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IDIA 612 : iPhone Application Project

Fall 2009

The Situation

Our Task: Design an iPhone application to promotes sustainable living.

Challenge: To design the application to work with the functionality of the iPhone while keeping in mind the psychology of iPhone users and people who travel.

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EcoTravel Application

1. Change the behavior and cognitive response to eco-friendly concepts**.**

2. Sustain these behavioral changes through a user-friendly application that is accessible anywhere.

3. Provide users with an outlet to support their existing "green" habits.

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Research

1. Travel Motivations and Expectations

2. Social Media and Mobile Devices

3. UI Control and Error Prevention
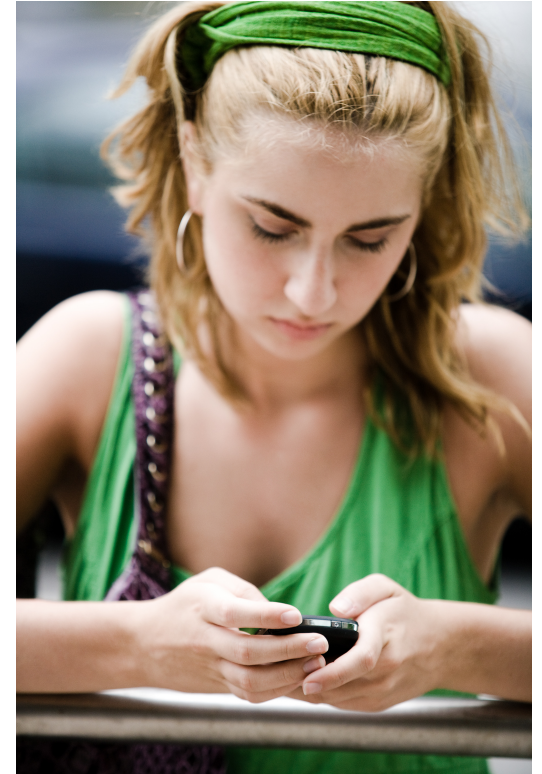
4. Design Factors for iPhone

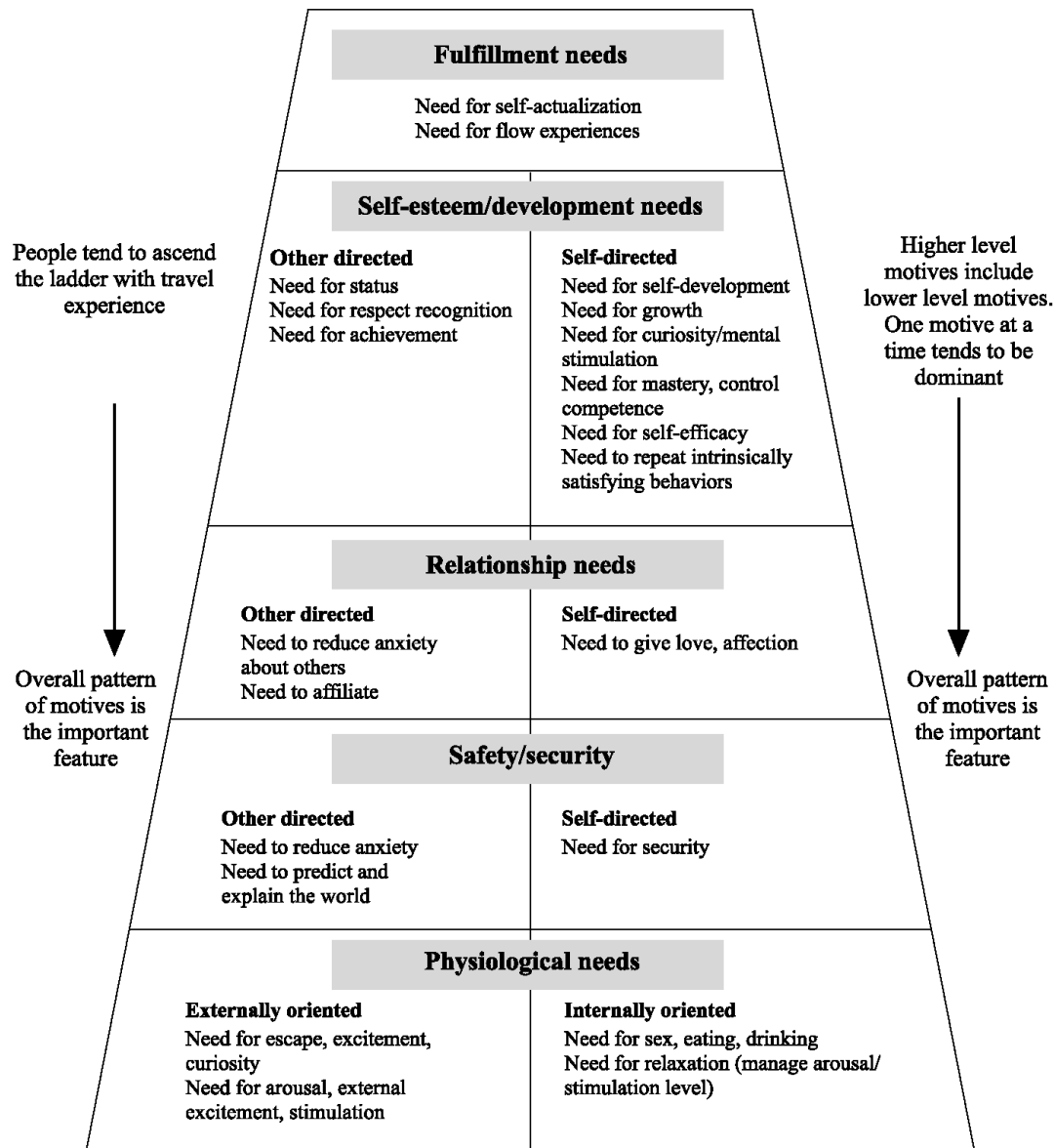EcoTravel

Target Audience

People who are:

- Predisposed to travel
- Users of iPhones
- Interested in sustainable activities

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Travel Motivation

Pearce's Travel Career Model

People tend to ascend the ladder with travel experience

Overall pattern of motives is the important feature

Higher level motives include lower level motives. One motive at a time tends to be dominant

Overall pattern of motives is the important feature

Fulfillment needs

Need for self-actualization
Need for flow experiences

Self-esteem/development needs

Other directed
Need for status
Need for respect recognition
Need for achievement

Self-directed
Need for self-development
Need for growth
Need for curiosity/mental stimulation
Need for mastery, control competence
Need for self-efficacy
Need to repeat intrinsically satisfying behaviors

Relationship needs

Other directed
Need to reduce anxiety about others
Need to affiliate

Self-directed
Need to give love, affection

Safety/security

Other directed
Need to reduce anxiety
Need to predict and explain the world

Self-directed
Need for security

Physiological needs

Externally oriented
Need for escape, excitement, curiosity
Need for arousal, external excitement, stimulation

Internally oriented
Need for sex, eating, drinking
Need for relaxation (manage arousal/ stimulation level)
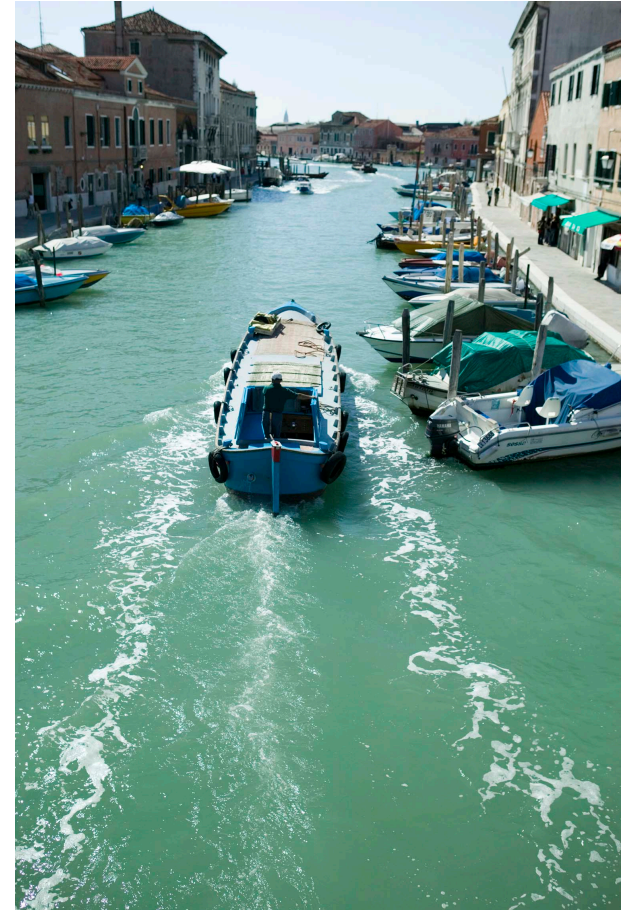
Source: Pearce (1991)

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Recreational Travel

Iso-Ahola says for travel to be recreational, it must:

- Be intrinsically movtivated
- Allow for optimal arousal

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Social Media

Social Media Participatory Technology

- Allows individuals to connect, share, and communicate information using their mobile phones.
- Social Networks (like Facebook, Twitter, Flickr) are the fastest growing Participation Outlets among users today because of convergent devices like IPhone, and the Android.

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Nature of Social Networks

Social networks are:
- Densely Knit
- Tightly-Bound
- Multi-stranded
- Context dependent and socially constructed

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ABI Research on SM

- Media mobile communities and user generated content will be worth $13.1 billion by 2011.
- There are currently 50 million members in "mobile social communities".
- Facebook has the largest social mobile community today.
- This number expecting to reach 174 million worldwide by 2015.

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User Interface Control and Error Prevention

Application use on mobile devices:

- **Low usability** scores for according to Jakob Nielsen Group's user testing.
- Small screens mean fewer visible options.
- Users required to rely on **short-term** memory.

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iPhone UI control selection

Typically, there are two types of content-area views in iPhone application.

Navigating Hierarchical Information

- Research shows that the **table view** works well to display a **hierarchy of information**.
- This makes it **easy for users** to follow a path through the hierarchy by selecting one item in each successive list.
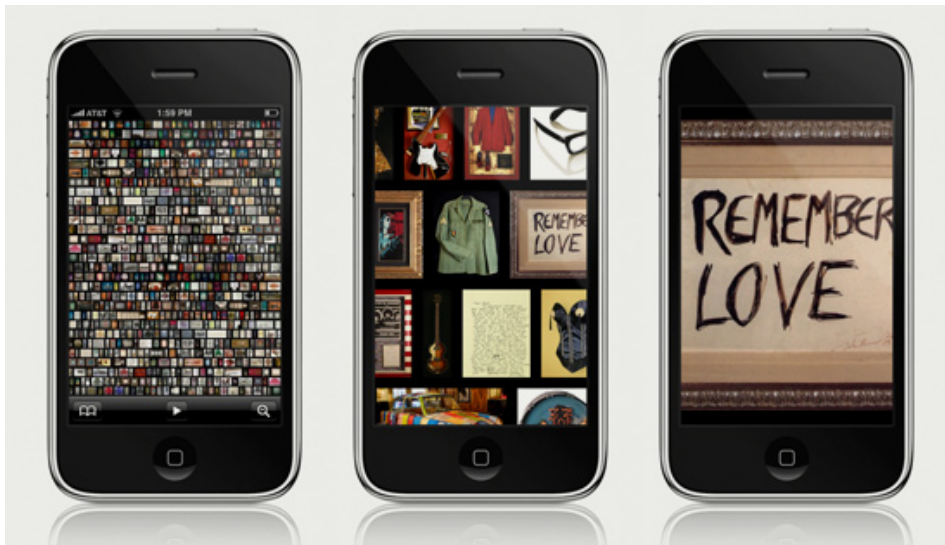- The disclosure indicator element tells users that tapping anywhere in the row reveals the subset of information in a new list.

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Visual design for the iPhone

Screen space

- Due to limited space (compared to desktop applications), designers must identify the most crucial feature of the application to display on screen.
- A high screen resolution makes graphics and fonts crisp and vibrant. This makes a good solution to small screen space.
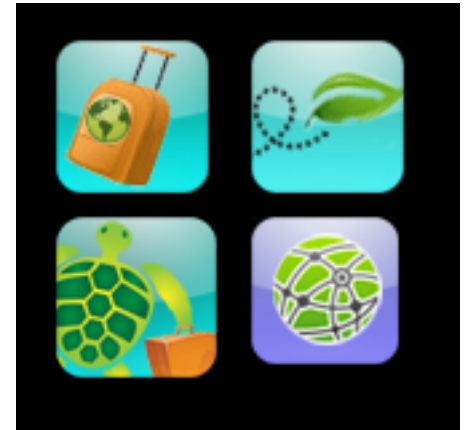

graphics on a high-resolution screen.

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Graphics and Icons

- Apple provides a toolkit for user interface that includes standard controls, windows and look-and-feel.
- Although apple provides the framework, there are two custom items needed for the application: the application icon and launch image.
- The application icon should be designed with the application's branding in mind. It should be easy to identify and aesthetically pleasing.
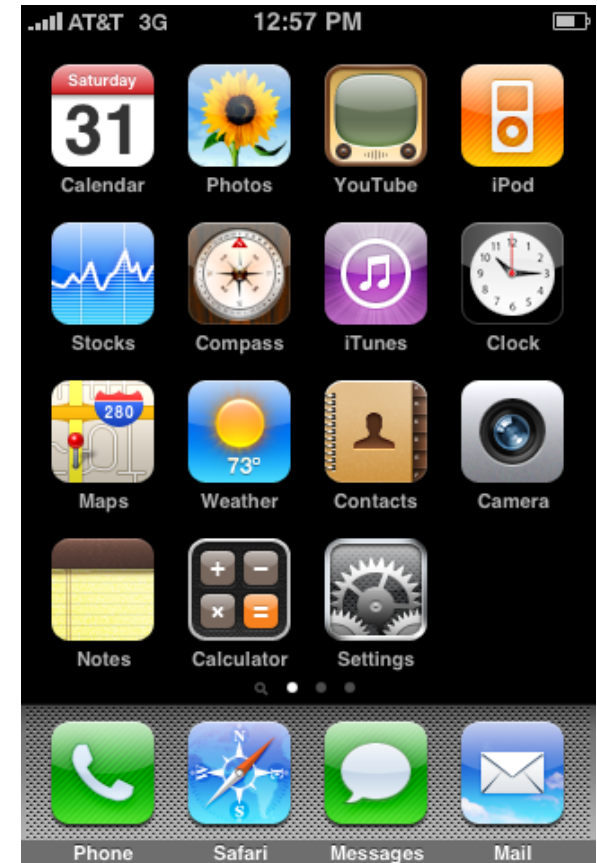- Positive first impression

application icon designs

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Fonts and Colors

- The background color of the application launch page is black. Therefore, the background of the application icon should be any color but black so that it does not get lost on the screen.
- Apple adds the rounded corners and reflection to the icon for a consitent look.
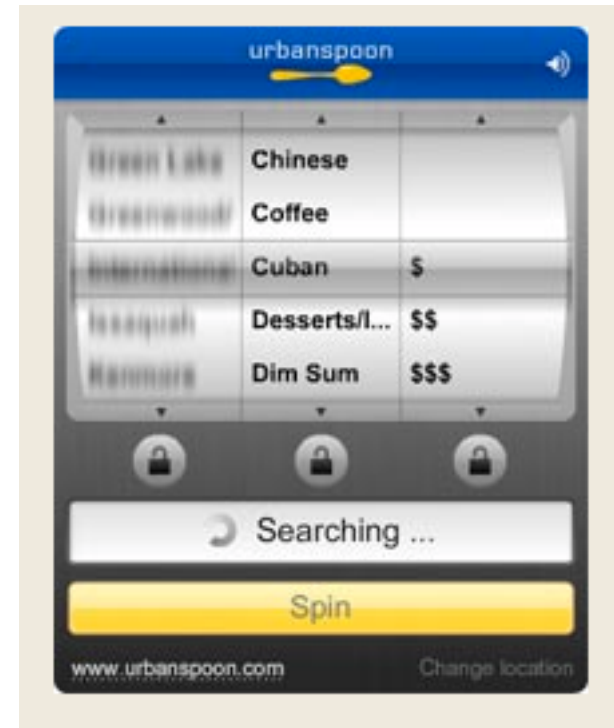- The font Helvetica is used in the iPhone interface.

application icons on a black background.

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Initial Design Influences

Problems and Solutions

Problem: How do we provide users with sustainable destinations.

Solution: Conduct a search for sustainable destinations.

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Problems and Solutions

Problem: Once users pick a destination, how do they take further action?

Solution: Create a description page that uniformly displays information for each result found from the users' search.

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Problems and Solutions

Problem: How does the user leave a rating to build up the database of information and legitimize their finding based on our data sets?

Solution: Create a rating system with stars to indicate a scale of 1-5.

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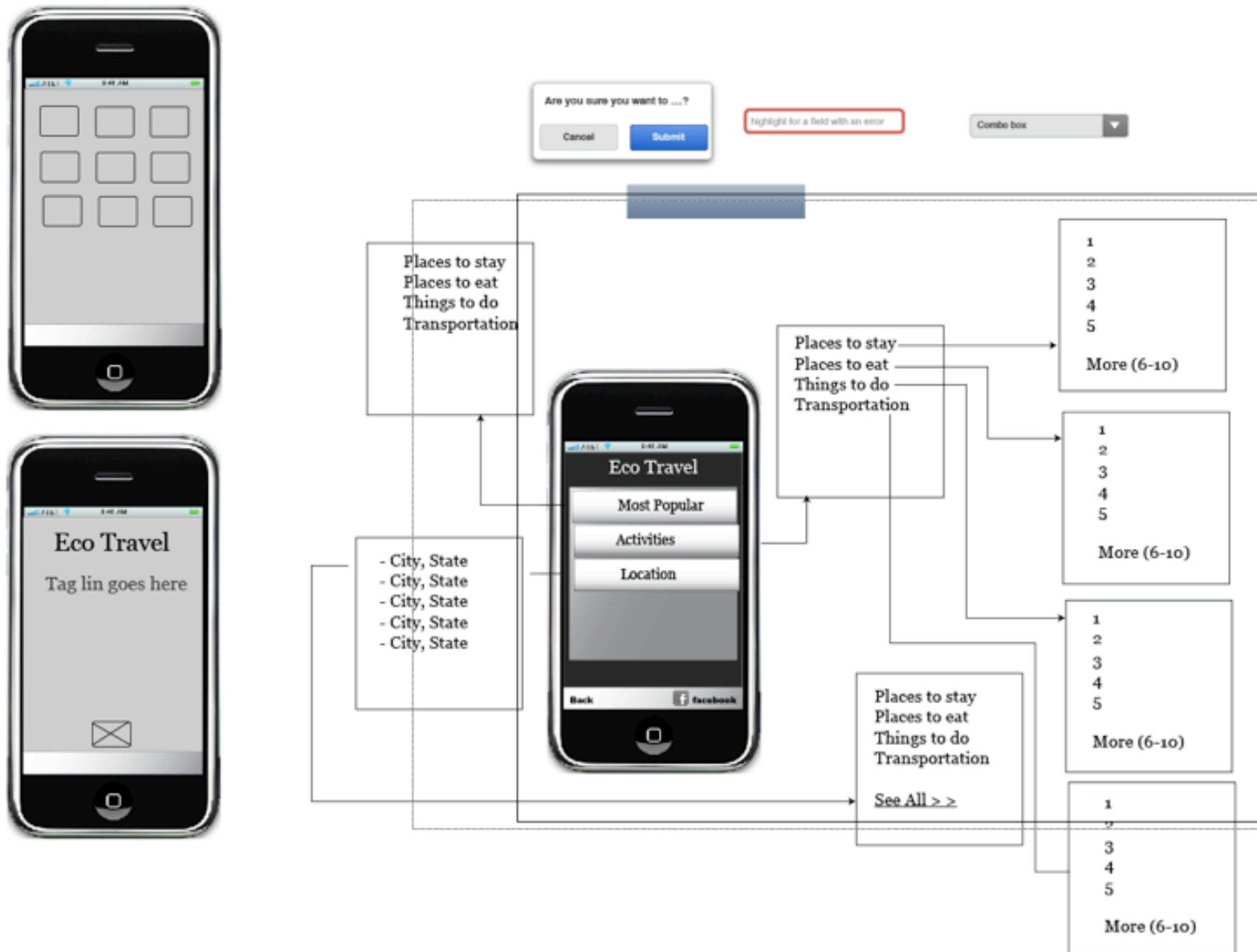# Problems and Solutions

Problem: Orientation and Navigation

Solution: Provide general orientation and navigation via the top navigation "Back" button.

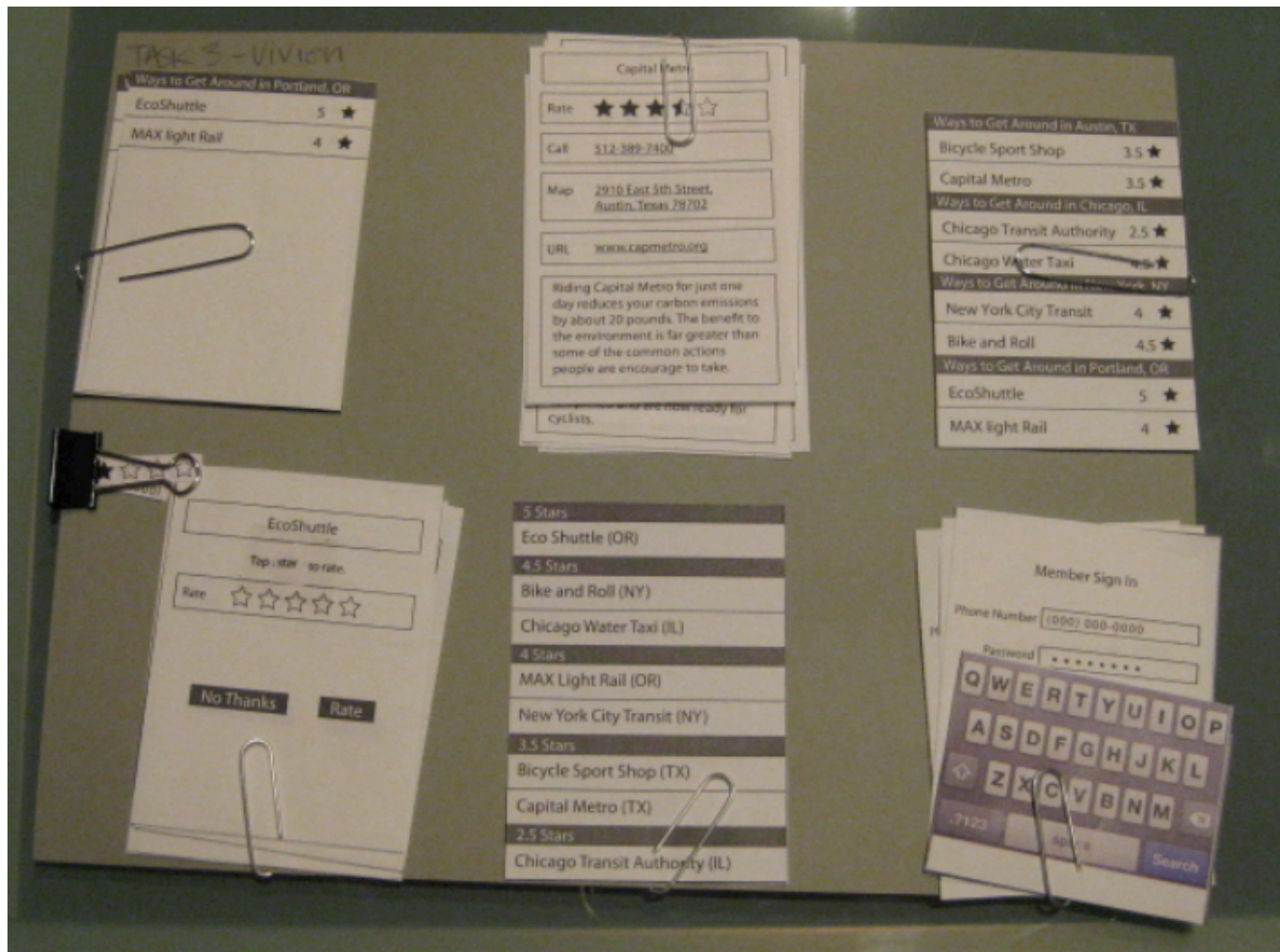Provide a common navigation to reduce cognitive load.

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Planning Navigation

Usability Testing
Paper Prototype

1st Usability Testing
Paper Prototype

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Key Issues

1. Category Naming Conventions
2. Navigation of screens to get back to main category
3. Stars vs. miles need to change
4. Rating should include instruction

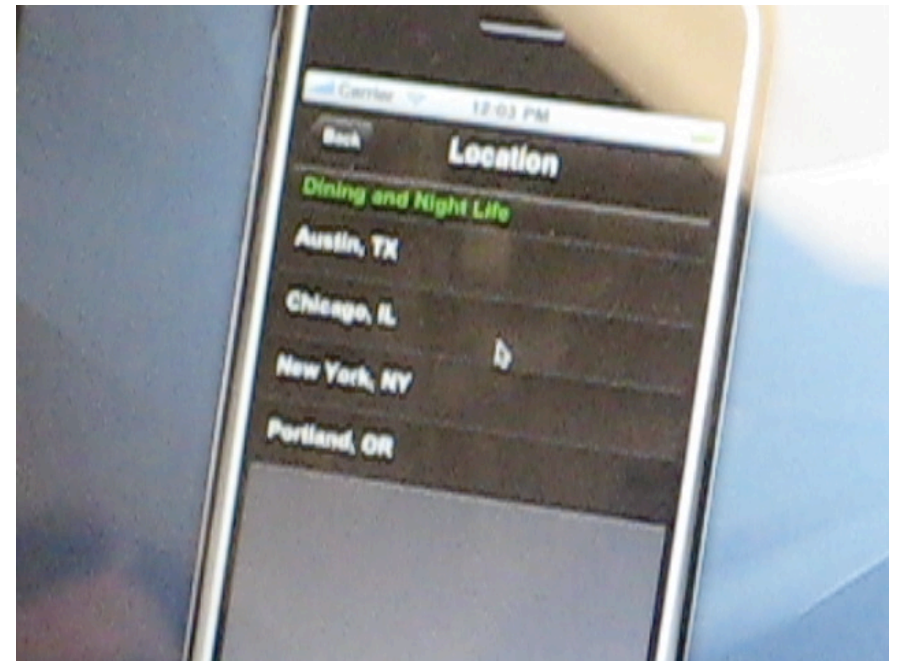EcoTravel

Usability Testing
Digital Prototype

Usability Testing
Digital Prototype

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Technical Findings

1. iPhone Simulator is not fully compatible with standard HTML syntax
2. No fully support for Adobe Flash; limited to Flash Lite only
3. Application Distribution requires approval process
4. Develop is best on a Macintosh Platform

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Findings

1. Category Naming Conventions worked much better
2. Additional Navigation Schema at top and bottom useful
3. Call, Map, Web, Rate sections need to appear more distinct design-wise
4. Sections need identification to show they are clickable
5. Rating still needs more instruction
6. Adding a search function would help

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Future Development

- Search Function
- Tips Section
- Facebook Page (exchange of reviews, stories, and photos from sustainable travel spots)
- Improved Rating System
- Feedback Section
- More detailed design (add photos...etc.)

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Any Questions?

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