

Topic 4: Technology and Tools for Trustworthy ICT



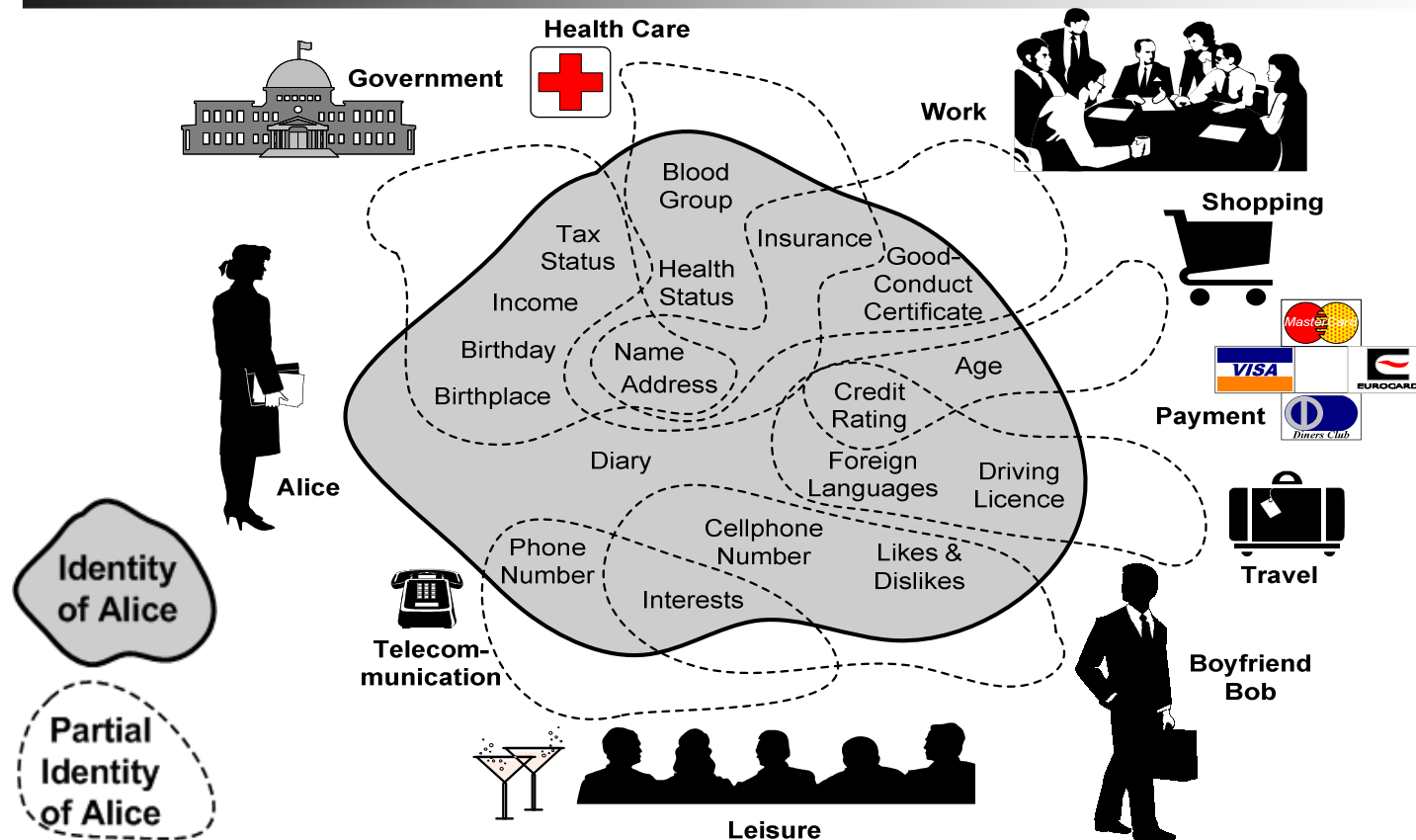
Prof. Simone Fischer-Hübner

ICT 2008, Lyon, 26th November 2008





User-centric privacy-enhancing Identity Management (IDM)



Vision: Users can act *securely* in the Information Society while keeping *sovereignty* of their private spheres



Viability of privacy-enhancing IDM has been demonstrated

Integrated approach providing:

- Data Minimisation
 - Anonymous communication, anonymous credentials, privacy-enabling authorisation model
- Assurance & Life Cycle Management
 - Assurance control, privacy & trust policy negotiation & enforcement, obligation management
- Transparency
 - Data track,...





New Research Challenges –

Privacy-enhancing IDM for emerging technologies & applications

- **Social Networks/Web 2.0** (addressed by PrimeLife & Picos)
 - Multilateral security addressing privacy & trust
- **Lifelong Privacy** (partially addressed by PrimeLife)
 - Investigating identity lifecycle from interdisciplinary perspectives
 - Enabling lifelong control, "right to start over"
 - Recovery possibility from loss of digital credentials
- **Ubiquitous Computing Environments**
 - User-controlled IDM on small (low performance) devices
 - Transparency
 - Privacy over RFID lifecycle
- **Ambient Applications, Behavioral & Psychological Profiling,..**
 - User control
 - Pseudonymity
 - Transparency
 -





Research Challenges – Transparency Tools for enhancing Privacy









- Usable end user tools for
 - Informing about passive (hidden) data collection
 - Assurance/Trust evaluation
 - Informing about privacy implications of future actions
 - Online function to exercise rights
- Services side tools for
 - Automatically answering users' online requests
 - Checking privacy compliance based on privacy-preserving logging and inference techniques

Trust Evaluation - PrimeLife 0.2

Trust Evaluation

[Company name] [web address]
has been evaluated according to [your trust policy settings](#).

Trust Evaluation results of [Company name]'s system:

- ☐ **Mentioned in privacy alert lists:** 
[Datainspektionen, 2008-09-23](#)
[ULD, 2008-09-01](#)
- ☐ **Blacklisted:** 
[Konsumentverket](#) (Sweden)
[\[Name_of_List\]](#) (Spain)
[\[Google Blacklist\]](#) (International)
- ☐ **Privacy seals:**   
[TRUSTe Seal](#)
 [ULD Gütesiegel](#) (no information)
 [EuroPriSe Privacy Seal](#) (expired)
- ☐ **Does not support PrimeLife Functions:** 

[Close](#) [Expanded](#) [View](#)



Research Challenges – Multilaterally Secure Reputation Systems

- Meaningful reputation metrics
- Prevention of reputation poisoning/ forging
- Interoperable, transferable and privacy-respecting reputation schemes

The screenshot shows an eBay Feedback Profile for a user named 'i-three'. The profile includes a header with the eBay logo and a welcome message. Below the header is a navigation bar with links to Categories, Motors, Stores, and a 'Buyer Protection with PayPal' banner. The main content area is titled 'Feedback Profile' and features a user profile card with a silhouette icon, the username 'i-three' (7722 stars), a 'Power Seller' badge, and a 'Positive Feedback (last 12 months): 99%' rating. Below the profile card are two tables: 'Recent Feedback Ratings' and 'Detailed Seller Ratings'. The 'Recent Feedback Ratings' table shows counts for Positive, Neutral, and Negative feedback over 1, 6, and 12 months. The 'Detailed Seller Ratings' table shows average ratings and the number of reviews for various criteria. At the bottom, there are tabs for 'Feedback as a seller', 'Feedback as a buyer', 'All Feedback', and 'Feedback left for others'. A summary line indicates '8,614 Feedback received (viewing 1-25)'.

ebay® Welcome! Sign in or register.

Categories Motors Stores Buyer Protection with PayPal We've got you covered. See terms

Home > Community > Feedback Forum > Feedback Profile

Feedback Profile

i-three (7722 ★) **Power Seller**
Positive Feedback (last 12 months): 99% [\[How is Feedback Percentage calculated?\]](#)
Member since: Dec-07-04 in United States

	1 month	6 months	12 months
Positive	455	2147	5767
Neutral	8	28	83
Negative	7	29	52

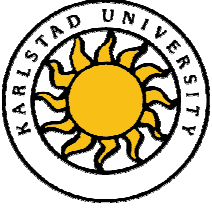
Criteria	Average rating	Number of ratings
Item as described	★★★★★	4045
Communication	★★★★★	4037
Shipping time	★★★★★	4026
Shipping and handling charges	★★★★★	4022

Feedback as a seller Feedback as a buyer All Feedback Feedback left for others

8,614 Feedback received (viewing 1-25)

Feedback

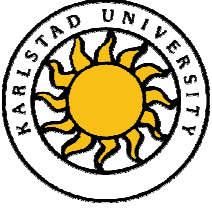
Great seller nice computer AAAAA+++++



HCI Research Challenges – **Usable Tools for Trustworthy ICT**

- User-friendly representation of complex technical privacy concepts
 - unlinkability, pseudonymity, policy management, anonymous credential selection,...
- Mapping legal privacy requirements
- Mediating trust
- Providing security
 - against Phishing, Spoofing,...





Final Remarks

Development of Tools & Technology for Trustworthy ICT requires interdisciplinary cooperation

