

FIA – Identities and the Network An impossible Mix?

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Specific Network Issues with Identities

Functions and Operations with the user in mind

- Dealing with the explosion of objects or “things”
- Dealing with multiple identities and user roles
- Use of multiple devices in a communication

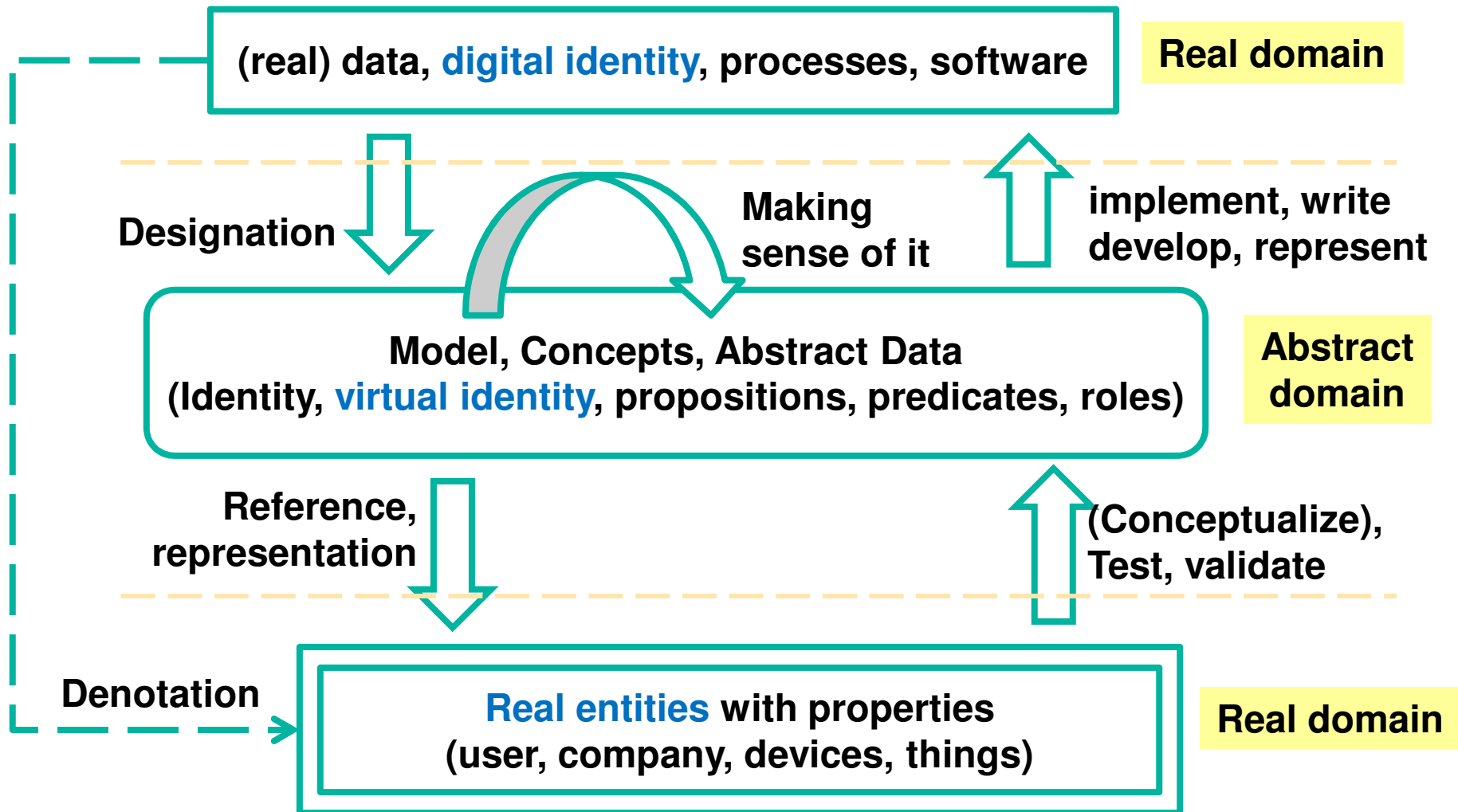
Privacy and Data protection

- Privacy across all layers → Avoid personally identifiable data at the network level, i.e. IP and MAC addresses
- Enabling OECD Guidelines on privacy across layers

Work needed to enhance both functionality and privacy at the levels of network and service enablers!

Pioneer work in EU SWIFT, iNEM4U and Discreet projects is encouraging

Understanding and taming Identity at its roots



Let us not fool ourselves ...

**Identity data exists in the network today:
Examples are IP and MAC Addresses**

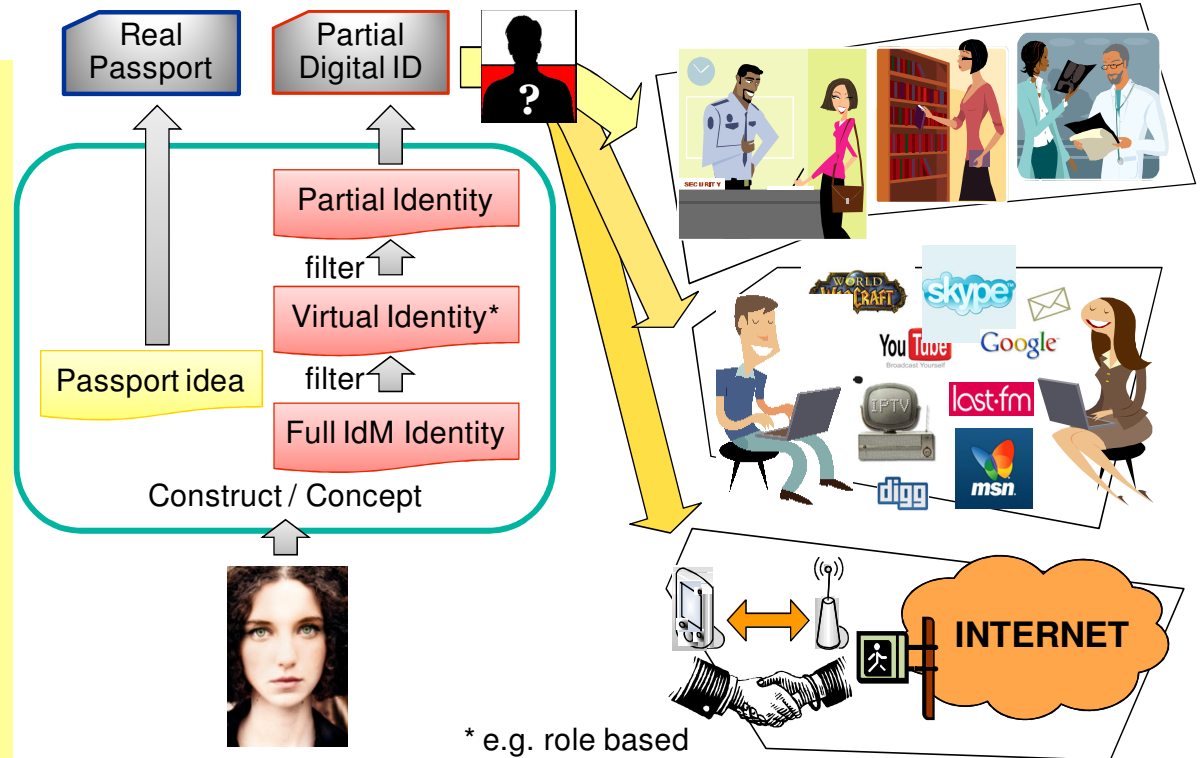
**The Question is how to use Identity data
in the network while maintaining a
maximum of privacy – more than today!**

Bird's eye view to get best of two worlds



Best of two worlds

- Make it impossible (difficult) to link partial ID to entity → privacy
- Maximize ability of partial ID to support functions & operations → functionality



Identities: Part of future network fabric?

■ Digital identities part of the future network architecture

- Communication setup and routing should be identity aware *for the needed functions of the network* without making the related *users* identifiable
- Ensure better privacy and security than available today!

■ Mobility

- Make Identities represent entities not only devices
- Identities across terminals considering security and other capabilities enabling use of arbitrary (public) devices

■ Maximizing the capabilities of the network by providing it with (personally non-identifiable) locally relevant data about intended use will help scalability

Future Research Directions

- We need R&D to tame the virtual bull “Identity with possibly personally identifiable data” rather than ignoring the animal or putting our heads into the sand
- Investigate the scope of using Identity data in the network in a way that both are increased:
 - Functionality and the associated increase in usability
 - Privacy and security, in particular taming identification
- Approaches to compare, perhaps as starting points
 - Evolution of the Host Identity Protocol
 - Creation of Communication Sessions in the Network
 - Others

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