On The Impact of Real-Time Feedback on Users' Behaviour in Mobile Location-Sharing Applications

Mobile Systems Privacy Workshop
Imperial College London
23/09/2010

Lukasz Jedrzejczyk
Privacy

“right to be let alone”
Warren and Brandeis, 1890

“right to select what personal information about me is known to what people “
Westin, 1967

Do we have a **control** over the personal information we share?

Are we **aware** of who has access to our personal information?
Real-Time Feedback

**Feedback** - Informing people when and what information about them is being captured and to whom the information is being made available. (Bellotti & Sellen 1993)

**Social translucence** (Erickson & Kellog 2000)

- Visibility
- Awareness
- Accountability
Real-Time Feedback and Social Translucence

An example scenario

System layer

User layer

request

response

real-time feedback

Bob (data requester)

Alice (data owner)

visibility

shared knowledge (awareness)
Real-Time Feedback – Research Issues

• representation
• delivery time
• social implications
• privacy protection potential
Evaluating Real-Time Feedback

- focus group discussion
- interviews
- field trial
Context Matters

- time
- location
- activity
- phone’s position
- company
- importance of the information
- mobile activity (browsing web)
Social Implications

Data owners

• mostly neutral about real-time feedback - not less or more willing to share location

• memory overload: “Why did X look up my location?”, “What does he want?”

Data requesters

• internal debate “Should I do it?” – protecting position within the social network

• change in users’ behaviour – smaller number of location lookups made in week 3 of the field trial
Privacy Protection

- real-time feedback limited the number of unjustified location lookups
- real-time feedback has to be supported by aggregated feedback
Summary

• wider demographics
• evaluate different sensory dimensions of real-time feedback in Buddy Tracker
• support context-awareness
• incorporate machine learning to improve users’ experience
Thank you

Arosha Bandara  Lukasz Jedrzejczyk  Clara Mancini  Bashar Nuseibeh  Blaine Price  Yvonne Rogers  Keerthi Thomas

PRiMMA
Privacy Rights Management for Mobile Applications
primma.open.ac.uk