

Northeastern University

Spring 2010 ECE Capstone



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Design Concept

- Online services create virtual barriers.
- **Network Buddy** uses technology to connect people.
- Meet people at all types of venues based on compatibility.



eHarmony®



Approach

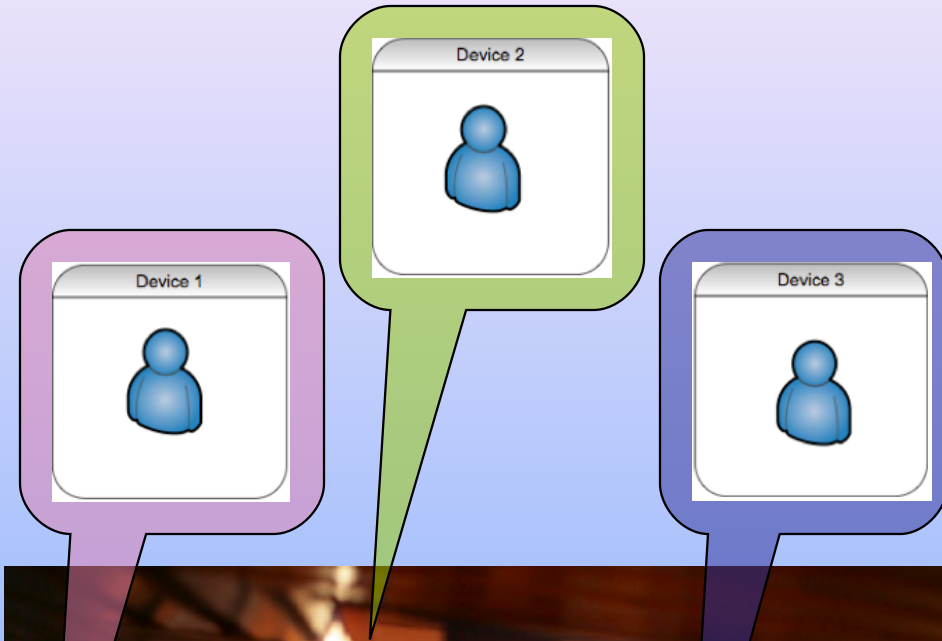
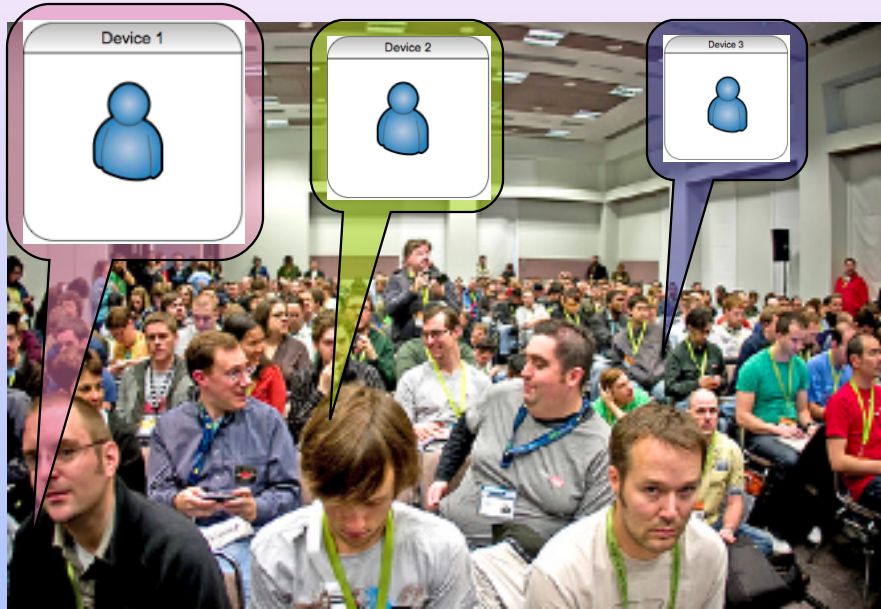
Who will use it?

- Most practical application: Dating.
- Convenient alternative to online dating.
- Expands your social circle.

What is needed?

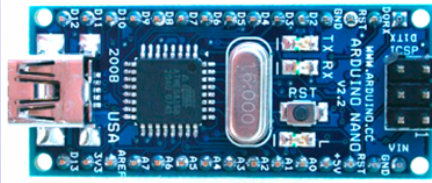
- A set of handheld devices that compare two or more people.
- A web application for user interface.
- SMS service for retrieval of profile (not implemented).

Where It Will Be Used: Social Events, Bars, Business Conferences, Trade Shows



Hardware

The Brains/ USB Interface: **Arduino Nano MCU**



Power: **9V**

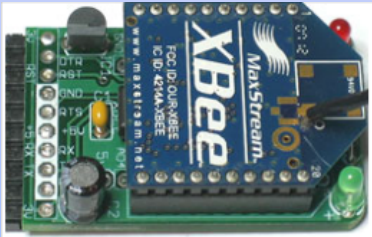
On/Off: **Power**

Controls (Push Buttons):

Left Scroll

Right Scroll

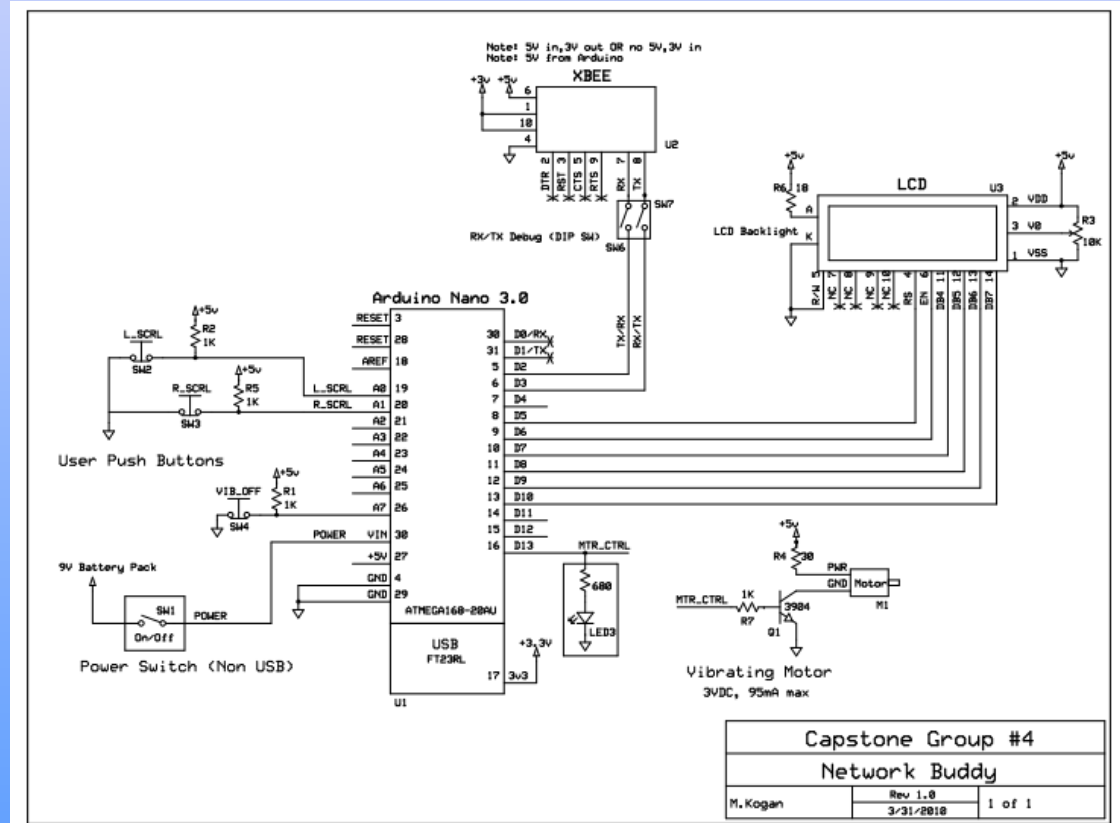
Communication: **XBEE Series 1 RF**



Display: **8x2 Character**

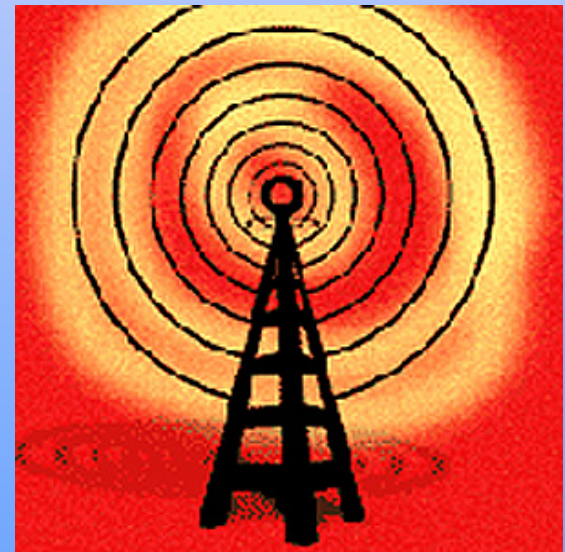


Indicator: **Vibrating**



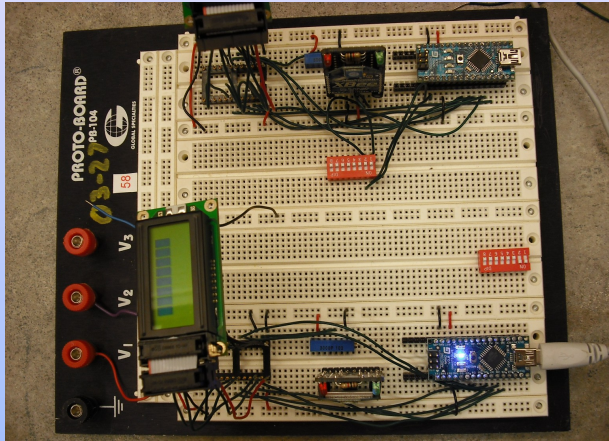
Firmware

- Arduino IDE Program
- C/C++ Hybrid
- Wireless Communications
- Handshaking
- Message protocol
- Component Interfacing:
 - LCD (custom symbols)
 - Vibrating Motor
 - Buttons

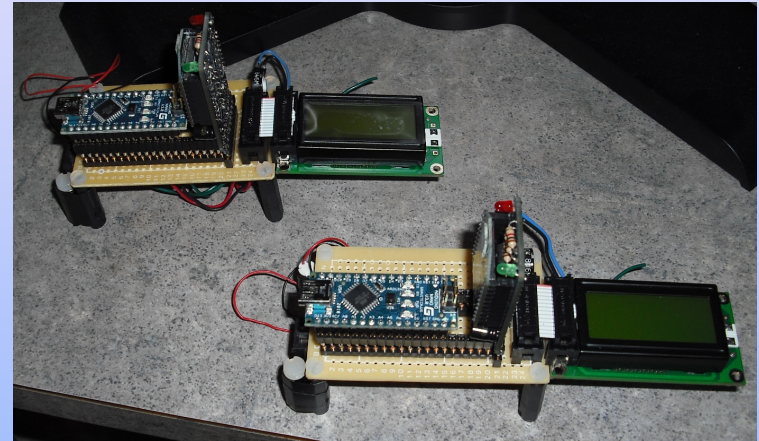


Prototype Versions

Stage 1 –



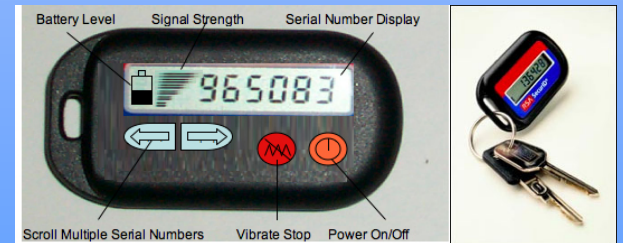
Stage 2 – Developmental



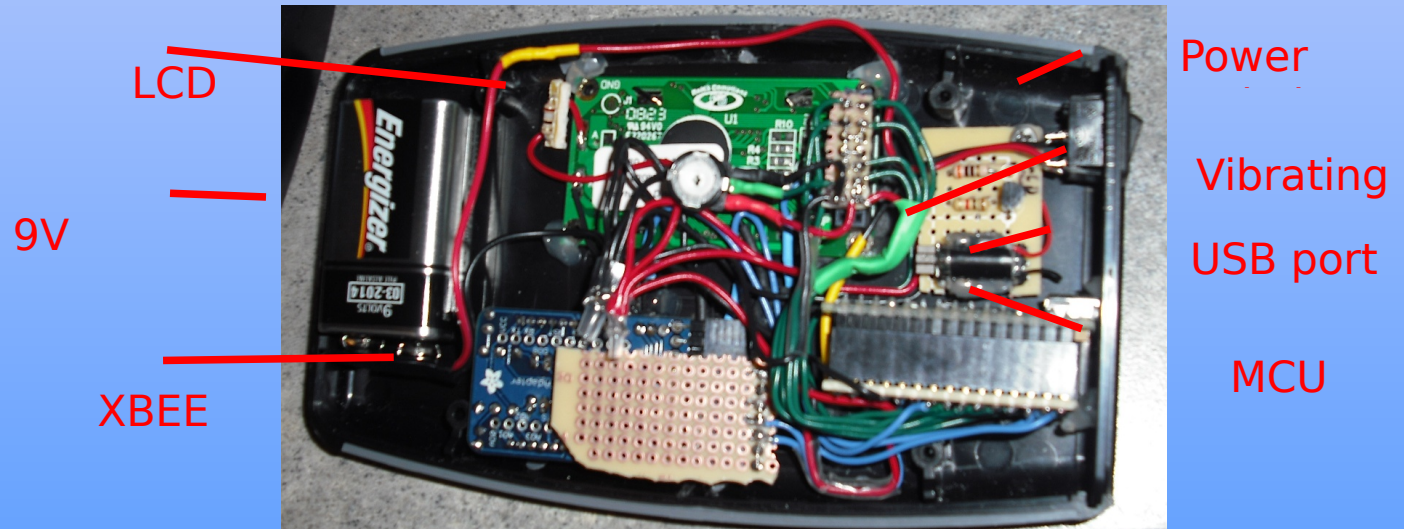
Stage 3 –



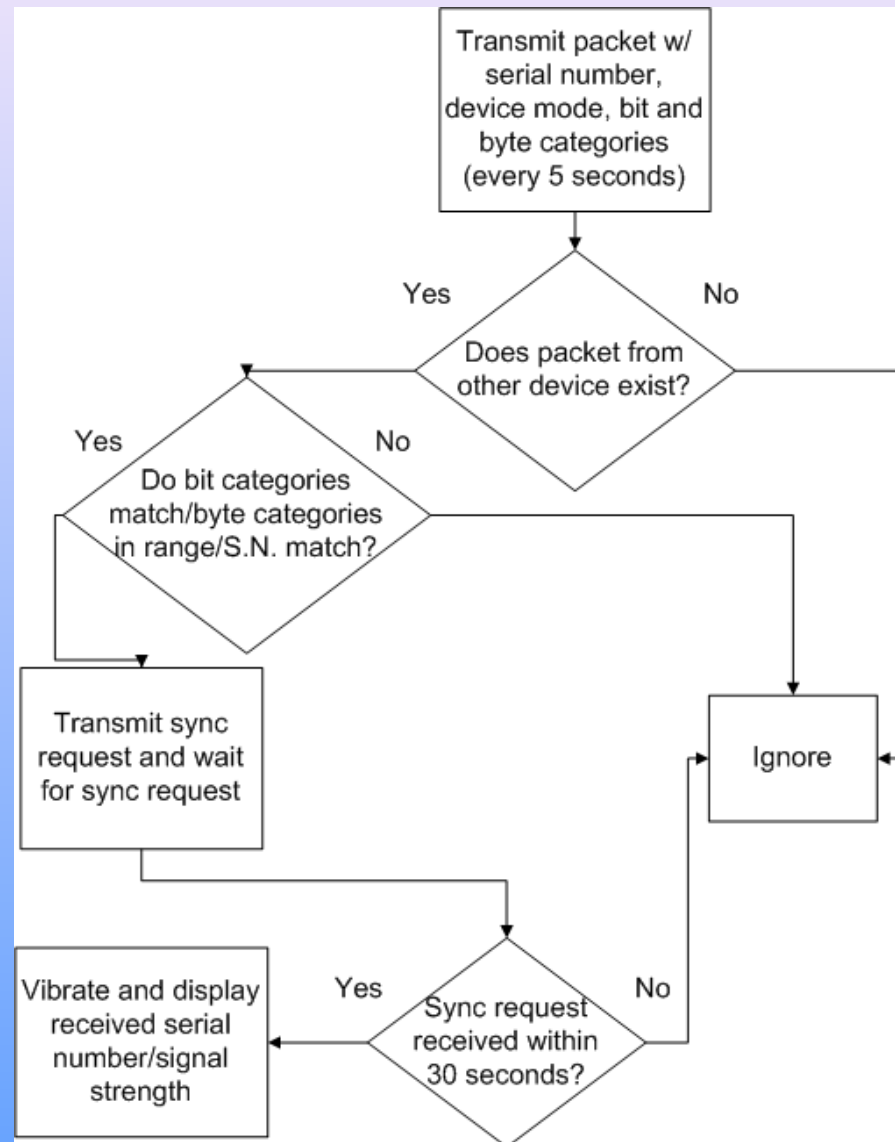
Future Stage – Key



Under the Hood




Compatibility Algorithm



Web Application


Allows users to:
-manage mode-specific” profile information
(e.g. “personal networking”,
“conference”)



Network Buddy



Your Email:

Passphrase:

 Login

Welcome, testuser! | [Logout](#)


My Tools

-  Profile Information
-  Account Settings

Generic Information

My age:

I am a:

 Update Profile

Mode-Specific Information

Personal Networking Mode #2

Miscellaneous

I seek a:


Your highest level of education:

Your salary bracket:

Personality

Days per week you drink:


Days per week you smoke:


Your cleanliness level: 

Physicals

Times per week you play sports:

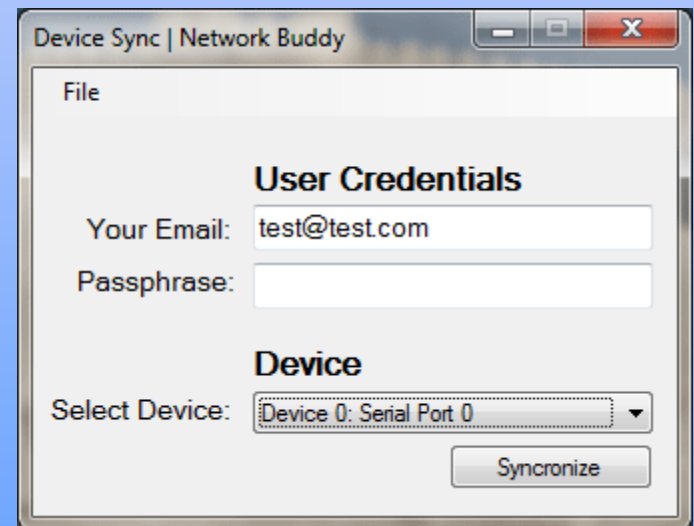
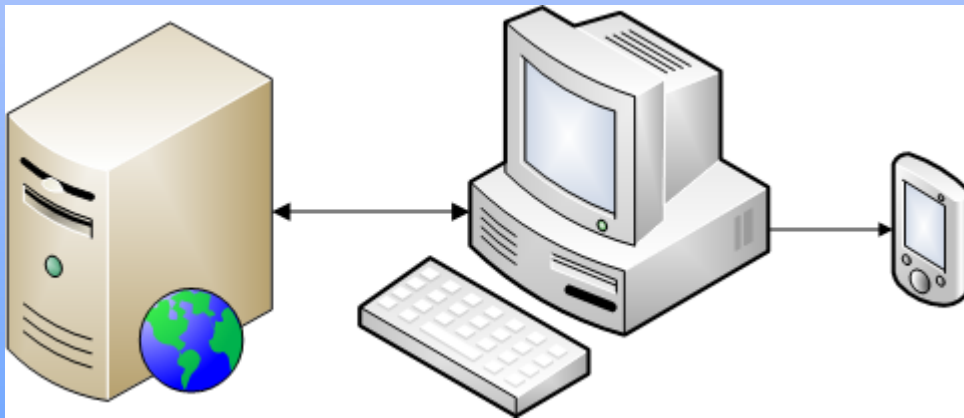
Hours per week you watch TV:

Your physical activity level: 

 Update Profile

Data Sync Application

- Standalone (Windows-based) application
- Connects Device with local Client via USB



Questions?

Matched with Network Buddy!



Matched with
an Online Social Network

