Pervasive Sensing in the Context of Social Well Being

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Motivation
1. Nowadays, mobile devices are an integral part of the daily live of people.
2. The majority of such devices are also sensorial (accelerometer, GPS, microphone, camera, sonar, wireless sensors).
3. Mobile phone are powerful tools to perform learning and inference of behavior and activity recognition in a non intrusive way.
4. We can use mobile devices to improve social well-being
   • E.g., stimulate social interaction

Objectives
Conceive and develop a non-intrusive framework for inference of social interaction:
   • Based on personal devices
   • Activity recognition relevant in the context of social interaction (e.g., sleep).

Contributions
1) Provide a better analysis on current sensors available, and how their captured data can be combined to perform different types of activity recognition and behavior
2) Perform validation (based on living labs) of the potential for such tools to simulate social interaction
3) New algorithms, heuristics, mechanisms that can assist in further developing sensing middleware in a way that allows pervasive sensing analysis to scale to large sets of users in close-to-real-time
4) to validate our findings by building a framework (proof-of-concept) that integrates our contributions

Status
• Thesis proposal stage (NEMPS edition 2016/2017)
• Ongoing analysis of sensor data application in the recognition of different social well-being activities
• Completed analysis of relevant available middleware