Overview

PRIAM: Privacy Issues and AMbient intelligence

PRIAM is an INRIA funded cooperative research action (ARC)

http://www.inria.fr/recherche/arc/index.fr.html

Motivation

The techniques under development in the field of ambient intelligence may soon lead to a society where people are surrounded by intelligent objects capable of interacting in an unobtrusive and often invisible way. While many applications of ambient intelligence benefit to the users, these new techniques also present enormous technical challenges for privacy and security because of the huge amount of behavioral, personal and even biological data being recorded and disseminated.

Privacy is quite a complex issue though, especially in the context of ambient intelligence:

- First the very definition of privacy is far from obvious since it is by essence subjective and based on a fuzzy notion of boundary or “private sphere”. In particular, these boundaries are blurred in the ambient intelligence landscape. Further, a user’s expectations are not easy to define and they typically evolve as his familiarity with the new technologies grows. Last but not least, the legal framework, which has to reflect the social expectations, needs to be revisited to account for the new possibilities offered by the technology.

- An ambient computing infrastructure is by nature heterogeneous and dynamic, with new nodes, of different natures – and belonging to potentially unknown mistrusting users – connecting to the network and being able to communicate in a spontaneous way.

- Last but not least, the smart objects can be tiny, inexpensive, devices with limited resources (chips on clothes, banknotes, etc.). It is thus difficult to rely on these to implement complex privacy policies.

The PRIAM project addresses these issues in a transversal and multidisciplinary way, favoring the exchange of ideas between lawyers and experts from the information and communication technology.

Keywords

privacy, privacy policy, privacy enhancing technologies, protection, personal data, identity, localisation, medical, health care, biological, private , public, delegation, transfer, data aggregation, verification, anonymous, anonymity, legal, regulation, law, contract, right, obligation, liability, accountability, responsibility, legal proof

mobility, ambient intelligence, ubiquitous computing, spontaneous information systems, self-configuration, peer to peer, P2P, ad-hoc networks, dynamic networks, pervasive systems, hybrid networks, WiFi, Bluetooth, GSM, GPRS, UMTS, internet of things, ubiquitous commerce, virtual home, invisible computer, wireless networks

RFID tag, radio frequency, identification, sensor, actuator, mobile phone, cellular phone, gateway, PDA

security, integrity, confidentiality, TPM, trusted computing, secure log, secure channel, trust management, risk, authentication, access control, DRM, content protection

Poster

ARC Day (01/10/2007) priam-arc-poster-2007-10-01 325.79 Kb (fr)