CMSC434
Intro to Human-Computer Interaction

In-Class Team Project Proposal Presentations!
Wednesday, February 22, 2012
Instructor: Jon Froehlich
TA: Kotaro Hara
CMSC 434
Introduction to Human-Computer Interaction
Grassroots
an online organic farming community
Why organic? Why online?

- Traditional supermarket produce is artificially enhanced
- Push towards local, organic produce from “locavores”
- Organic farming community is a fairly disconnected network
- Solution: online marketplace hosting various local farms
What’s on the market?

- **Locavore**
  - Feature-rich mobile application
  - No rating system, no delivery

- **LocalHarvest.org**
  - Feature-rich web application
  - No rating system

- **Amazon Fresh**
  - Rating system, delivery
  - Promotes larger producers
Target Users and Benefits

- **Local farmers**
  - Expand their businesses online
  - Receive feedback on the produce sold
  - Increase customer loyalty

- **Consumers of organic goods**
  - Ability to compare produce in local area
  - Convenient way to purchase organic produce online
Methods of Learning

- Interviews
- Paper Prototyping
- Surveys and Questionnaires
UNEMPLOYMENT

sucks when your job gets blow'd up
Previous Solutions
Solutions

Sidewalk issues due to Construction.

If there are sidewalk issues due to construction: Call 311.

Construction detours caused by development (not road construction)

If private development is adjacent to a county road: Call 311.

If private development is adjacent to a state road: Call the State Highway Administration at 301-513-7300 and request the Utility section.

Maintenance problems: broken sidewalks, tree branches blocking the sidewalk or bike lane, poor drainage causing flooding in the sidewalk or crosswalk or bike lane.

If the problem is on a county road (un-numbered roads): Call 311.

If the problem is on a state road (numbered road): Call the State Highway Administration, Maintenance Office, at 301-513-7305.

If the problem is on private property immediately adjacent to the road (for example, bushes that need trimming): Call 311 or report online.

Click here for more information on maintenance issues.

Click here for more information on drainage issues.

Maintenance problems on paved shared use trails (bicycle/pedestrian): broken pavement or overgrown vegetation.

If within a Maryland-National Capital Park and Planning park: Call MNCPPC at 301-670-8080 or email service.center@mncppc-md.org.

Capital Crescent Trail within Montgomery County: Call the MNCPPC maintenance office at 301-495-2535.

Georgetown Branch paved trail north of Bethesda Avenue: Call 311.

Metropolitan Branch paved trail north of ped/bike bridge near Fenton/Chicago Street: Call 311.

Metropolitan Branch paved trail south of ped/bike bridge near Fenton St/Chicago Ave: Call the City of Takoma Park, Department of Public Works at 301-891-7633.
SeeClickFix: A Worthy Competitor
Proposed Solution
Take Picture of Problem
Voice Capability

Record Sound Here
Map of Issues
Gamification

FixSee
You got the Community Warrior badge!
OK
Primary Users

• Members of the community that want:
  – Improve their community’s infrastructure
  – Contribute to decreasing unemployment rates (which would improve the economy)
  – A better way to report infrastructure/utility problems to the proper authority
Secondary Users

- State and local governments, utility companies
  - Better organization of reported problems, with feedback on which problems are more important to the community that the problem was reported in
  - Lower cost of finding problems
Research Methods

• Interview state/local government officials
• Poll members of nearby communities to find out if they use, or even know about, the problem reporting methods currently provided by their community
Questions?
Chasing Dreams

Your future is no game!
Encouraging High-school students to pursue Math, Science, and Engineering.
Introduction

What inspired you to get into science?

Why do you like Math?

What do you find fun?
Previous Work

Sonic Schoolhouse/Math Blasters
Open World vs. Individual Levels
Audience

Highschool Freshmen

Teachers
Proposal

Adventure Oriented Learning
Experiencing Real World Applications
of skills.
Encourage yourself and others.
Project Motivation

• Half of Americans say the biggest problem facing education is not about money, but about a lack of parental involvement (public agenda)
Project Motivation

- Studies have showed that
Project Motivation

• Be proactive rather than passive.

• Most of the time, report card too late for action
Project Description

• Provide a mobile platform for parents, teachers and students

• Almost everybody has a smart Phone

• Connect parents, teachers and students
Past Works
Why it's a bad idea to let schools design their page

- Web page created for Parents by Julius West Middle School (Based on the Edline platform).
- Users claimed it lacked organization and it was difficult to find what they were looking for.
- Their design does not take into consideration the way users interact.
Our Approach
Proactive Parent (P²)

- A uniform user interface designed by our team.
- The design will be based on what we learn from our research.
- The result will be a very intuitive interface that is easy to use.

- Login screen of our P² application
- Provide "on the go" usability
- Easy to contact teacher
- Grades easily accessed
- Assignment scores
- Exam scores
- Attendance record
Target Users: Parents

- Check child's attendance
- Check grades
- Keep track of assignments
- Easy contact with teacher
- Receive notifications
Target Users: Teachers

- Post assignments
- Easy contact with parents
- Post grades
- Answer student questions
- Keep attendance
Target Users: Students

- Check up on grades
- Look up assignments
- Contact teacher with questions
Research Sources

- Parents in public
- Teachers
- Principal
PureFoods
*You ARE What You Eat*

Haoyue Wang, Kerese Wright, Mengyi Miao, Will Smallwood
Problem

- 48 million foodborne illnesses
- 128,000 hospitalizations
- 3,000 deaths
- reduce the number of people suffering from foodborne illnesses by inspecting your foods before consumption
Past Solutions

- People are more concerned about diet and budget than food safety.
- Developers concentrate on food safety are not doing enough.
Target Users

- Primary Users: Individual Household
  - Measuring foods' condition
    - Bio-sensor scanning process
  - Refrigerator and kitchen thermometer
    - Build-in wireless sensor

- Secondary Users: Restaurants, Grocery Stores
  - Measuring foods' condition
    - Bio-sensor build into the RFID
Proposed Methods

Surveys
publish e-survey, talk to restaurant owners

Direct Observation
trail cooks, observe kitchens, refrigerators

Prototyping
See what people would be willing to use while preparing food
GPS as Safety Device
Travel Safely

Amrit Khatri
Nita Sutreja
James Leffler
Ricardo Kreyhsig
Problem Motivation

• Safer Traveling
• Self-defense weapons often elevate problem
• Safety solution needed where potential victim could avoid an attack
Problem Description

• Crimes while traveling
• No real time crime information
• No feedback or review about places
Past Work

- Websites for ratings and reviews
- UMD Alert limited to UMD staff/student/faculty
- Personal safety devices like safety alarms and child tracking devices
Solutions

• Real time crime information
• Friend/Family tracking via social networks

• Unique:
• All features in one
Target Users

• General People
  - Vacation travelers
  - People who travel often over long distances
  - People who live in high crime rate areas

• Benefits
  - No need to interact with strangers
  - ill-intentioned locals
  - Safe place to rest/eat
Methods of Learning

• Extreme user interviews
  (Interview with highly qualified or completely unfamiliar person)

• Surveys
seek. rely. overcome.

alliance

Prezi presentation: http://cmsgc34-s12.wikispaces.com/Reaching+Out+to+LGBTQ+Youth+in+Trouble
Helping Organizations Balance Energy Efficiency with Cost Effectiveness

Kong
Director, Energy Saving

Kyle Schultheiss
Dylan Symington
Sawyer Symington
Benson Tran
GREEN PROGRAMS SAVE GREEN

69% of US organizations have green programs in place

60% of companies measured cost savings from green programs in 2010

39% of companies measured cost savings from green programs in 2009

68% reported paper cost savings

68% reported heating/cooling cost savings

78% reported electricity cost savings

60% reported water cost savings

POPULAR GREEN PROGRAMS:
- Ridesharing
- Telecommuting
- Light sensors
- Hiring individuals with green skills and experiences
- Bicycle parking
- Recycling + paper reduction
Previous Solutions
Commercial Clothes Washers for Consumers

(Are you a partner? For Partners)

See also: Residential Clothes Washers

Did You Know?
By choosing ENERGY STAR qualified clothes washers for your laundry facilities, you could trim more than $1,000 per washer from your utility bills over ten years. View more information on cost savings.

About ENERGY STAR Commercial Clothes Washers

Overview Specifications Buying Guidance FAQs

Choosing ENERGY STAR qualified commercial clothes washers for your laundry facilities will save you a significant amount of money and provide your residents with the best laundry performance possible.

Make your property more attractive to current and prospective residents.
Thanks to the latest cutting-edge features, ENERGY STAR qualified commercial clothes washers will satisfy all of your residents' demands and more:

- Charge a Higher Vend Price. Since most ENERGY STAR qualified clothes washers have more capacity than conventional clothes washers, property managers can charge a higher vend price and increase vend revenue.

- Save More Than Money. ENERGY STAR qualified commercial washers have more capacity than conventional top-load models with an agitator. Some front-loaders can wash over 20 pounds of laundry at once, compared to 10-15 pounds for a standard top-loader. This means your residents can do fewer loads and avoid having to bring big, bulky items to the Laundromat.

- Enjoy Clothes Longer. Most ENERGY STAR qualified commercial washers are designed
## Commercial Clothes Washers Qualified Product List

List Posted on February 15, 2012

Below are currently qualified ENERGY STAR models available for sale in the U.S.

<table>
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<th>Brand Name</th>
<th>Model Number</th>
<th>Load Configuration</th>
<th>Volume (cubic feet)</th>
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Our Solution

1. Search & Compare

2. Visualize Savings

3. Buy
Target Users
Benefits

"I saved a bunch of money by going green"
- $mooth Sam
Methods

- Interview
- Survey
- Observation

"I'm not stalking..."
-Sneaky Pete
Save Energy?

You Better!

-Evil Monkey, Family Guy
SafePath

“Don’t Go There!”

Stephen McCarthy
Andrew Lake
Andhita Primandini
James Hayes
### Problem Motivation

#### Uniform Crime Report Statistics

**University of Maryland, College Park**

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- Year-to-date includes January 1 through December 31, 2011.
- UCR offense classification includes rape and attempts to commit rape (see definition), and does not include other sex offenses.
- Simple assaults (those not involving a firearm, knife or other cutting instrument, other dangerous weapon, or hands/fists/feet resulting in aggravated injury) are not included in these numbers.
These are in the order that they were mentioned in the presentation.


SetReady.
Taking the Game Outside
THE ISSUE

OBESITY?

"I'M ONLY MILDLY OBSESE..."

OBESITY TRENDS* AMONG U.S. ADULTS
BRFSS, 1991 and 2005-2007 Combined Data
(*BMI >30, or about 30 lbs overweight for 5' 4" person)

*Source: Behavioral Risk Factor Surveillance System, CDC.
THE ISSUE
OBESITY & INACTIVITY

“I EAT BECAUSE I’M UNHAPPY, I’M UNHAPPY BECAUSE I EAT”

Kaiser Family Foundation
CURRENT SOLUTIONS

STRIIV.com

FITOCRACY.com

ZAMZEE.com
CURRENT SOLUTIONS

TARGET GROUP RESTRICTED

PREDEFINED CONCEPT OF USE

EXTRA PERIPHERALS

WHY NOT LEVERAGE SMARTPHONES?
DIFFERENT SOLUTION

USER DRIVEN EVENTS

DIFFERENT AGE GROUPS
Parent/Child  OLDER ADOLESCENT & ADULTS

EASE OF USE

PEACE OF MIND

“WAIT, HE’S NOT AT MAX’S HOUSE?”

Your Son
(Not Max’s House)

By Steve

Google Maps
OUR SOLUTION

CONNECT USERS
GROW WITH THE USER
EASY INTUITIVE USE

NETWORKS
SCHOOL
CHURCH
FIGHT CLUB

USER

USER

USER

PARENT

CHILD

EVENT

+ MATURITY
THE GAMEPLAN

PAPER PROTOTYPING

Interviews
VOLUNTEERISM

CONNECTING THE DOTS

VICKI LE | JOSE MEDINA | KEVIN EGNER | MICHAEL OHR
MOTIVATION?

I JUST WANT TO VOLUNTEER!!
PROBLEM DESCRIPTION

- Poor user interfaces
- No ability to track progress (whether organizations’ or volunteers’) or share with others
- The best of features are spread to multiple sites – we want to eliminate this and create one central site
Most current volunteer sites have a relatively simple search feature on their front page.

Not all of them have a system to publish reviews.

Restricted to certain geographic areas.
FLASH VOLUNTEER ... LACKING?
Engage Students

VolunteerMatch Solutions

VolunteerMatch Campus Tools
VolunteerMatch can help harness the vitality and passion on your campus to benefit the community at large. Providing a hosted, branded Web site with active volunteering opportunities makes it easy for your students, faculty and staff to get engaged.

One Web Site for All Your Campus Volunteering Needs
Engage Students, Faculty and Staff
Engage Student Passions

Read the Volunteering Is CSR Blog
Honoring Volunteers: Old National Bank’s Volunteer of the Year
Posted 02/21/2012 by Shari Itsen
VOLUNTEERMATCH ... BAD!

For a price quote or demonstration:

CONTACT US
PROPOSED SOLUTION

- One place for volunteers and organizations to go to
- No lower limit on how much an organization can post
- Progress bar for volunteers and organizations
- Social networking sharing
- Minimized registration process
TARGET USERS

- Students
- Volunteers
- Non-profit organizations
METHODS

- Try It Yourself
- Surveys and Questionnaires
- Affinity Diagrams
- Competitive Product Survey
- Behavior Sampling
FINAL GOAL

I DON'T ALWAYS VOLUNTEER

BUT WHEN I DO, I CHOOSE VOLUNTEERISM'S WEBSITE