Case 3 - Comprehensive Information Technology Security

A new Approach to Respond Ethical and Social Issues Surrounding Information in the 21st Century

Introduction

- up to now IT-security has been seen as mainly technical
- nearly nobody has been thinking about the social and ethical dimension
- increase usage of information technology results in industrial espionage as well as social misuse
- security is no longer engineers-only problem

➡️ we need a different perception of "information technology security" - a **comprehensive** one

Problems and Demands concerning the Growing Importance of Information Technology Security

- For a comprehensive IT-Security concept the following levels have to be included and answered:
    - CIA elements of IT-Security (confidentiality, integrity & availability)
    - organizational elements
    - legal, economical, social & ecological elements
- These dimensions are influenced by ethics (aim: protect nature and people from damages)
- main question which should influence decisions → "is economy more important than security?"

Technology Assessment in the Field of IT-Security

- Technology assessment (TA) is a sociological approach
- aims to asses the intended and not-intended, the short- and the long-term consequences of new techniques
- first ever project by german "Bundesamt für Sicherheit in der Informationstechnik (BSI)"
- Objectives of the project:
  - to show the various stages of technological development
  - to analyze questions of security and vulnerability
  - to point out advantages as well as risks
  - to sensitize the different parties
  - to work out possible actions

Technology Assessment in the Field of IT-Security

Two important characteristics of the project:

1. interdisciplinary discourse among affected parties
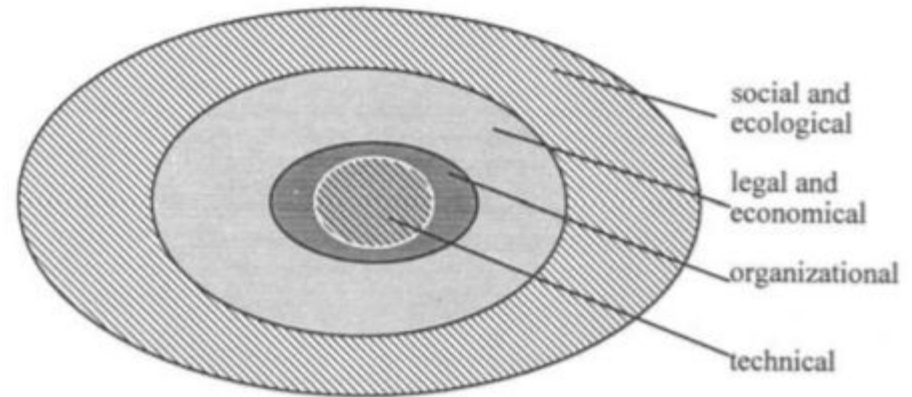2. illustrate main problems of different design options

Outcome:

● not all questions could be answered, due to discourse a lot of unsolved questions arose
● next step: let all affected persons and actors know the results of this study

Comprehensive Information Technology Security (1)

the most **elementary issues** for a new approach:

1. need for more **comprehensive interpretation of IT-security**
    → we have to put the elements of IT-security into new manner

    - organization
    - legal
    - social
    - economical and ecological
      elements

Comprehensive Information Technology Security (2)

2. **TA-studies**
   → assess the chances and risks of new information technologies as well as of new applications of well known technologies

3. concept of **co-responsibility**
   → think about our own roles, influence and power to increase the information technology security and to avoid risks and damages

4. **security culture**
   → development of a security culture (interculturel communication and cooperation process)

Big Picture

bringing the 4 issues together with the IT-security elements

→ there must be a **harmonization** in regard to the demands, the solutions and the way to use a technique