

Cybersecurity: Technology and Governance

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Exercises

Chapter 7: Wireless Security

Task 1: Wifi

Consider WPA-Personal with Simultaneous Authentication of Equals (SAE).

- Does it provide user authentication and/or access control? Justify your answer.
- Does it authenticate the AP (Access Point) to the STA/user? Justify your answer.

Consider WPA Enterprise-based authentication **without** certificates.

- Does it provide user authentication and/or access control? Justify your answer.
- Does it authenticate the AP (Access Point)/enterprise to the STA/user? Justify your answer.

Task 2: Bluetooth

- Why shouldn't "Just Works" pairing between devices be done in areas with a lot of unknown people?
- What can be the consequence if your mobile is paired with the device of a criminal hacker?
- Bluetooth devices have the default name given by the manufacturer. What can you do to more easily recognize specific Bluetooth devices?

Task 3: Mobile networks

- What is meant by "IMSI catcher", and what does it mean that "IMSI is caught"?
- What can/should telecom operators do to stop IMSI catchers?
- What can/should users do to protect themselves from IMSI catchers?
- What new security challenge is particularly significant for 5G networks?