

# Introduction to electronic voting

## Assignment nr 1 (14-19 X 2012)

ATM machines are very similar to DRE-machines. There is at least one company which was manufacturing both.

1. Describe a protocol that is performed between a customer and an ATM machine (and a bank and a payment card).
2. Consider the following cases:
  - (a) a customer asks for a receipt,
  - (b) a customer does not ask for a receipt,
  - (c) a customer asks for a receipt but the receipt is not printed.

A customer wants to withdraw amount  $x$ . Assume that an ATM is altered and it requests from a bank amount  $x + 50$  but pays a customer  $x$ .

How a customer can detect and prove that she was cheated?

3. Some ATM machines perform a slightly different protocol – they ask a customer if she/he wants to get a receipt before performing any operation. Explain the difference between that protocol and scenarios considered in the previous exercise.
4. Describe what is a:
  - (a) security policy – what is and what is not allowed,
  - (b) security mechanism – methods, tools and procedures that are used to enforce security policy,
  - (c) threat model,
  - (d) risk assessment,
  - (e) countermeasures.