Sociable Objects Workshop

Instructor: Rob Faludi

Plan for Today

- Documentation

- Heat, curves and approximation

- Simple Sensor Network: wrap-up

- Sensor / Actuator Network: proposals

- Card Assignment

- Readings & Assignments

Documentation

Documentation

- Send me a link to documentation of each of your projects:

  - Imagined Sociable Objects

  - Doorbells

  - Romantic Lighting Sensor

  - Simple Sensor Network   <--got this link already!

Heat, Curves and Approximation

Curves

- http://sigma.octopart.com/5390347/datasheet/Vishay-NTCLE100E3103JB0.pdf

- http://www.vishay.com/thermistors/curve-computation-list/

- http://www.mstarlabs.com/sensors/thermistor-calibration.html

- http://www.purplemath.com/modules/strtlneq.htm

Simple Sensor Network: wrap-up

Sensor / Actuator Network: proposals

Floor Mesh Network

XBee ZigBee Node Indicators

- ATNI   Node Indicator

- ATND   Node Discovery

- ATDN   Destination Node

- Also:

    - ATDB   signal strength in DBm

    - AT%V   Voltage

Transmitting Data

- Read a list of all nodes on the network using ATND

    MY<CR>
    SH<CR>
    SL<CR>
    NI<CR> (Variable length)
    PARENT_NETWORK ADDRESS (2 Bytes)<CR>
    DEVICE_TYPE<CR> (1 Byte: 0=Coord, 1=Router, 2=End Device)
    STATUS<CR> (1 Byte: Reserved)
    PROFILE_ID<CR> (2 Bytes)
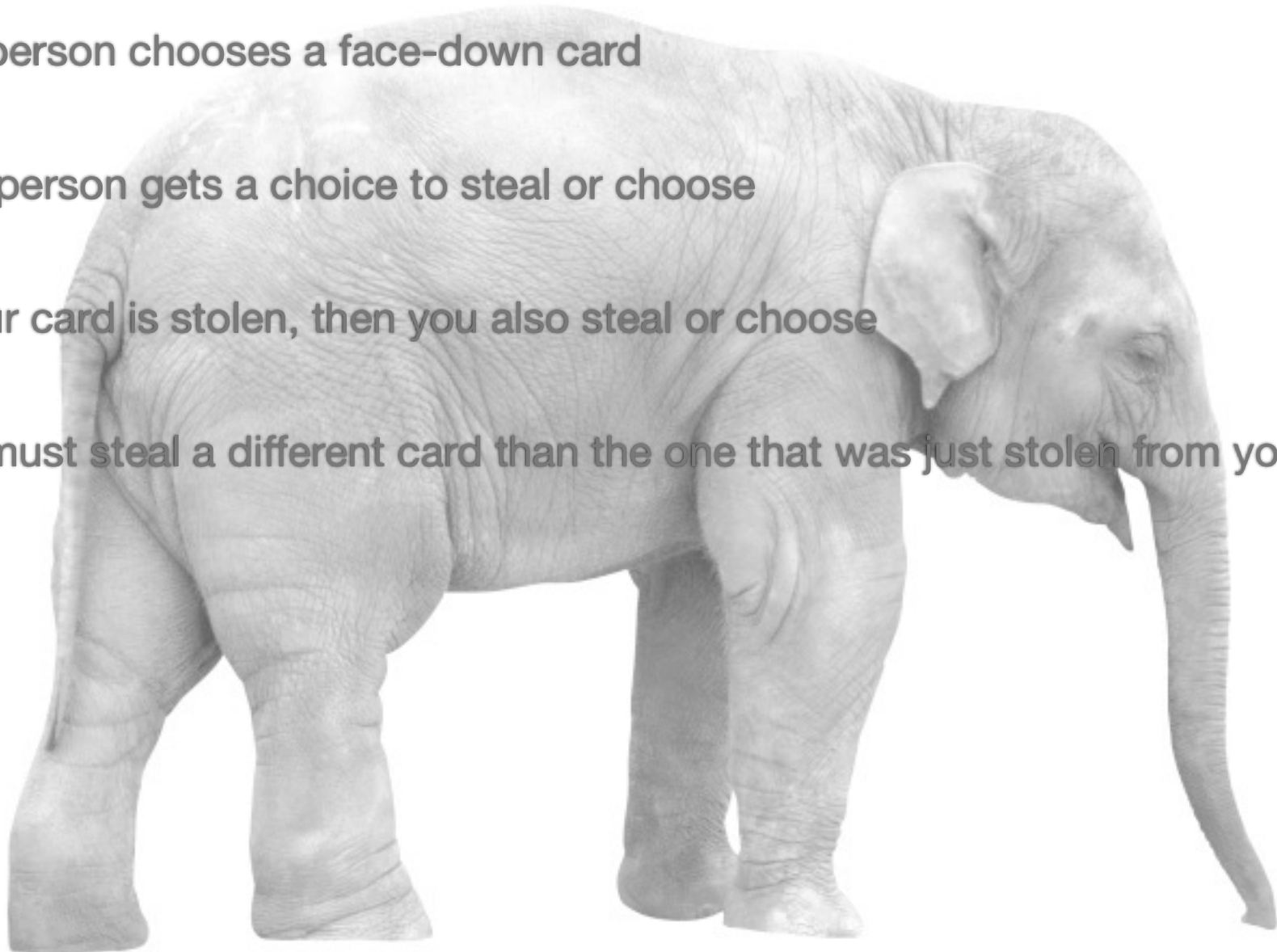   MANUFACTURER_ID<CR> (2 Bytes)
    <CR>

- Set the Destination Node using ATDN

Card Assignment

White Elephant Exchange

- first person chooses a face-down card

- next person gets a choice to steal or choose

- if your card is stolen, then you also steal or choose

- you must steal a different card than the one that was just stolen from you

Card Assignment

- Do a one-day project

- Work in pairs

- You may use one or both of your cards

- Think small, this is a one-day project with documentation at the end

Readings and Assignments

- Readings

  - Wireless articles from the Economist

- Assignments

    - Card Assignment 1

    - Sensor/Actuator Project prep