

FIA – eID approaches for the Future Internet

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Motivation

All layers require a sort of identification, potentially with different security properties

- Network elements, content elements, service elements, application instances, ...

All layers require some sort of routing, finding, discovery, ...

- How to get a packet there?
- How to connect to a service?
- How to connect to a person/organization?

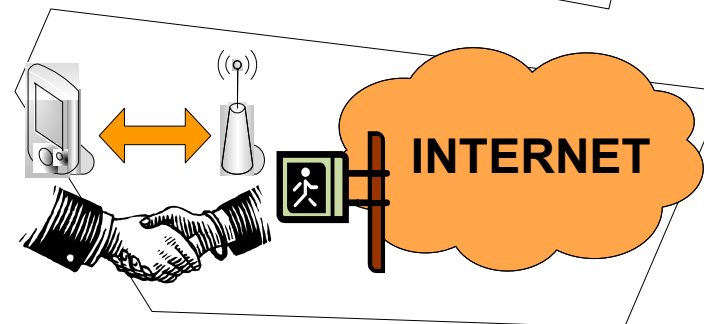
Discussion: Does it make sense to have Identities across the various levels (stacks)?



Applications



Service/Content



Network

Cross-Stack vs Intra-Stack

Cross-Stack

- Identity Management is a modular piece (service?)
- Do not duplicate functionality (cross-layer optimization)
- Binding between stacks has privacy implications
- Might be against the onion principles use in many security concepts

Intra-Stack solutions

- Very near to the service/application itself
 - targeted mechanisms and protocols possible
- Information deferred from other stacks possible
 - Example: “the time at which individuals are at home”
 - Deferred from energy consumption (smart meter)
 - Deferred from sensing information/content
 - Deferred from Internet usage pattern



Privacy & Usability

Continuum, certain actions/information people/organizations would like to keep private, others not

- Social interaction requires that certain information is given to social peers -> building up trust

Different stakeholder involved with different goals

- Business with information
- Policy-free mechanisms required

Large percentage of population is not aware of privacy issues

- Not well educated
- Willing to give away valuable information in exchange for benefits (payback, ...)
- Users don't know when they give what information
- Security mechanisms themselves not usable for non-experts!

