



Università degli Studi di
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Requirements & Challenges (un)trusted third party view

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Four Challenges for the ~~Speakers~~ – Wrap-up

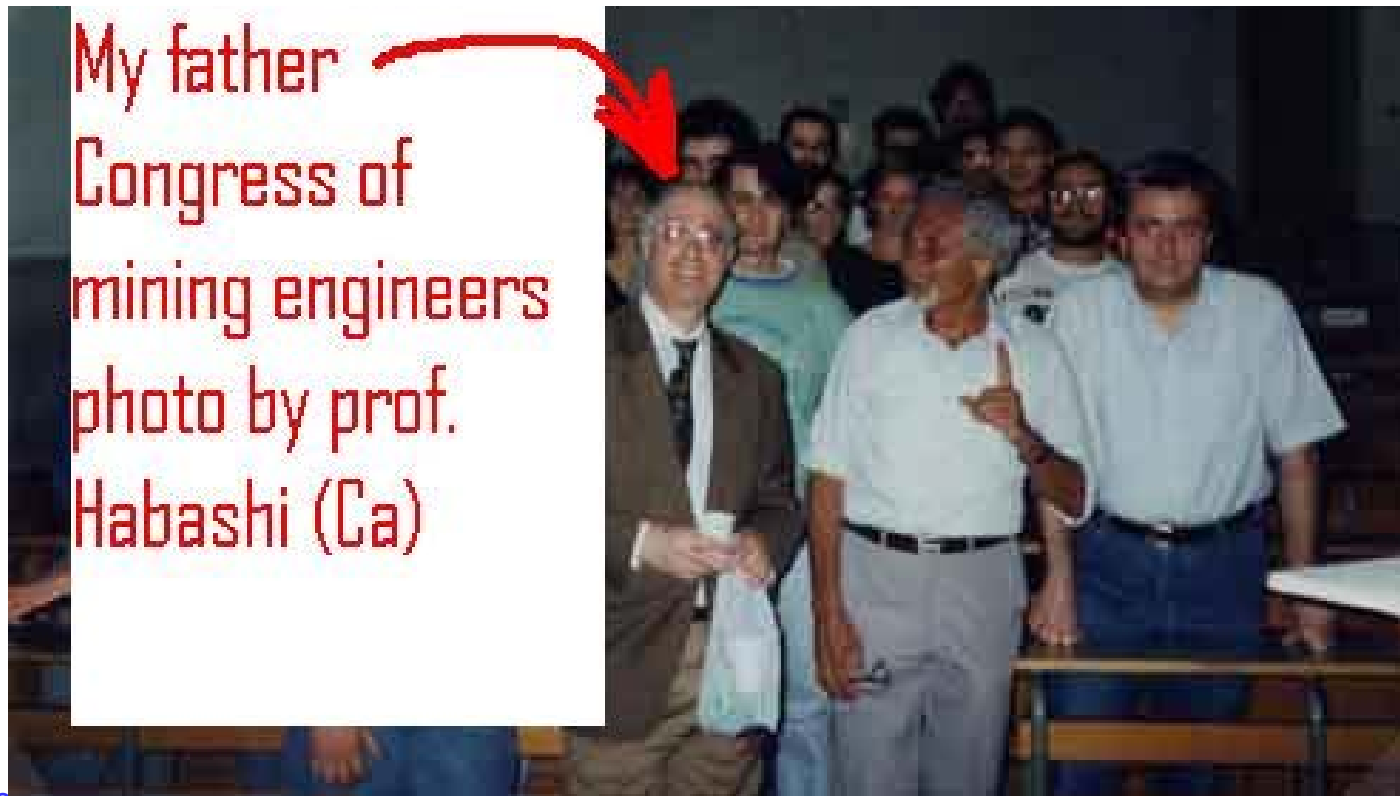
- **Search for google define:identity**
 - the distinct personality of an individual regarded as a persisting entity
 - the individual characteristics by which a thing or person is recognized or known
- **The Networking View (Armadeo's view)**
 - Identity is my “purposeful rich address” for you
- **The Application View (Jan's View)**
 - Identity is my “personal interaction” with you
- **Four Requirements Challenges**
 - Identity and Privacy (Personal Life)
 - Identity and Accountability (Commercial Sector)
 - Identity and Responsibility (Carriers)
 - Guarding Identities (Minors)

Privacy and Identity for Who?

- **When we think of the Future Internet we always think it is for “us”**
 - Fabio, Armadeo, Bart, Jan, Jim etc.
- **It is not for “us”. That’s wrong picture**
- **Three pictures tell a story**
 - Nonno Paolo – Born 1939
 - Papà Fabio – Born 1967
 - Paolo – Born 2000

Nonno Paolo – Jun. 1996

- First Picture on the internet – Age 58
- Business Related



Papà Fabio – Feb. 1999

- **First Picture on the Internet – Age 31**
- **Again only professional pictures**



Paolo – Feb. 2007

- **First picture on the internet – Age 7**



Where is the problem of Privacy and Identity?

- **Photo by ...**
 - By proud father? Er... actually not
 - By close friend? Er... actually not
 - By who then?
- **I was there, but I have no clue!!!**
 - Somebody from Sportivi Ghiaccio Trento put it on the web site of the organization
- **I didn't even know the picture was on the internet till Thu. 25/Feb/2010 10pm**
- **Paolo's life will be entirely on the Future Internet**
 - how can he separate his lives (note the plural) in different zones?
 - Why should he?this picture is pretty innocent

Papà Fabio – Private Picture – NOT on Internet

- You don't want this picture to pop up in a discussion
“Should we invite this prof. Massacci as an expert?”
- This guy doesn't really look like somebody reputable
- Yes, yes, this should be irrelevant but still...



Hidden, I'm sure you wanted to see it 😊
only participants saw it

Q1: Zoning Identity?

- **D. Lessig. “Code and other laws of the Internet”**
 - Zones separate “individuals” to build local trust
 - Within the zone we are fully accountable (can build trust)
- **In physical life we are pretty good at zoning**
 - Separate our relations (eg friends, work, relatives, neighbors) by “distance”.
 - Searches are difficult by people outside each zone
 - Law enforcement can break zones but have hurdles
 - Individual *and* government can build zones
- **Do solutions allow individuals to zone identities?**
 - J: Pure P2P Attributes → No Accountability: Zones too small
 - A: Purposeful Address → Total Accountability: Zones too big

Identity and Accountability

- **Nonno Paolo – 1° use C.C. on Internet: Age 59**
- **Papà Fabio – 1° use C.C. on Internet: Age 29**
- **Paolo – 1° attempt: Age 9**
 - Papi, can you give me your credit card?
 - Er... What do you need it for?
 - There is this Star Wars LEGO robot that you can buy on the LEGO web site you find with Google
 - Er... Let me see a second... Paolo, this is not LEGO web site!!! It is just a ... site ... selling stuff...
 - [Follow long -- and for a child boring -- explanation on *how to find the identity of providers*]

Q2: Commercial Identity?

- **Identity tech so far conceived for “clients”**
- **What about “identity” of “partners” ?**
 - You want to know who is the other!
- **In the physical realm**
 - Identity of partners is regulated (you cannot just open a supermarket, a dentist’s practice or a bank)
 - Commercial identity is *distinct but always linked* to identity of human individuals (legal responsible)
 - strictly linked to specific attributes *and* taxable
- **How to link the identity of end point to the accountable identity for humans behind it?**
 - J: escrow of credentials → requires third party
 - A: master addresses → accountable if physically located

The Knowledge of Identity and Responsibility

- **Two different queries to a Taxi Driver**
 - Bring me at via Fogazzaro 12, Trento
 - I'm a convicted sexual offender, can you bring me to a school where boys or girls aged 8 or 9 gets out after school unattended and go to a swimming pool nearby?
- **Suppose this is traceable, not repudiable etc. and something unpalatable happens at Lat. 46.065 North, Long. 11.131 West**
 - Is the Taxi driver responsible for it?
 - I'm afraid yes... (and not only morally..)

Q3: Identity for Carriers?

- **Today huge legal shelter by principle “Mere Conduit”**
 - We drive bits, not responsible for their meaning
 - Phone Harrassment: 85 Italian Supreme Court cases, not a single conviction of telecom provider
- **Carriers are lured by Google’s business model**
 - offer “free” services, profile users and gets money by advertising (more identity information, more valuable for advert)
 - But now they “*know*” the meaning of bits
 - First Instance Italian court sentenced CEO of Google Italy to 6 months to prison for a video where a handicapped is beaten
- **Can carriers run identity-based services without knowing identity (and other attributes) or need legal upheaval?**
 - Also go back to zoning (carriers offers zones and users disclose zoning info at their will but carriers not responsible for content)

Q4: Guarding Identities?

- **Back to Paolo Junior**
 - He is on internet, has a LEGO account
 - There is lots of notices for parents, but I didn't check...
 - not yet an email account
 - His cousin (12) has Yahoo+ Microsoft messenger accounts (likely she lied on her age... as all her friends did)
- **In the physical realm well understood problem:**
 - my children are on my passport
 - Can be sent to buy bread with ready cash but can't borrow
 - can't commit the family for large amounts
- **In the Future Internet Research Agenda?**
 - Option 1 – Ignore the problem
 - Option 2 – Solve before the world solves it in some way
- **How do you provide “limited” identity to minors with a fall back “guardian” identity that is accountable?**
 - Goes back to accountability: a linkage between identities

Sum-Up of Questions

- **Frame of mind:**
 - Identity solutions must be solutions for people whose lives/data/actions have been on the Future Internet since they can read or write (age 6)
- **Questions**
 - Do solutions allow individuals to zone identities?
 - How to link the identity of a partner to the accountable identity of humans behind it?
 - Can carriers run identity-based services without knowing identity (and other attributes)?
 - How we can provide “limited” identity to minors?