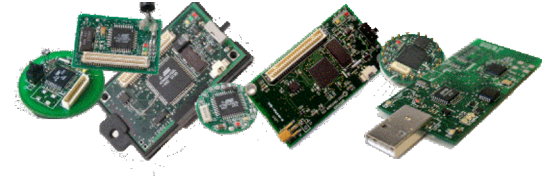


# Lecture Notes (Not Presented to Class)

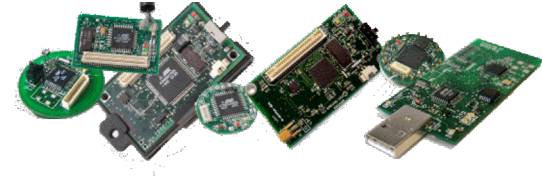
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# Teams

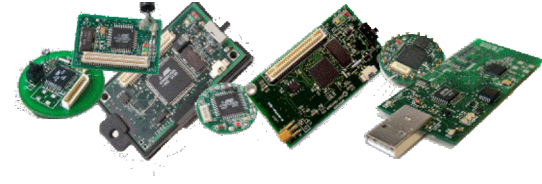
## ■ 1

- Han, Kay, Matthew, Ivan
- Fang-Fang, Rupe, Yitz
- Chad, Ioan, Dave, Gohar



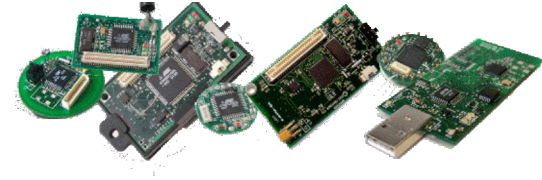
# Programming Assignment

- Use Surge\_3, Surge\_4, Surge\_5 for teams 1, 2, and 3 respectively
- Part 1: Get single mote programmed with current TinyOS distro (from CD)
  - Get acquainted with tools for downloading TinyOS
- Part 2: Do “Blink” example from net
- Part 3: Hello World in NesC
  - Set Timer for 5 secs, then sound alarm for 3 secs
- Part 4: “Shake and Cry”
  - Set time for 3 secs
  - Get accelerometer reading
  - Sound alarm and cry for 3 secs if acceleration above threshold of normal table vibration (picking up mote for example)
  - If you are having fun, use LEDs to signal “armed and ready” (blinking red == armed, solid green = setup)



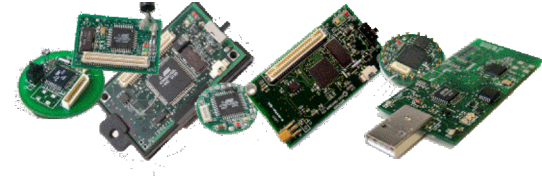
# The Puzzle

- Power-aware encoding of 1s and 0s



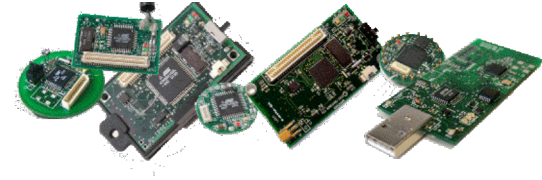
# Tweak and hand in on Monday

- Send email, Subject: CS347
  - beckman,stevens at mcs.anl.gov
- 2 Sensor network applications (1 must be feasible with current set of motes or motes with weather board)
  - Include predictions on software, deployment issues, constraints
- Algorithm for ad-hoc routing and discovery, including discussion of scalability, power cost, etc.



# Discussion of Homework

- Innovative Apps
- Ad-hoc networking
- Discussion of papers



# New Papers

- A Transmission Control Scheme for Media Access in Sensor Networks
- The Emergence of Networking Abstractions and Techniques in TinyOS
- Active Message Communication for Tiny Networked Sensors