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PICOS

Privacy and Identity Management for Community Services



PICOS will develop and build a state-of-the-art platform for providing the trust, privacy and identity management aspects of community services and applications on the Internet and in mobile communication networks.

At a Glance

Project coordinator:

Johann Wolfgang Goethe-Universität Frankfurt (DE)

Partners:

Hewlett-Packard Laboratories Bristol (UK), Hewlett-Packard Centre de Competence France (FR), Universidad de Málaga (ES), Center for Usability Research & Engineering (AT), Katholieke Universiteit Leuven - Interdisciplinary Centre for Law and ICT (BE), IT-Objects GmbH (DE), Atos Origin (ES), T-Mobile International AG (DE), Leibniz Institute of Marine Sciences (DE), Masaryk University (CZ)

Duration: 36 months

Total cost: 5 951 136 €

EC Contribution: 3 998 998 €

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Why is research needed on privacy and identity-management in online platforms supporting community services?

In recent years, we have seen the emergence of services for professional and private on-line collaboration via the Internet. Nowadays, many European citizens spend work and leisure time in on-line communities, such as social networks or other real world communities that utilise on-line services to support their activities. Moreover, communities based on mobile communication allow users to participate in their community not only from places where fixed-line communication is available. Mobile Communities also allow for a more intensive linking of services and therefore integration of people's virtual and real communities.

Additionally, context information, such as location information, gets important, e.g. for spontaneous socialising and collaboration in the "real" world.

However, when users participate in such communities, they consciously leave private information traces they are unaware of.

The providers of community services need to handle trust and privacy in a manner that meets the participants' needs as well as complying with regulation. Moreover, in order to finance or co-finance respectively such community services, the infrastructure needs to be opened for marketing activities of sponsors/advertisers. And, as new community-supporting services offered by communication service providers will increasingly become interoperable, this would

require that provisions for trust enablement and privacy-respecting identity management also be interoperable between such communication service providers.

A new approach to identity management in community services is needed, in order to meet the needs for:

- the enablement of trust, by members of the community, in other members and in the service-provision infrastructure,
- the privacy of community members' personal information,
- the control by members of the information they share, and
- the interoperability of community-supporting services between communication service providers

This approach must be developed in an open manner, and requires technical advances in order to meet the requirements.

Why PICOS?

PICOS will develop and build a state-of-the-art platform for providing the trust, privacy and identity management aspects of community services and applications on the Internet and in mobile communication networks. The PICOS approach to trustworthy on-line community collaboration addresses the following four questions:

- What are the Trust, Privacy and Identity issues in new context-rich mobile communication services, especially community-supporting services?
- How can information flows and privacy requirements be balanced in complex distributed service architectures (e.g., mash-ups)?
- How can these issues be solved in an acceptable, trustworthy, open, scalable, manner?
- Which supporting services and infrastructures do the stakeholders need?

PICOS will first review contemporary research in relevant disciplines. Work will then focus on platform design and prototype development in order to create interoperable, open, privacy-respecting identity and trust management tools that can be demonstrated to the public. These will be used to construct community application prototypes by leading industry partners in close cooperation with the targeted community. Finally the prototypes will be trialled and self-evaluated by PICOS concerning usability, ergonomics, legal issues, trust and privacy.

Expected Results

Expected PICOS results are:

- A set of interdisciplinary requirements for trustworthy, privacy-friendly community transactions, by setting policies for the disclosure of information to specific members of the community.
- A platform prototype that demonstrates the provision of state-of-the-art privacy and trust technology to leisure and business community applications, such as fishing or personal transportation services communities.
- User-centric trials that validate its applicability.

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