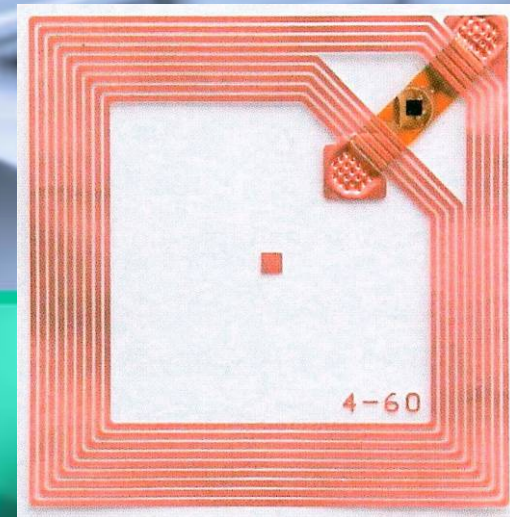


# RFID and Privacy

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# RFID and Privacy

## Content

- Use and misuse of RFID
- What is privacy?
- Ethical considerations
- Solutions, provisions and sanctions



## Use and misuse of RFID

- Ambivalent use of RFID
  - Infringing privacy (supervision, profiling, data mining)  
or
  - Protecting privacy (anti-theft, access control, anti-counterfeit)
- Criminal use of RFID
  - Misuse of data on transponders and in databases
  - Sabotage
  - Neglecting power limits
- Interference with other technologies
  - Internet, online banking, point of sales, credit cards

# Definitions of Privacy

- Local privacy
  - Human body
  - Home area
  - Country, state
- Informational privacy
  - Person related data
  - Private and public data (profiling, data mining and aggregation)
- Decisional privacy
  - Freedom of decisions
  - Freedom of contract
  - Equilibrium of state and citizen





## Definitions of Privacy

- What is data privacy?
  - „personal data” or „person-relatable data“  
Are random numbers personal data?
  - Privacy in Public
  - *Property* of personal data  
(Copyright, buying and selling data)
  - Protecting human *dignity*



## CA: Senate Bill No. 388 (February 21, 2007)

- (1) First or last name.
- (2) Address.
- (3) Telephone number.
- (4) E-mail, Internet Protocol, or Web site address.
- (5) Date of birth.
- (6) Driver's license number or California identification card number.
- (7) Any unique personal identifier number contained or encoded on a driver's license or identification card issued pursuant to Section 13000 of the Vehicle Code.
- (8) Bank, credit card, or other financial institution account number.
- (9) Any unique personal identifier contained or encoded on a health insurance, health benefit, or benefit card or record issued in conjunction with any government-supported aid program.
- (10) Religion.
- (11) Ethnicity or nationality.
- (12) Photograph.
- (13) Fingerprint or other biometric identifier.
- (14) Social security number.
- (15) *Any unique personal identifier.*



## Privacy in Public

- „Theories of privacy should also recognize the systematic relationship between privacy and information that is neither intimate nor sensitive and is drawn from public spheres.“  
(Helen Nissenbaum 2000. *The Problem of Privacy in Public*)

## Ethical considerations

- Acceptance of far reaching new technologies
  - Philosophy of technology: Jacques Ellul (1912-1994), Hans Jonas (1903-1993) and others
  - WW II and nuclear weapons, *Just War* “The technological society”
  - Environmental protection “The Imperative of Responsibility” (original title “Das Prinzip Verantwortung”)
  - Information technology impact on privacy?







## RFID Activists

- “The risk RFID poses to the social world are comparable to the risks nuclear weapons pose to the physical world. In the same way that bombs destroy objects, RFID could decimate privacy“ (Katherine Albrecht 2007, CASPIAN).



## Ethical considerations

- Ideological and political backgrounds
  - Liberalism
    - individualism
  - Socialism and Communism
    - collectivism
  - Capitalism
    - Utilitarianism, economic man / homo economicus
    - Laissez-faire capitalism or Social market economy



## Ethical considerations

- Globalization and cultural influences
  - Worldwide network and information exchange (internet, mobile phones, satellite technique, ...)
  - Different political systems
  - Different economical systems
  - Different culturesCultural dimensions



## Geert Hofstede (Culture's Consequences 1980)

- Cultural dimensions:
  - Power distance
  - Uncertainty avoidance
  - Individualism and collectivism
  - Masculinity and Femininity
  - Long versus short-time orientation
- Privacy: individualism versus collectivism

## Robert House et. al. 2004

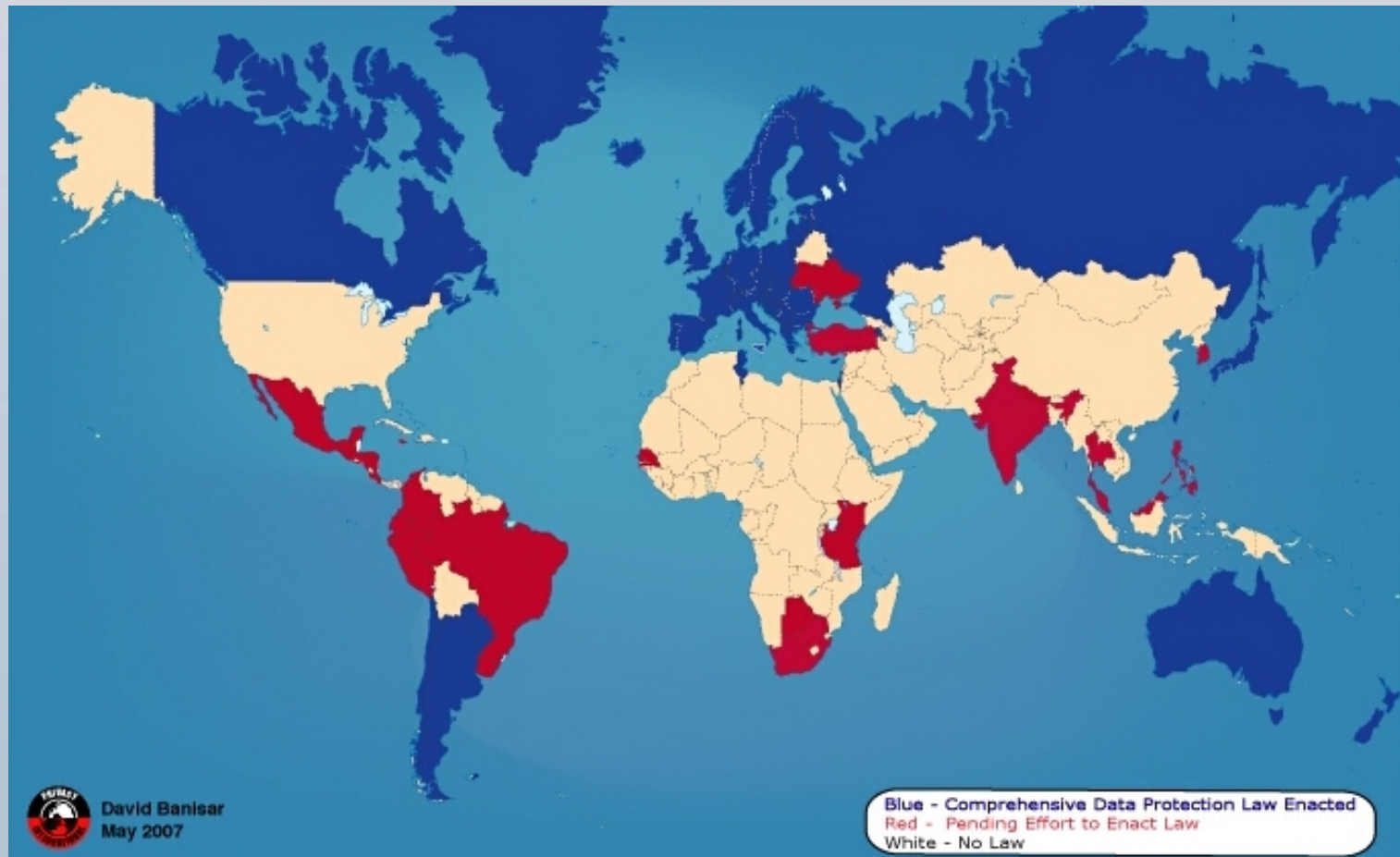
- Global Leadership and Organizational Behavior Effectiveness (GLOBE) project
- Cultural dimensions:
  - Power distance
  - Uncertainty avoidance
  - Humane orientation
  - Collectivism I: *societal* emphasis on collectivism
  - Collectivism II: *family* collectivistic practices
  - Assertiveness
  - Gender egalitarianism
  - Future orientation
  - Performance orientation

## Solutions, provisions and sanctions

- Legislation: Data Protection Acts
  - Protection of personal data
    - Intended use of personal data
    - Limited data life time
  - National laws (see map)
  - Global standards (UN, OECD, EU)
  - Totalitarian regimes
  - Just balance between governmental and industrial restrictions



# Data Protection Laws around the world



Source: Privacy International

## Solutions, provisions and sanctions

- Industry: Economical aspects
  - Customer benefits
  - Case studies
  - ROI
- Industry: Technical solutions
  - Encryption, preventing data access
  - Deletion and kill command
  - Transponder destruction
  - Opt-in, Opt-out



**Association for Automatic  
Identification and Mobility**



## Solutions, provisions and sanctions

- Industry: Codes of Conduct
  - “pre-legislation”
  - Standard proposals needed
- Industry: Informing the customer
  - Transparent data access
  - RFID emblems (AIM, ISO, EPC)



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*Questions?*

*Thank you!*