

Let us win the battle between attacks and security mechanisms!

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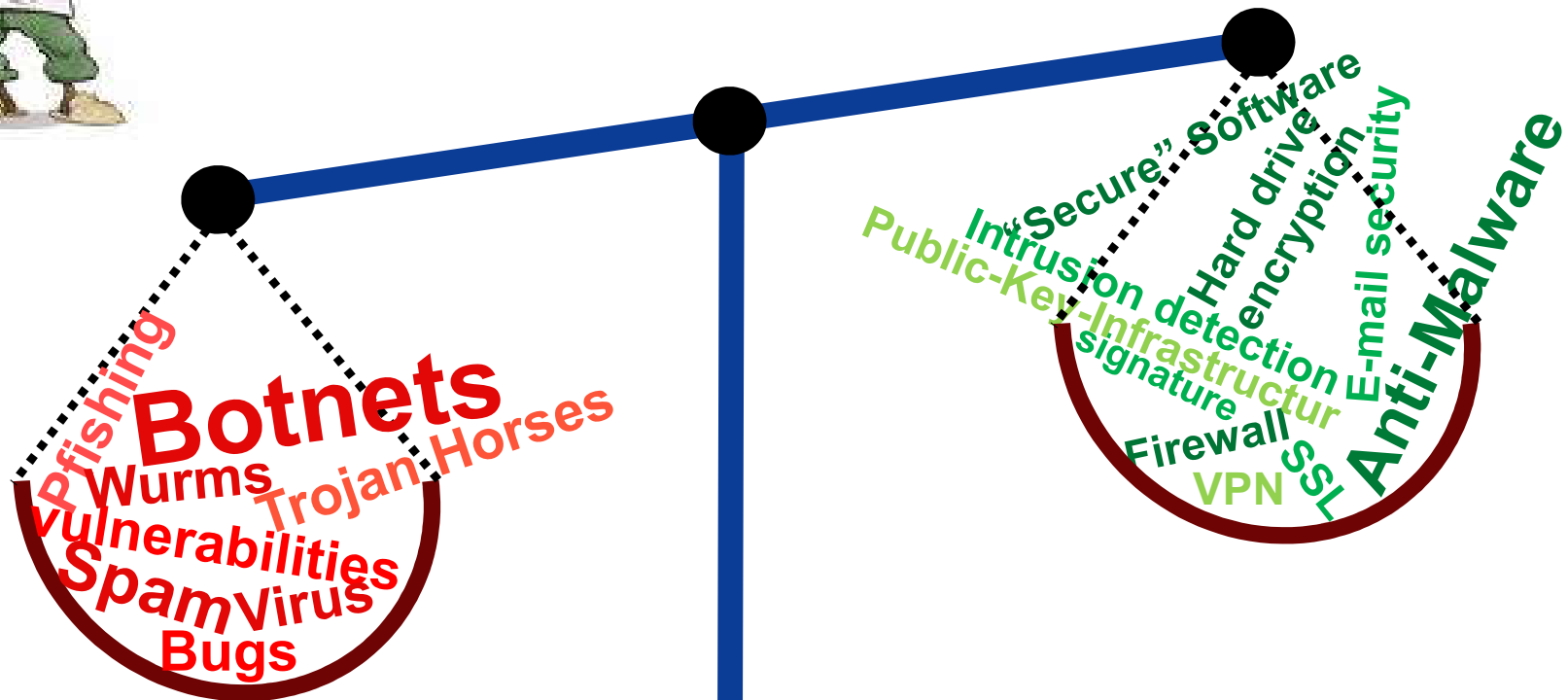
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Assessment of the situation

→ Battle: attracts <-> security mechanisms



The Hare and the Hedgehog



- Attacks -

- Security Mechanisms -

IT Security Situation Today

→ Threat Potential

- Too many vulnerabilities in our Software



- Unsecure web sites in the field



- Insufficient anti malware protection



- No international identity management



- **and ... E-Mail, SmartPhones, Cloud Computing, SmartGrid (everything),**

IT Security Situation Today

→ Business Models

- Underground economy:
International CyberCrime



IT Security Situation Today

→ Imbalance of power / rules / ...

- **Imbalance of power in cyberspace between attackers and defenders**
 - Highly motivated and skilled attackers
 - Operating in secrecy from almost anywhere in the world,
 - Use a lot of computers (Malware, botnets) with unlimited power
 - Very good, professional and international organized
 - Successful business concepts

What we have to do to win the battle?

→ Proactive versus reactive IT security

- **Robust and trusted IT systems**
 - security kernel
 - with separation and isolation technology
 - combined with intelligent cryptographic security mechanism

What we have to do to win the battle?

→ Collaboration between all players

- **Using every Computer as a sensor**
 - All computers send information to build up a common situation awareness
- **Collective counteractive measures**
 - Initiate efficient collective reactions on incidents preferably in an automated fashion
- **Business model of the defenders` collaboration**
 - Less money for security mechanism, lower risk-level, ...

What we have to do to win the battle?

→ Build up an international IT security infrastructure

- **E-Mail**
 - Common PKI infrastructure
 - Bridge CA, trust model,

- **ID Management**
 - Common unique identifier
 - Federation, ...

- **Trusted IT system**
 - Common TPM infrastructure
 - Configuration, ...

- ...

**Let us win the battle between
attacks and security mechanisms!**

**Thank you for your attention!
Questions?**

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