

Motivation

The power grids are becoming smarter. An EU directive aims to have 80% of households equipped with smart meters by 2020 in Europe. Smart meters are power meters that can send the measured consumption using internet protocol. Such measurements can reveal information about the user's private life, e.g., which movie is running on one's TV. Protocols have been proposed to preserve users' privacy. In this thesis, we want to analyze the amount of information leaked, if privacy-preserving protocols are not used.

Goals

Without privacy-preserving protocols, smart meters can detect too much information from the customers' private life. The main goal of this work is to reproduce the experiment developed by Greveler et al., 2012, trying to detect movies running on a TV. The student is also motivated to try other appliance and evaluate the leak of private information.

Type	
Analysis	■ ■ ■ ■ □
Empiricism	■ ■ ■ □ □
Implementation	■ ■ ■ ■ □
Literature Research	■ ■ ■ □ □

Vision

Information leakage is a huge problem in the information society and the news present a leak followed by others. This work will make a fundamental contribution measuring the consumption of devices and identifying the possible drawback regarding to privacy.

Abstract

Some paper have demonstrated that smart meters can reveal which device someone is using and when. Others have showed that we can extract more information of high-frequent measurements. Up to now, the worst scenario for privacy is the detection of movies in the TV. Reproduction of the experiment should be done to identification of new issues.

