Pervasive and Social Computing

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Convergence of cyber and physical

Real-world social network inferred via BT

Facebook personal social graph

Kostakos et al, 2010, ACM TOCHI

http://nexus.ludios.net/
Participation in public life

Angus et al, 2009, IEEE Pervasive
Patterns of human behaviour

Routines
Mundane behaviours
Participation
Authoring
Power of sharing
Anonymity
Freedom of expression

Collective intelligence
Representations
Trails
Metrics of significance
Concept drift
Data sets
Inter-disciplinarity

Papadogkonaset al, 2009, IE09
Only at the beginning

• Limited case studies so far
  – In terms of participant profiles, time-frame, and variety of social situations

• Large-scale information capture needed
  – Deployment costs imply commercial operation
  – Data management becomes critical
  – Significant observation accuracy questions
  – Regulatory compliance
The way ahead?

- Beyond instrumentation and connectivity
  - Map-reduce and other Big Data technologies
- Spatial-Temporal-Sensory-Semantic data models
- A role for beliefs, motivations and expectations
  - Not directly measurable by technology
- Sharing can be achieved in alternative ways
  - Facebook vs. 4chan approach
- People are individuals, not just consumers