CS 523: Social, Economic, and Legal Aspects of Security

Bank Account Theft
Can it really happen? How?

• Alice wakes up, checks her bank account, and finds out that it was emptied overnight through multiple transactions that she never authorized
  – She calls her bank and, after 45 minutes of listening to awful music and recorded messages, gets a human from whom she learns that the withdrawals were to pay for the credit card bills of a certain “Bob”

• Info that Bob (or “Bob”) needed to carry this out:
  – The bank’s routing number (public, on bank web site)
  – Alice’s account number (printed on Alice’s checks)
How Bob generated each transaction

• Bob connected to his credit card’s web site
• Bob clicked “Pay My Bill”
• As source of the funds to pay his bill, Bob entered Alice’s banking information
• That’s it! The credit card company took the money out of Alice’s bank account
  – Neither the credit card company, nor Alice’s bank, ever contacted Alice to ask for her approval
How did Bob get Alice’s bank info?

• He could have bought it from the illegal markets for such info

• How do the illegal markets get the info?
  – From corrupt bank employees
  – From people who handle physical checks (landlords who get paid by check, employees of utilities whose customers pay by check, ... etc)
  – From break-ins at companies, that reveal banking info of employees on the company’s payroll
Likely consequences for Alice

• No loss of money if she *promptly* catches and reports the fraud
  – Her bank would work with the credit card company to reverse the transactions
  – Note that someone who does not balance their checkbook may not notice a small-amount fraud (so a clever Bob would not have emptied Alice’s account, he would have taken a tiny slice from it)

• She has to close bank account, open new one
How to self-protect

• Do not write any paper checks, to anyone
  – Even to someone you trust, because processing the check takes it through too many hands
  – The rent check you use to pay your landlord is also seen by her accountant, the courier who drives and delivers it to the bank, bank employees

• Do not use your bank account for auto-pay of monthly bills (utilities, subscriptions, etc)
  – Use your credit card instead (loss limited to $50)
How to self-protect (cont’d)

• Do not keep large balances in the bank account whose info you shared, e.g.,
  – You wrote checks drawn on the account
  – You provided the account number to entities that pay you (as employee or consultant) – the info you provide for the purpose of putting money into your account can be used to get money out of it

• Move the money promptly to another account
  – OK if it is at the same bank