Evaluation Assignment 1
CS5760
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Undergraduate Team: Team5 (Stomp - Ant Mounds)

We are collaborating to develop an app for Andrew Storer that will enable middle and high school students to collect data about local ant mound creation behavior. Specifically, Andrew is interested in what kinds of materials North American ants are using to create their underground mounds. The app will require students (primary users) to take pictures of ant mounds, record the location of those mounds, note the locations where there are no mounds, record the size of the mounds, as well as the flora species adjacent to the ant mounds. We envision that teachers and parents may also use the app to monitor the student/children activities as well.
ONION MODEL

- **Primary Stakeholders**
  - Students
  - Teachers

- **Secondary Stakeholders**
  - Ant Scientists
  - Parents

- **Tertiary Stakeholders**
  - App Evaluators
  - App Designers
  - App Developers
  - Board of Education
  - Principal

**App**
<table>
<thead>
<tr>
<th>Stakeholder Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kit</strong></td>
</tr>
<tr>
<td><strong>App</strong></td>
</tr>
<tr>
<td><strong>Goals</strong></td>
</tr>
</tbody>
</table>
| - Complete assignment (smash N mounds) | - View data:  
  - location (gps coordinates), time ant mounds are found  
  - locations ant mounds were not found  
  - pictures of mound contents carried out by ants  
  - pictures of ants in mounds | - pass HCI class  
  - write code for app  
  - ensure app is functional |
| **Influences** | **Influences** | **Influences** |
| Contributing | - Data collection (pictures of ant mounds)  
  - Mound measurements (size)  
  - Nearby tree species  
  - Simple interactions  
  - Need training  
  - Need to see where they've been before | - N/A  
  - Needs a lot of data | - create the app  
  - limited time  
  - dependent on feedback from designers and evaluators |
| Constraining | | | - dependent on production of developers and designers |
| **Teachers** - caretakers and managers of middle school/high school students | | **Evaluators** - people who assess the app including: UX consultants, usability test participants, and HCI professors |
| **Goals** | **Goals** | **Goals** |
| - Track students current positions  
  - View student past activity  
  - Annotate/comment on pictures | - Track children's (students) current position  
  - View student past activity | - pass HCI class  
  - conduct usability test  
  - ensure app is effective, efficient, and enjoyable |
| **Influences** | **Influences** | **Influences** |
| Contributing | - provide students feedback on picture quality  
  - need to see past student data records (when/where did they take pictures)  
  - need to be able to comment on pictures  
  - need to be able to view current student locations | - N/A  
  - N/A  
  - N/A  
  - N/A  
  - N/A | - test the app  
  - provide feedback to guide development to a more usable app  
  - limited time |
| Constraining | | | - dependent on production of developers and designers |
| **Parents** - caretakers of students | | **Designers** - HCI student(s) who create the "look and feel" of the app |
| **Goals** | **Goals** | **Goals** |
| - Track children's (students) current position  
  - View student past activity | - Track children's (students) current position  
  - View student past activity | - pass HCI class  
  - create aesthetic interaction experiences for users |
| **Influences** | **Influences** | **Influences** |
| Contributing | - N/A  
  - N/A  
  - N/A  
  - N/A  
  - N/A | - N/A  
  - N/A  
  - N/A  
  - N/A  
  - N/A | - dependent on production of developers and feedback from designers |
| Constraining | | | - dependent on production of developers and feedback from designers |
| **School Principals** - people who manage school teachers, likely responsible for accepting or rejecting class assignments that involve going into woods. | | |
| **Goals** | **Goals** | **Goals** |
| - Safety of students  
  - Meet educational goals | - Safety of students  
  - Meet educational goals | - Safety of students  
  - Meet educational goals |
| **Influences** | **Influences** | **Influences** |
| Contributing | - N/A  
  - N/A  
  - N/A | - N/A  
  - N/A  
  - N/A | - N/A  
  - N/A  
  - N/A |
| Constraining | | | - N/A  
  - N/A  
  - N/A |
| **Board of Education** - committee of people who oversee school policies for out-of-classroom activities. | | |
| **Goals** | **Goals** | **Goals** |
| - Safety of students  
  - Meet educational goals | - Safety of students  
  - Meet educational goals | - Safety of students  
  - Meet educational goals |
| **Influences** | **Influences** | **Influences** |
| Contributing | - N/A  
  - N/A  
  - N/A | - N/A  
  - N/A  
  - N/A | - N/A  
  - N/A  
  - N/A |
| Constraining | | | - N/A  
  - N/A  
  - N/A |
Summary of Stakeholder Analysis

There is type of primary user: high school and middle school students. These students are presumed to be competent in their mobile phone use because they are digital natives. Parents and Teachers may be considered secondary users because they are mostly interested in current or past locations of students (rather than ant mound data). Tertiary users are developers, designers, and evaluators of the app, but may also include school principals, and school boards of education who make policies regarding the types of activities appropriate for students to engage in as part of classroom activities.
Personas

Name: David
Occupation: Student
Age: 12
App Familiarity: Competent Performer
Stakeholder: Primary User

David is a straight A student. He wants to get a good grade on his field experiment assignment which requires him to use STOMP. He didn’t understand the instructions given in class about how he should use the app. He has been using smart phones and apps his whole life. He’s not worried about navigating the app, but he is worried that the app won’t give instruction about how he should complete the assignment. David hopes there is a tutorial explaining how to gather the field data.

Name: Drew
Occupation: Student
Age: 18
App Familiarity: Competent Performer
Stakeholder: Primary User

Drew is a senior in his final semester before high school graduation. He has a severe case of “senioritis”. He is totally unmotivated to complete his assignment. Drew needs some compelling interactions to draw his attention or he will get bored with the app and go back to procrastinating or hanging out with his friends.
Robert is an experienced and wise 9th grade biology teacher. His teaching methods are more traditional and he usually avoids using technologies like apps. However, the school Principal has suggested he give the students a field experimentation assignment using the Stomp app. Robert is most concerned with being able to view his students’ activity so he can grade them. He’s worried that some students will record a lot of ant mounds and some will do nothing, and he won’t be able to tell them apart. He is easily discouraged by technological failures. He hopes that the new app will facilitate his teaching and grading.
Name: Susanna
Occupation: Mom
Age: 40
App Familiarity: Competent Performer
Stakeholder: Secondary User

Susanna is a mother to one of the students who is using STOMP to complete her homework assignment. She is most worried about keeping track of her daughter as she walks through the trails behind the house. If she had time, she’d go with her daughter but she’s at work. But she still wants to check in to see where her daughter is. Susanna has experience using smart phones and apps but she gets nervous when she thinks her daughter could be lost in the woods. She hopes she can easily access an intuitive-to-use/read map showing the location of her daughter.
## Simplified HTA

<table>
<thead>
<tr>
<th>Upper Level Views</th>
<th>Login view</th>
<th>Tutorial view</th>
<th>View Map</th>
<th>START STOMPING - Available after tutorial is complete</th>
</tr>
</thead>
</table>
| Goals             | - Enter Unique ID to find self/others in app | - Intro to purpose  
- Learn how to use app | - Track current position of self/others  
- Track past position of self/others | - Take picture of ant mound  
- Measure ant mound  
- Identify local tree species |
| Mid Level Views   | - Enter username  
- Enter password  
- Re-enter password | - Active introduction guide (requires participation to complete)  
- Active tutorial guide (requires participation to complete) | - View current position  
- View past positions  
- View others current position  
- View others past positions  
These could be checkboxes | - Take picture of ant mound  
"Keep measuring stick in view" OR  
Text entry boxes for W x H x D dimensions  
- Take picture of popular trees nearby |
| Lower Level Views | - Submit  
- Cancel | - Press "stomp" button to continue  
- Place ruler to continue  
- Next  
- Finish | - Back  
- Home | - Submit [geotags, uploads picture]  
- Retake  
- Cancel  
- Home |

## Summary of Simplified HTA

This table outlines the basic structure of the app menu - the higher level menu items being located higher in the table and lower at the bottom. The simplified HTA is not an exhaustive list of all menu structure proposed, but does hold examples of key features which could be considered. There may need to be more discussion with the scientist, Dr. Storer, to understand exactly how he’d like the mound measurement and local tree species identification processes to be completed.
in europe: you find mounds that are produced above ground
in USA: the mounds are underground

can we find more ant mounds than are currently known to exist

Wood ant mounds: organic: created by pine needles, etc.

enagagemnet into a project

NOT STOMP: just move a part of it.

Yes to GPS

Perhaps tablets, but not at first.

Location info provided from students: What type of forest
    The dominant species of tree
    Measurements of the mound (ruler for reference? Optional)
    Documentation as to where there are not mounds
    (Sending app to others in Europe)

There will be an offline version of the app
(data points on a map, vary from lab verified vs. location verified)

Style of research:
    There is an initial starting point
    This is the basis for general information
    Then, they describe how far they walk in a given direction
    They record any ant mounds encountered
    After a distance they stop, and may repeat this in any given direction (apart from retracking)

    Transect (what is this exactly)

    GPS tracking at the start and end of each transect

    (this has specific guidelines for recording)

    Do not deviate from the transect, finish it, and create another one if there is an ant mound farther away.

    good contrast with the screen

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