Emerging Threats and Actors

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FORTH

Mobility

- Problem
  - Mobile devices are ubiquitous and always connected
  - Limited compute resources and battery power prevent users for running full-fledged security software

- Research Directions
  - New tools and techniques for protecting such devices

- Impact
  - Better protect citizens
  - Adoption for commercial use

Privacy

- Problem
  - Privacy issues due to data aggregation:
    - Cloud, e-meters, social networks, public info, …

- Research Directions
  - New techniques to protect users against sophisticated privacy attacks and prevent correlation of public records

- Impact
  - Increase confidence of EU citizens in privacy-preserving use of ICT

Emerging Technologies

- Problem
  - New services and technologies often released before the research community has had a chance to study their security implications
    - Clouds, SCADA, social networks, smart meters, web services

- Research Directions
  - Sponsor activities and collaborations between industry and academia

- Impact
  - Increase adoption of such services without risking security failures

Usable Security

- Problem
  - Human factors, insider problem, …
  - Engineers don't care/know about computer security. Users give permissions and click on everything
  - The impact of new defense techniques greatly depends on the assumption made on the final users and on their involvement in the security process

- Research Directions
  - Study usability of security countermeasures

- Impact
  - Increase the end-user adoption of security-related software and monitoring systems

Targeted Attacks

- Problem
  - Current defense tools, policies, and infrastructures fail in front of attacks designed to focus against a specific target instead of blindly targeting the entire community
  - From malicious hardware to targeted spam

- Research Directions
  - Collect and analyze data associated with targeted attacks
  - New defense approaches that take into account alternative factors (such as monetization)

- Impact
  - Significant improvement towards the protection of Critical Infrastructures

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