



Analysis of Aml Scenarios

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Future Vision: Aml will support

- Communications between all kinds of people, organisations and objects
- Security
- Personalised access to all kinds of information
- Controlling appliances and objects
- Reminders, finding of things
- Safety
- Comfort, "extremely convenient life"
- Prevention, cure and care of diseases
- Entertainment
- Working tools
- Emergency
- Remote shopping, working and learning
- Environment protection



Scenario from Flying Carpet



Mimosa project

Future Vision: Actors

- Ordinary people
- Everybody has accepted Aml
- Human's problems or disabilities are described only if there is an Aml solution to help them
- Too many scenarios are targeted at single individual, not a member of family or some social group
 - alarm-clock
 - TV personalisation
 - shopping



Future Vision: Actors

- Children are playing games
- Children receive reminders
- Children, 10 and 13 years old, get bored on a beach (ITEA roadmap)
 - **Books? Music? Real world?**
- Parents observe and track them
- Father perceives children as a disturbance (ITEA roadmap)
- Scenarios state that privacy and dignity of elderly people must be respected
- Nothing like that concerning children
- Is it realistic? (children switch off phones)
- How harmful it can be? ("Right to be left alone")



Future Vision: Environments and Activities

- Blurring of boundaries between time and space:
 - everything any time and from any location
 - everything connected
 - this makes places and activities more public
 - increases disturbances any time (remote workers in different locations)
 - video recordings of meetings: no transitory effects?
 - how to escape from being always connected?



Future Vision: Information Flow

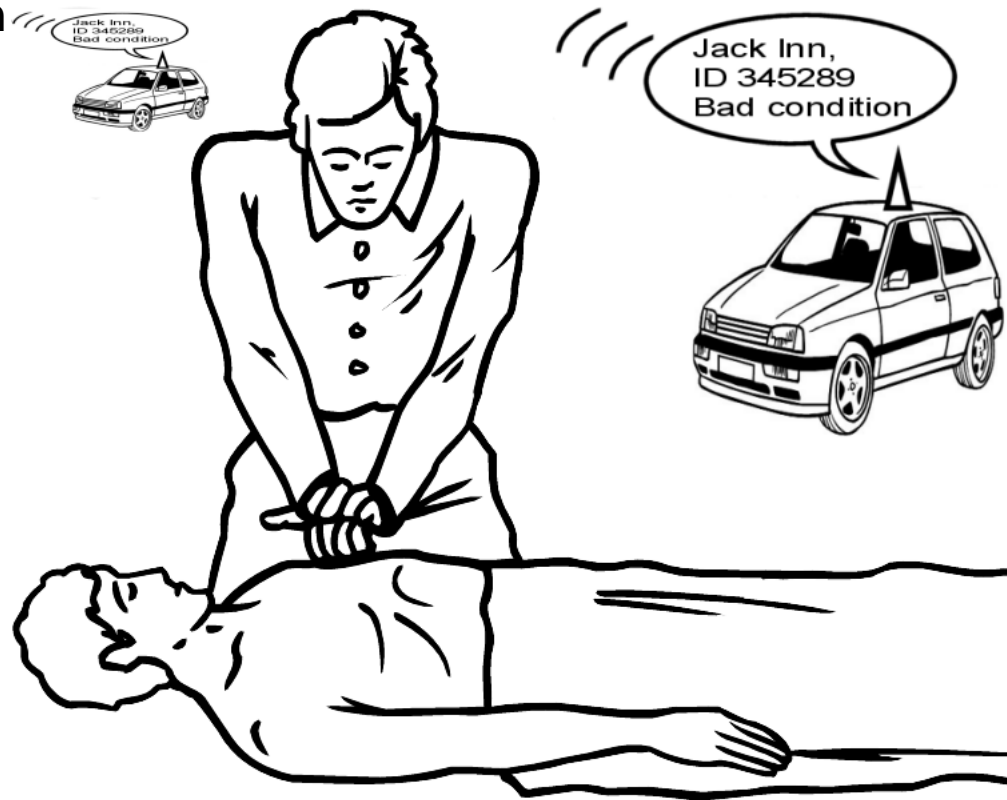
- Identity
- Location
 - current and future
- Health
 - needed in many places
 - can be acquired accidentally
- Financial data
- Objects locations
- Preferences
- Psychological features
- Emotions



- Asymmetry
- Who is interested in it?
 - government
 - insurance companies
 - work superiors
 - criminals
 - relatives
 - neighbours
- How it is protected?
 - is it possible to restore a raw data?
 - reliability
 - usability

Future Vision: Aml control

- High: acts on behalf of a person
 - access control
 - health care
 - safety, especially in driving
 - privacy
 - personalisation
 - communications
 - work tools
- Acceptability (current projects vs. future visions)
- Who controls Aml?
- Medium: proactive suggestions
 - guiding
 - reminders



Future Vision: Technologies

- Hardware
 - small size: truly invisible
 - large numbers
 - difficult to notice
 - easy to lose
- Ubiquitous communications
 - no need to identify the user always
 - use of UIDs in protocols
 - RFID tags don't protect much, even in biometric passports
- Interfaces
 - video communications
 - public screens
- Sensors and actuators
 - location
 - biometrics
 - physiological sensors
 - health
 - safe driving
- Reasoning
 - increased intelligence
 - storage and linkage of everything
 - increased autonomy
 - is the legitimacy of incoming data checked?
 - privacy protection should not burden users!

Conclusions

- Blurring of physical borders of observability
- Physiological sensors make people really "naked"
- Blurring of boundaries between time and space
- Links between diverse databases
- Continuous monitoring, always-on systems
- Recording of information: violation of ephemerality expectation
 - computers are able to record anything, but they are not smart enough to NOT record everything
- High Aml control
- Technology:
 - becomes invisible
 - sets limitations
 - privacy requirements can be contradictory to low cost, performance, security requirements
- Difficult to escape gracefully ("always on" system vs. what mobile phone allows)