



Threats and Vulnerabilities in the Future Internet The SysSec project

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syssec (1) Changes and developments

□ Mobility

- 24/7 connectivity
- Always-connected / always-available

□ Increased use of “smart” devices

□ Erosion of on-line trust and anonymity

- Social networks, RFIDs, mobile tracking,

□ Physical World connects to the cyberspace

- Physical Infrastructures are available in the cyberspace

□ Centralizations of Services: The “cloud”



- ❑ Create a Vibrant **community** in Systems Security Research
- ❑ Capitalize on the **European potential** in the Area
- ❑ Work towards
 - a **safer and more secure cyberspace** for all citizens



syssec (3) Challenges

❑ Cyberattackers move into the trust domain

▪ Attackers use trust channels to con victims

- e.g. Social networks, instant messaging



❑ Scale/complexity

- More devices, more applications, more complex programs

❑ Privacy

- Most of our life will be public
- Most of our browsing will be public
 - Social networks, “like” buttons, etc. erode anonymity



❑ Security is not what it used to be

- what is the “security perimeter” of an organization?

(4) Solutions and implied RTD needs

❑ Protection of Privacy

- Using technical and legal approaches

❑ Authentication/Authorization

- All our data are protected by one password
 - The same in most sites

❑ Know thy enemy

- Understand the motives and approach of attackers
 - Malware analysis, honeypots, forensics, reverse engineering

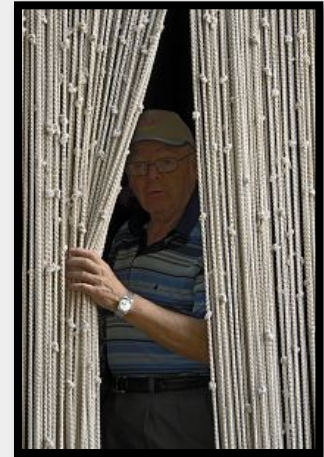
❑ Deal with compromised computers

- Detect/intercept the operation of **botnets**

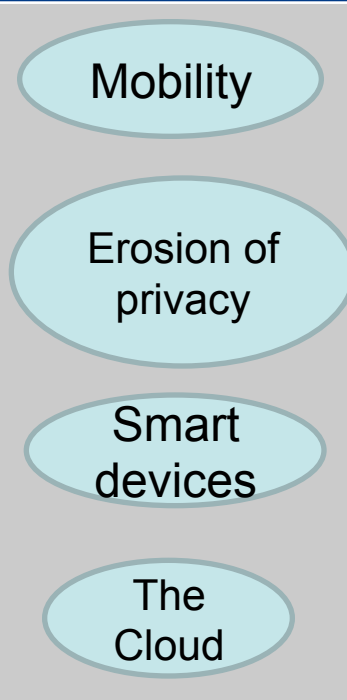
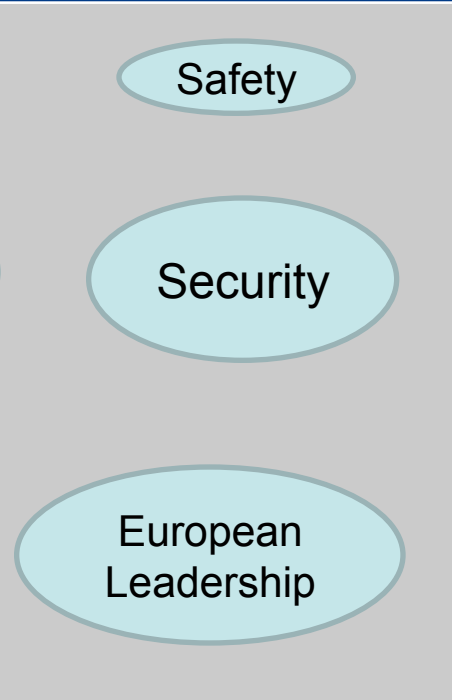
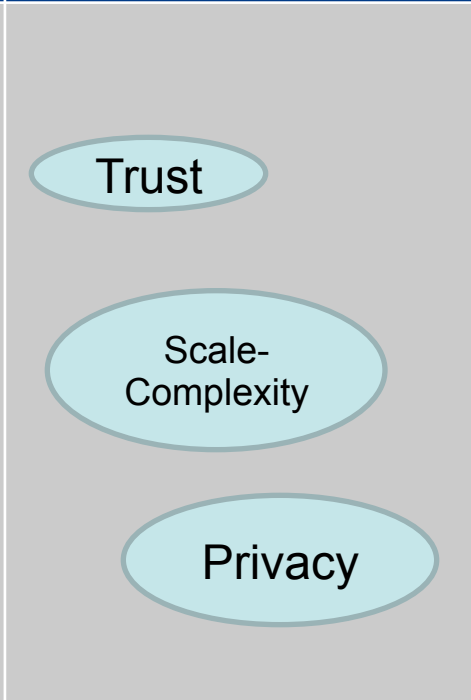
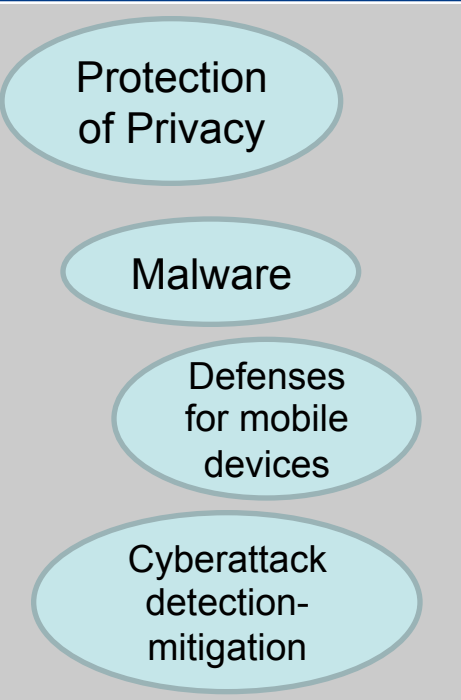
❑ Cyberattack detection/prevention

❑ Defences for mobile devices

- Antivirus systems? Firewalls?
- Intrusion Detection Systems?



(6) The overview map from your project

| Project name: SysSec | | | |
|---|---|---|---|
| Developments and changes | Future vision | Challenges and gaps | Future solutions and research needs |
|  <p>Mobility</p> <p>Erosion of privacy</p> <p>Smart devices</p> <p>The Cloud</p> |  <p>Safety</p> <p>Security</p> <p>European Leadership</p> |  <p>Trust</p> <p>Scale-Complexity</p> <p>Privacy</p> |  <p>Protection of Privacy</p> <p>Malware</p> <p>Defenses for mobile devices</p> <p>Cyberattack detection-mitigation</p> |

Note to authors, this is summary that captures the previous points, the 'blobs' should contain keywords that correspond to the key points in your presentation.

Don't present this slide, we will use this to add to the combined roadmap that we will build in the session



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Thank you!

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