On Security aspects of cloud and mobile computing: Main challenges

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The Three Laws of Security:
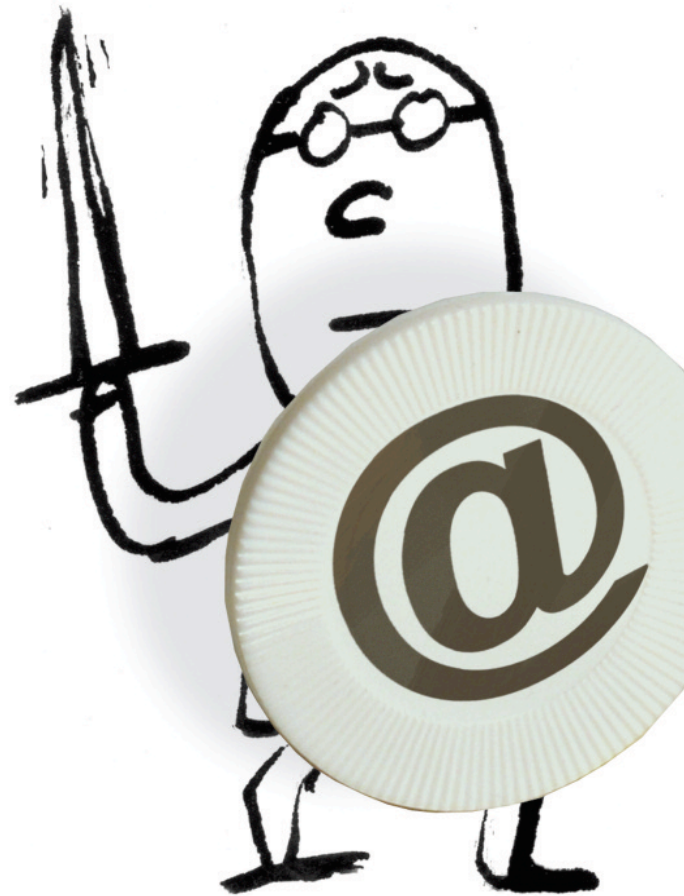## 1. Absolutely secure systems do no exist

The Three Laws of Security:
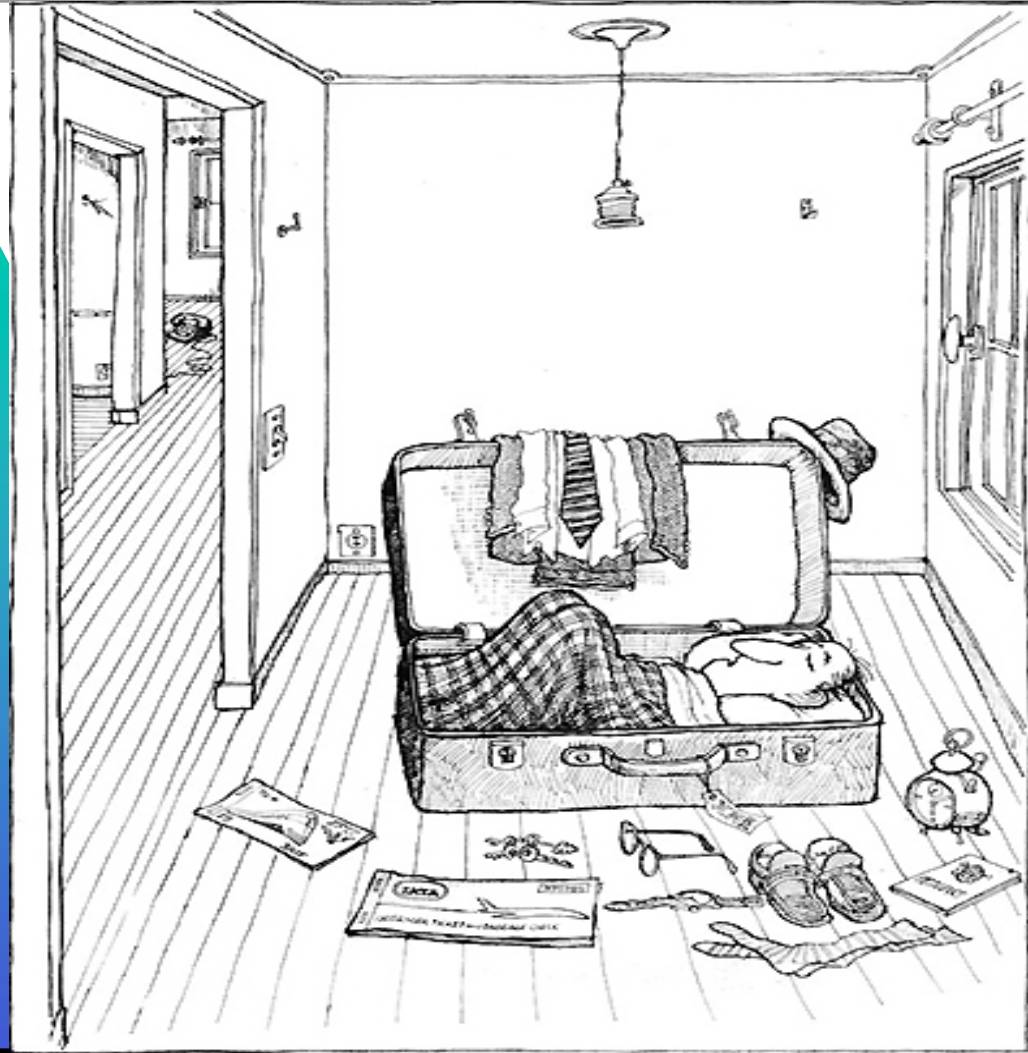## 2. To halve your vulnerability, you have to double your expenditure

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The Three Laws of Security:
3. Cryptography is typically bypassed, not penetrated

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Security Issues in Mobile Computing

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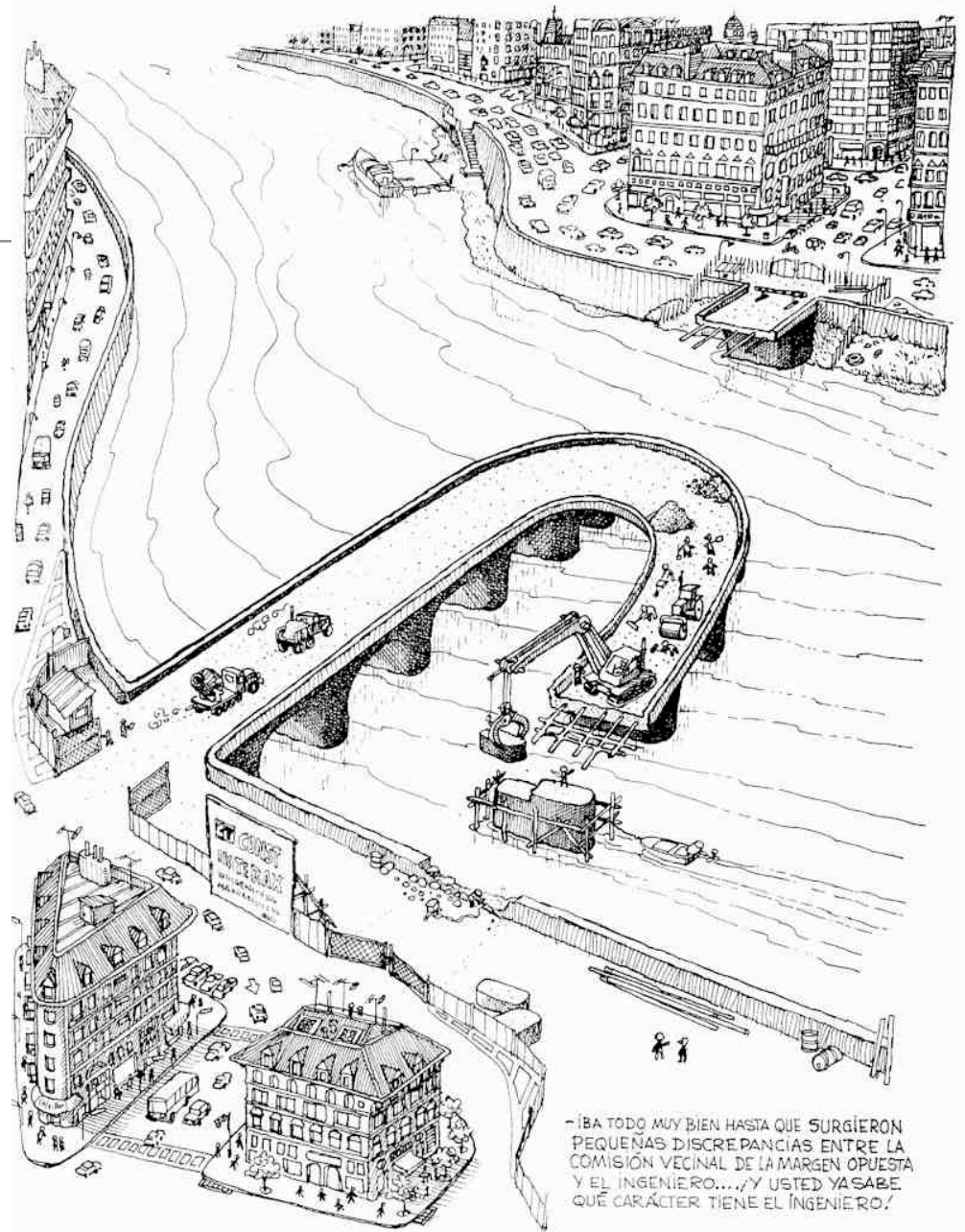
Mobile Computing Applications

- PDAs
- Carputers
- Wearable computers (clothes, eye glasses, etc.)
- Smartphone
- Ultra-mobile PC
- Smart sensors in infrastructure (windows, roads, bridges, etc.)
- Etc.

- ¡IBA TODO MUY BIEN HASTA QUE SURGIERON PEQUEÑAS DISCREPANCIAS ENTRE LA COMISIÓN VECINAL DE LA MARGEN OPUESTA Y EL INGENIERO... ¡Y USTED YA SABE QUÉ CARÁCTER TIENE EL INGENIERO!

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Security and Economics of Mopile Computing

- People won't be willing to pay for security per se
- People won't buy products without security

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Where are the challenges for mobile computing security?

- Designers worry about IT functionality, security is ignored or an afterthought.

- Attacker has easy access to nodes

- Security infrastructure (PKI etc.) is missing: Protocols?

- Side-channel and tamper attacks

- **Computation/memory/power constrained**

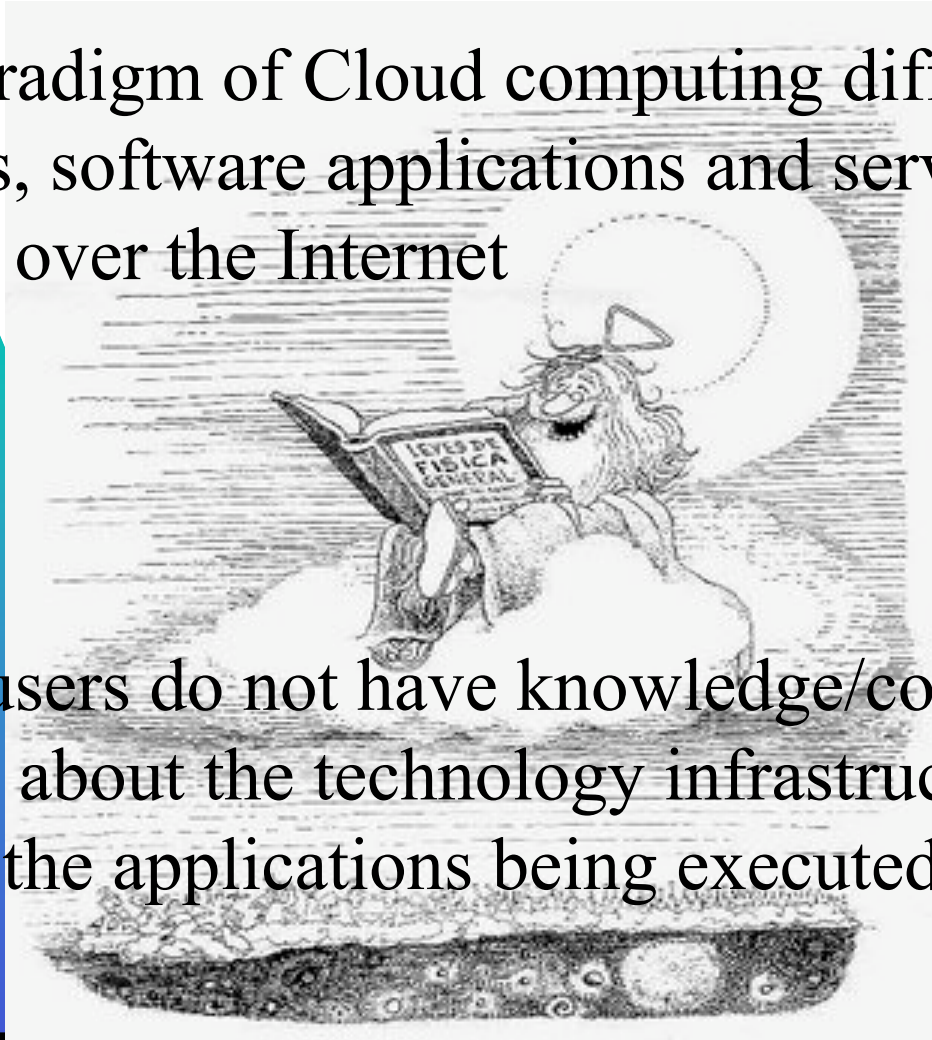# Security Issues in Cloud Computing

Cloud Computing Main Features

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- In the paradigm of Cloud computing different resources, software applications and services are provided over the Internet

- Typical users do not have knowledge/control or expertise about the technology infrastructure that supports the applications being executed by them

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So…Where are the challenges in Cloud Computing?

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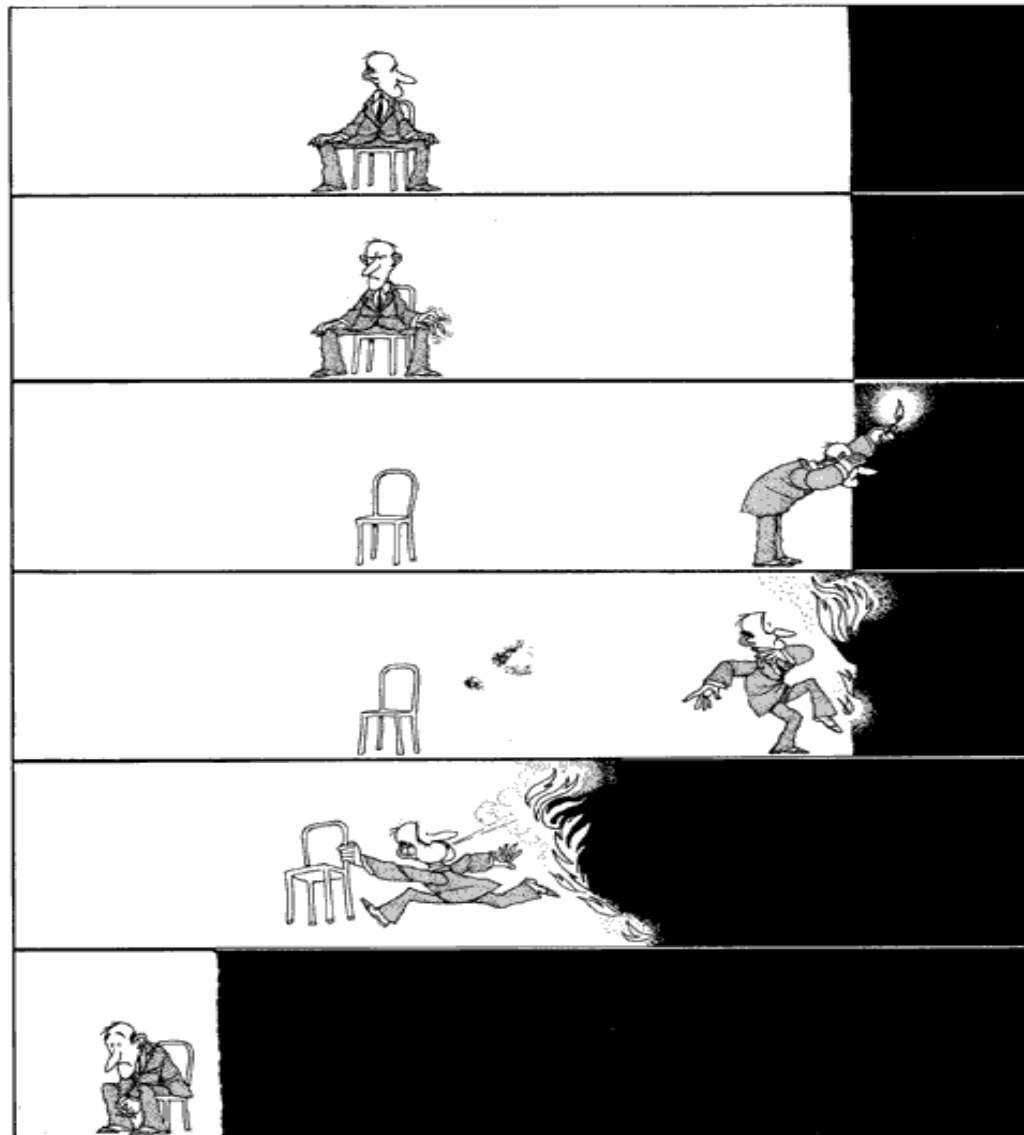
# How cloud hosting companies approach security

Is the correct moment to go for standards or the cloud industry is still in a embryonic stage where too many restrictions may actually hamper its development?

# Jurisdiction and Legislation where data is held

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- Data that might be secure in one country may not be secure in another

- Very often, users of cloud services don't know where their information is being stored

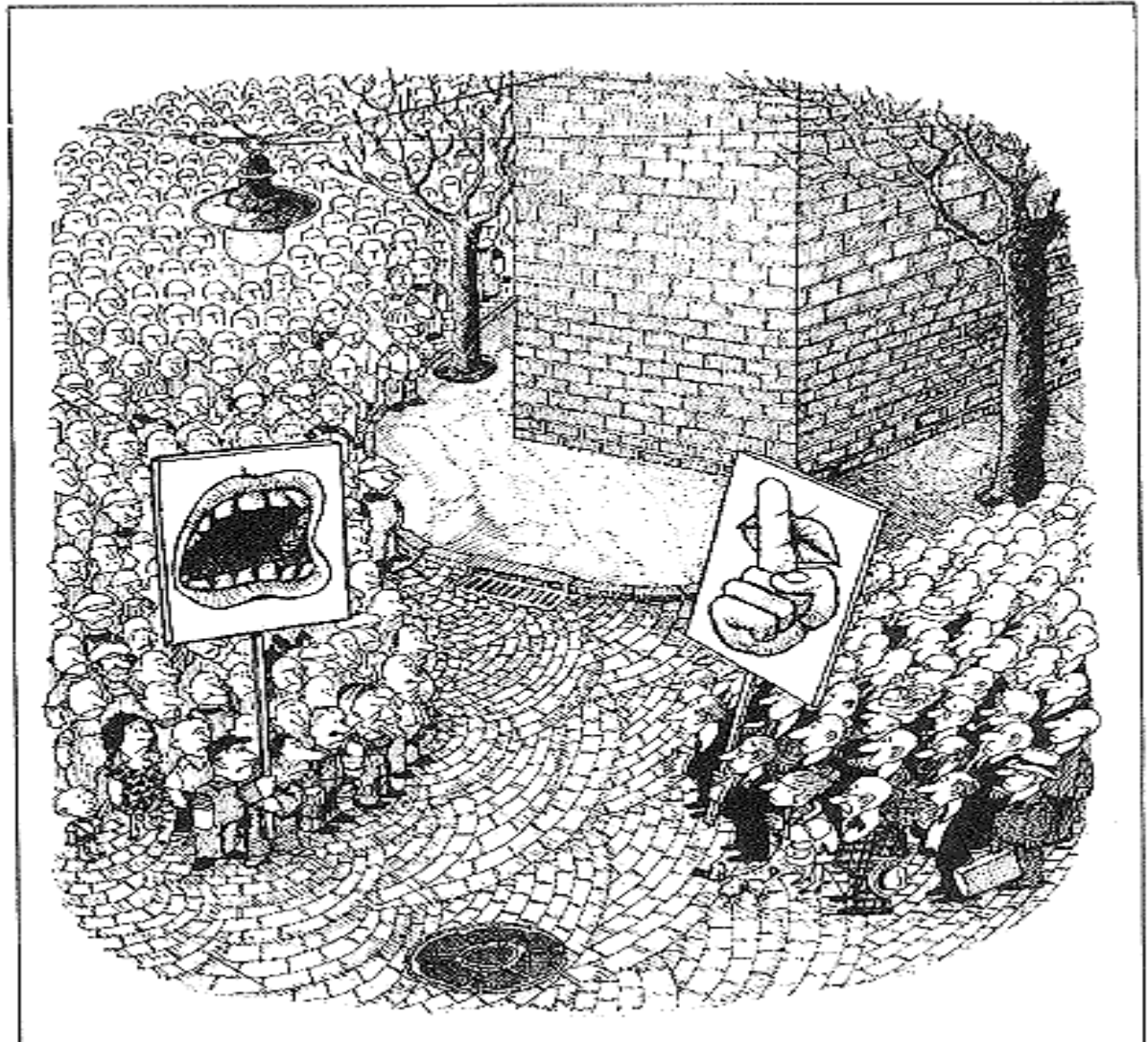Francisco Rodríguez Henríquez
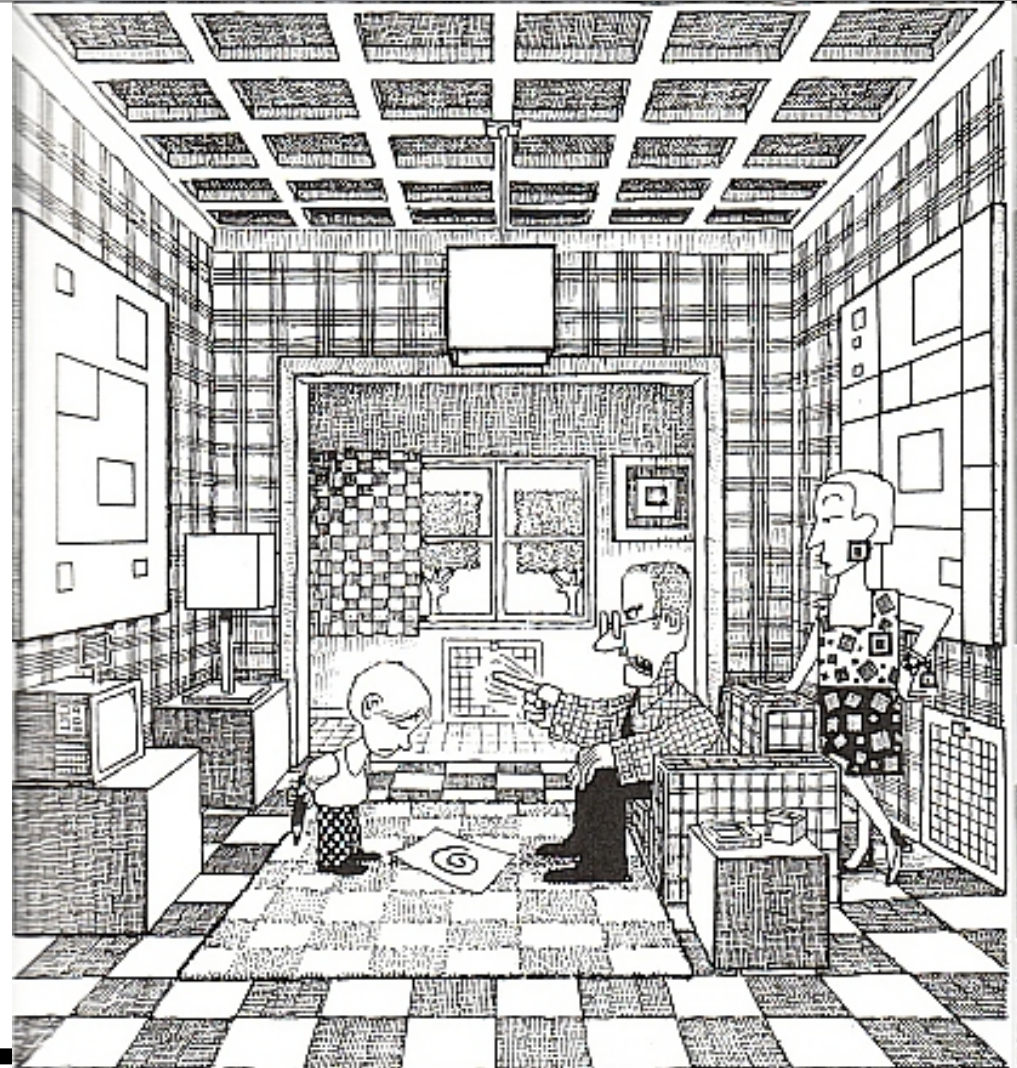
Privacy

- How can we know that our sensible data will not be shared with third companies?

- Do I still fully hold the copyrights of my documents (e.g. photos)

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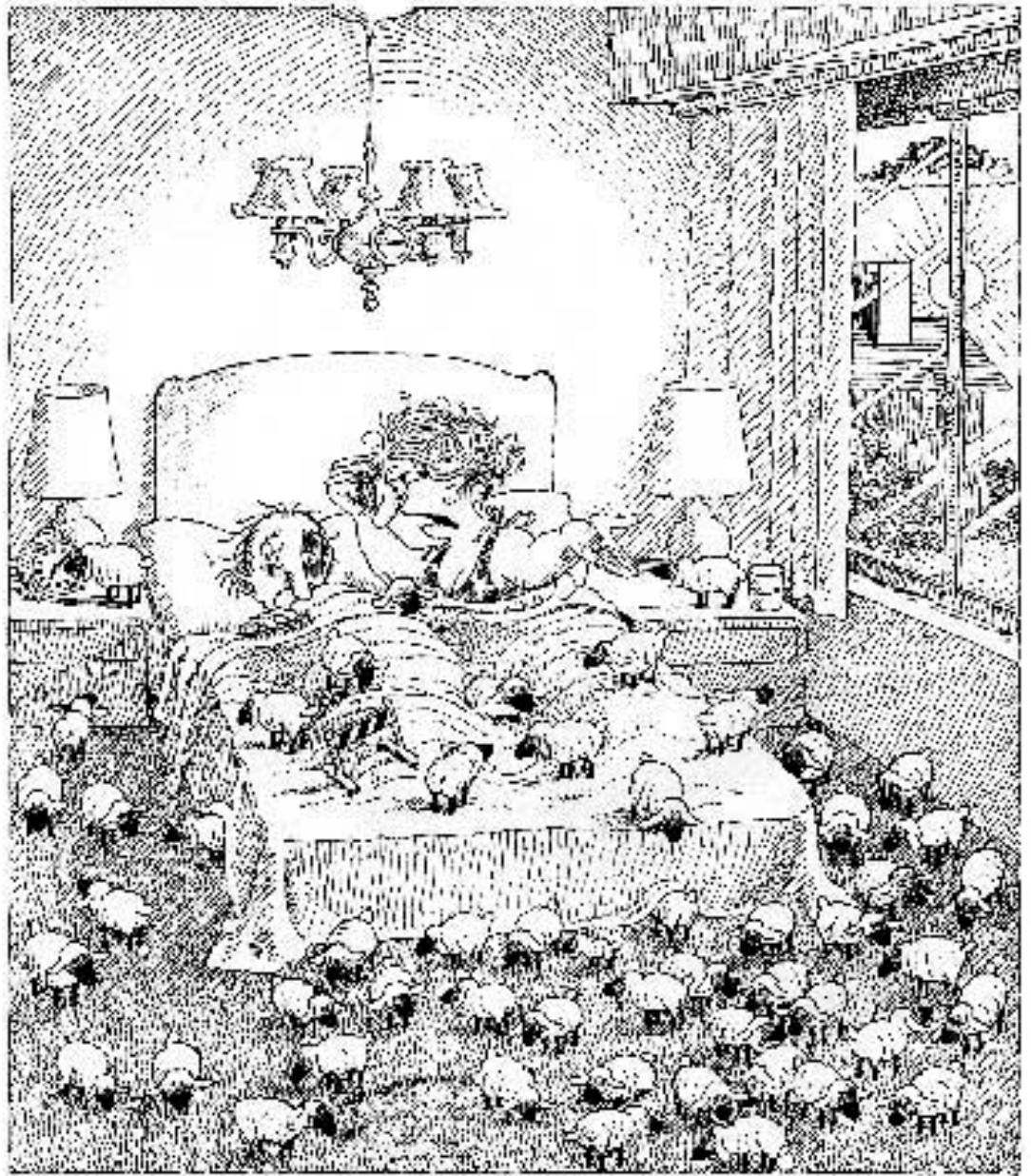
Trust

- Should I keep my sensible data within a third party infrastructure?

The last word is…

Thanks!