IoT Light Bulb Covert Channel

Extended Functionality Attack on Smart Lights

Julia Wanker, Bennett Piater

Taxonomy of IoT Attacks

1. Ignoring Functionality
2. Reducing Functionality
3. Misusing Functionality
4. Extending Functionality

Ignoring Functionality

Reducing Functionality

Misusing Functionality

Create Discomfort

- Heat in summer, AC in winter
- Flash bedroom lights at night
- Turn on AC in bathroom in the morning

Generally be Annoying

- Turn on lights
- Open Faucets
- Run Washing Machine

. . . when the owners leave for vacation.

Extending Functionality

Ronen, Shamir Paper

Julia Wanker, Bennett Piater

Questions?

Julia Wanker, Bennett Piater