Grassroots: A Local Online Community for Farmers and Consumers

Task Refinement, Storyboarding and Video Prototyping

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Problem/Solution Overview

Farmers who supply large grocery stores often speed up and artificially enhance the production of their produce in ways that can lead to harmful side effects including cancer [1]. Local organic food is one method to get fresh fruits and vegetables that have not been genetically modified in dangerous and unnatural ways while also contributing to the local economy. However, many organic food growers do not have storefronts; they sell through online orders and grow in popularity through word of mouth. Other organic growers only have roadside stands and have no online presence at all. In order to promote local organic produce, we propose a website on which local organic farmers can create an online presence for themselves and their produce. Our goal is to create a website which will allow local organic farmers to sell their produce online while enabling consumers to buy, view and rate local organic produce in their area. In addition to this, our website will also contain community information, such as local farmers markets, which can be contributed by both local farmers and consumers. Our goal is to make the buying and selling of organic produce more transparent while still providing useful functionality to the user.

Refined Tasks

After reviewing and refining the tasks from the previous assignment, we have chosen three tasks which reflect the most important functionality in our project. However, before we describe the three tasks it is important to describe some background information about our proposed system. First of all, the two most important groups of people that will be using our system will be producers and consumers. The producers will be local organic farmers who wish to sell their produce online or merely gain an online presence. The consumers will be either ordinary people who wish to buy local organic food directly from farmers or organic markets who wish to provide local organic food to their patrons. Currently, producers of organic food primarily sell their produce through local farmers markets or through stores which sell organic produce. However, not all farms are able to sell their produce through local stores and are forced to sell their goods through word of mouth. On the other hand, consumers typically buy local organic produce through farmers markets or by buying it directly from a store which sells organic produce. However, it is often difficult to find local organic produce in stores as the food is often bought from farms located out of state or even outside of the country. Therefore it is important that local farms, both big and small, have a place where they can sell their produce which is accessible to everyone. For consumers, it is important that they can locate, view and buy local organic produce in an easy and straightforward manner.
With this in mind, the three tasks that we have chosen for this assignment are searching for local farms which carry a particular type of produce, rating an item once it has been purchased and finding and buying the highest rated item of a particular type of produce. All three of these tasks will be achieved through the use our system which make the tasks easy and straightforward to perform. The first task, which is the easiest, has not changed much since the previous assignment. This task merely involves a consumer using a search field within our site to locate nearby organic farms which sell a particular type of produce. The second task, which is moderately difficult, has completely changed since the previous assignment. This task involves a user rating an item that they have previously purchased through our site. To accomplish this task, a user must return to the farm page from which they bought an item and move their cursor over the rating near the item that they purchased. From this point, the user will be able to rate the item and give a farmer feedback on their produce. We believe that a ratings system will help customers decide which farms to buy from, help new users make decisions on where they should buy produce from and give farmers feedback on their produce.

The third, and most difficult, task that we have chosen involves a user choosing a particular type of produce and then finding and buying the highest rated one in their area. This task has changed slightly since the previous assignment. What has changed is the fact that the user must find and buy the produce within our site as buying produce is one of the main functionalities that we wish to provide to consumers.

All three of the tasks that we have chosen will be performed whenever the consumer chooses to search for, buy or rate local organic produce. This means that how often a task will be performed will change from one user to another and can range from days to weeks or even months. In addition to this, the only time constraint on the tasks is whether or not a particular type of produce is in season. For instance, if it is winter and the user is attempting to find locally grown organic fruits it likely that no local farms will be selling that type of produce during that time period. Finally, it should not be difficult for users to learn how to perform the aforementioned tasks. We have purposely designed the interface of our site to be as simple as possible while also using existing metaphors that users should already have experience using. Therefore, the amount of learning necessary to perform each task should be minimal if any.
Refined Interface Sketches

This sketch shows a possible interface for a search and results page within our site.

Easy Task: Basic Search

You entered the term "apple"  

- Apples (Found at 23 farms near you)
- Green Apples (Found at 5 farms...)
- Pineapples (Found at 11 farms near you)

Downtown Market

12 Apple Street Englewood, NJ

Large search bar, enter name of produce (apple) or name of farm (Mom's Market)
This sketch portrays a possible interface for the farm page portion of our site.
The following two pages of sketches represent our selected interface. They portray the homepage, search results page and a farm page within our proposed website.
Selected Interface Design

After sketching and discussing multiple interface ideas, we have selected one interface design which we believe will best benefit the users and make their experience simpler and easier. While designing our interface, we felt that we should try and make our interface as simple and usable as possible rather than inundating the user with a huge amount of information at once. This idea can be seen in all of our interface sketches but is most prominent in our homepage. Our homepage consists only of a logo and a search bar through which the user can search for types of produce, by farm name and even by location in order to find information regarding locally grown organic produce. The results page will then show information about farms that pertain to the search parameters. The user will also be able to narrow their search in the results page by ordering the farm results according to distance, ratings or prices. Another important part of our interface will be the pages for individual farms.
These pages were designed to give the user all the information that they need about a particular farm without it becoming clustered or difficult to navigate. Some information that will be available on one of these pages will be the location of the farm, the produce that they sell and prices and a rating for each individual type of produce. Each farm will also have a rating which will be an average of all the ratings for the different types of produce that they sell.

**Storyboards/Narratives**
(The order is storyboard followed by the narrative)

John is an everyday consumer who is new to buying locally grown organic food. John decides that he wishes to buy organic blueberries but realizes that he doesn’t know of any organic farms in his area. However, John soon remembers that one of his friends recommended a site to him where he would be able to locate and buy local organic produce. John excitedly goes to his computer where he navigates to Grassroots. Once at the website,
John enters the type of produce that he is looking for, blueberries, into the search bar on the homepage. After clicking on the search button, John is greeted by a results page where he can view all the farms in his area that currently sell blueberries. From this point John is able to decide where he wishes to purchase his blueberries from.

John is a consumer who has recently bought locally grown organic produce through the website Grassroots. After receiving his order and tasting the produce, John realized that it was the best produce that he had ever tasted. John wished to give the farmer and other users feedback on the produce so he decided to add a rating to those food items that he purchased. In order to do so, John returned to the Grassroots website and entered the name of the farm (that he bought from) into the search bar. After viewing the results page John clicked on the corresponding link in order to navigate to the correct farm page. Once on the farm page, John
looked for the produce items that he purchased and hovered his mouse over the ratings icon near each produce item. At this point, John was able to use his mouse to choose a rating for the produce item and give feedback to both the farm and to other users who will possibly visit the site.

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filter the results according to rating and then chooses the first result on the following results page. Once John has arrived at the farm page he finds the produce section on the page and chooses the quantity of blueberries that he wishes to order. Next, John clicks on the “Add to Cart” button and then the “Cart” button in order to proceed in the checkout process. He is then able to view his order and then finalize his order by entering necessary information (such as payment etc). John has now ordered the highest rated blueberries in his area and will soon be enjoying them in the comfort of his own home!

Creation of Lo-fi Prototype & Video Report

As shown in the IDEO shopping cart video, we brainstormed our website prototype on paper first. All of us had many different ideas which were primarily focused to accommodate the user’s needs. In our second step, we condensed our ideas and distributed them into three categories i.e. search, purchase and rate. Using Balsamiq, we converted these ideas into lo-fi prototypes that the user would interact with when searching for local organic produce. All of the prototypes have simple design but illustrate the actual functionalities of the overall website. Also, our prototypes were created targeting both technical and non-technical users so that they would be able to understand the functionalities easily. The figure above illustrates the lo-fi search result prototype.

A similar process of brainstorming and paper prototyping was done prior to the video shoot. These prototypes included a step by step process of searching for a specific product, adding produce to the cart, modifying the items on the cart and finalizing the transactions. Paper prototyping was the most effective tool that assisted us in creating different user interactive scenarios. As we combined the paper prototype ideas, the scenes for the video were setup sequentially covering all the aspects necessary to be demonstrated. However, the biggest challenge was to find the flow between the prototypes. We made close to a dozen Balsamic mockups, some with slight differences in appearance (text box filled in versus empty) to animate user interactions such as mouse clicks and entering text in text fields. We then shot several video clips showing a mouse pointer performing different actions through our web user interface, and stitched these actions together to illustrate how a real user would navigate our site. The stitching process involved splitting our video into separate audio and video tracks, since several shots needed skips in the video to give the illusion of interactivity. This editing was performed on iMovie ’11 for Mac.