, **instantly globally connected** to the digital domain
 - 20 Million videos per month on Facebook
 - 152 Million blogs active in 2010
 - 2 Billion mobile phone world wide
 - 5 Billion Flickr photos
 - 25 Billion Tweets in 2010

„Digital Shadow“



- The Internet made any piece of digital, **archival knowledge** instantly, globally available
- We are now at the verge of any **real life event** becoming, **instantly globally connected** to the digital domain

- everything has a shadow
- a shadow can be big or small
- a shadow can be accurate or deceptive



Digital Becomes Real



Tech

London riots: Focus on BlackBerry phones, social media

Associated Press

Updated Aug 09, 2011 at 02:01pm IST

 Recommend

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AP Photo/Lefteris Pitarakis



Digital Becomes Real



Tech

London riots: Focus on BlackBerry phones, social media

Assoc
Update

Posting a video of a burning car on a certain Facebook group is a totally different type of coupling then calling individual people and telling them about it !!

Send



AP Photo/Lefteris Pitarakis

Connectivity and Coupling Strength



- System behavior is determined by
 - connectivity patterns
 - coupling strength
 - interactions
- Small changes in any of the above can lead to dramatic changes in overall system properties
- ICT has fundamentally connectivity and coupling in human interactions

The world we want..



Adaptive social media technology fends off potential riots in London

Associated Press

Updated Aug 09, 2011 at 02:01pm IST

 Recommend

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AP Photo/Lefteris Pitarakis





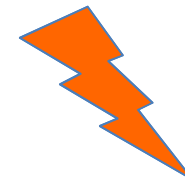
Possible Measures

- Prediction and warning
- Adapting infrastructure to support intervention and prevention
- Persuasive technologies to discourage participation
- Adapting information flow to prevent escalation ??
- Direct control of infrastructure such as public transport ??



The Dilemma

Adaptive social media help regime squash pro democracy protests



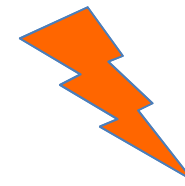


The Dilemma

Adaptive social media technology supports the rioters in achieving maximum destruction and fun



AP Photo/Lefteris Pitarakis



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