BBGo:

An application designed for enhancing the integrated experience of visiting Brooklyn Botanic Garden

Part 3: Conceptual Design

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Nov 6, 2015

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System Concept Statement

What is the system name?

Brooklyn Botanic Garden Organizer

Who are the system users?

BBGo Application will be used by those who are going to visit Brooklyn Botanic Garden, and members who will often join in BBG events.

What will the system do?

The system will allow users to plan their activities on their visit to the Botanic Garden. The system will provide navigation through the garden as well as give background information on plants and flowers in the garden. Lastly the system will create an environment that is conducive to sharing experiences as well as provide a platform to document and revisit one's experiences.

What problem(s) will the system solve?

- The system will solve the problem of being lost in the Botanic Garden.
- It will prevent users from missing events due to ignorance or forgetfulness.
- It will solve the problem of users having no knowledge of plants and flowers being viewed while in the garden.

What is the design vision and what are the emotional impact goals?

- It will create a more knowledgeable user with an index of flower background info, which will enhance the experience.
- Encourage nostalgia by allowing the user to create a virtual scrapbook of their experience that can be shared.
- The system will help users navigate the garden, thus cutting down on wasted time.

Conceptual Task Scenarios

Casual Visitor Alex

Before

Alex and his girlfriend decide to visit the Brooklyn Botanic Gardens as part of their vacation trip to New York City

Alex visits several websites, and searches for detailed information about their destination. He views people's opinions about the place, such as routines, famous attractions, events, etc. According to the information he's got, he writes down their own plan.

Then Alex searches to find out how to get to their destination, and downloads a digital map for reference. When he finishes all these things, he purchases admission tickets for the two of them.

Before arriving, Alex looks for some interesting events held in their destination, and bought event tickets for them.

During

Alex and his girlfriend arrive at their destination. They find the routine they've planned, and then begin their tour.

As the couple tours the gardens, they take photos of the scenery and plenty of selfies. During the trip, they encounter a lot of beautiful plants, Alex looks up detailed information about these plants. After spending some time in the garden, Alex and his girlfriend go to join their event, they show their tickets and have good time there.

After

Alex has a great time on his trip and when he gets back home, he uploads his photos to Facebook. His friends 'like' and comment on his photos. He shares his experience with his friends by replying their comments. He also calls his mother and tells her about his trip and sends her a few photos through text message.

Member Charlotte

Before

Charlotte has been a member of the Brooklyn Botanic Gardens for several years. She has a few friends visiting for the holidays and wants to take them to the Gardens while they're here. She checks for upcoming events of BBG, looks for interesting ones that

she'd like to join, and adds a reminder to her calendar. She shares her plan to her friends.

During

Charlotte and her friends arrive at the exhibition and take photos of interesting outdoor artwork. Charlotte pays great attention to exhibits she has noted before their visit, and reads the description about them carefully. She is interested in learning more about the artists, so she searches for the artists' background and history. Charlotte reads this information as her friends continue to check out the exhibit.

After

On Monday, Charlotte tells her colleagues about the exhibit. Because she is not a heavy social media user, she shares photos taken from the exhibit in person. Later, she writes down her experience about the exhibition. Then she checks to see if BBG has more upcoming events.

Focus Scenarios and Personas

Casual visitor Alex before the trip

Persona Name: Alex

Brief Description: Alex can manage technology, he travels a lot. Alex doesn't like planning a trip, wants to find an easy way to plan when he travels.

Explanation: For casual visitors, we believe that planning the trip is the most crucial part. When planning a trip, Alex will encounter a lot of problems, such as his tour routes, how to get to his destination, how to get event information, etc. The planning part includes almost everything that a casual visitor may encounter during his trip, which means considering this part will give us a more comprehensive view of our product. So we choose this part for our casual visitors.

Member Charlotte before the trip

Persona Name: Charlotte

Brief Description: Charlotte likes to travel to the same place with her friends. She like to document her experience. She is having trouble organizing attractions she wants to attend.

Explanation: Unlike casual visitors, members have been to the garden many times, so they are quite familiar with the routes or attractions. The main requirement for them is how to organize future events (according to our contextual inquiry carried out earlier), which means the main concern for member group is also before the trip. So we decided to use this task scenario as our focus scenario.

Interface Metaphors

General Explanation

We mainly focused on the users before their trip to the Botanic Garden, but including a metaphor that emphasizes the end of their trip was important as well. Because the nostalgia created from the scrapbook metaphor will encourage the user to return, it was important to implement it. We started from the planning of the trip which is a lot of info gathering, reservations, and combining resources for one's trip. The advantages of our metaphors was that they are familiar to most users, therefore users will understand how the system works easier. Also, the metaphors match the travel planning process almost exactly. The disadvantages of these metaphors is that they are so familiar that a user may transfer their thoughts and behavior toward each metaphor into the product, that may not necessarily match what the system actually does.

Metaphors	**Reasons**	**Contextual concepts**
Travel guide book	Some people will always refer to a guide book to choose their destinations, they can get some general information about their destination from these guides. This metaphor will help users understand the garden better.	Destination description Destination history Destination features
Calendar	This will allow users to view events and event info, RSVP, and receive event reminders. People will often use calendar to note what they will do in the future, so we think this is suitable for our app.	Event times Event info Admission tickets Reminders
Visit planner	A visit planner will give advice on which route to take, which events can visitors join in. Visitors can give some basic information about themselves to visit planner and the planner will make a good plan for them. So we choose this metaphor for planning a trip.	Maps Routes Events Exhibits
Encyclopedia	People can get detailed information on items they are interested in through encyclopedia. In our garden, there will be a lot of plants that people may have never seen before, some of the	QR Code Attractions Plants Statues

	visitors may be interested in these plants, we can't just let them google the plants cause it will be a waste of time, so we make an 'Encyclopedia' metaphor for visitors to have a better way to look up plants themselves.	
Scrapbook	Create nostalgia and allow users to revisit their experiences. A scrapbook helps people to memorize the beautiful things they've experienced. We regard photos, videos – which almost every visitor would like to take according to our contextual inquiry -- as part of a scrapbook, cause these things will remind user's travel experience.	Photos Videos Diary Social media integration

Interaction Types

Exploring
When encountering attractions, visitors will scan the QR code to get detailed information. They can also scan plants directly to get information about them. Visitor can take photos, videos, etc. and share them. Visitors will also be able to explore or navigate the garden through a GPS system. This is why exploring is included.

Manipulating
Visitors will manipulate their calendar: they will schedule or view their events through the calendar. Visitors can buy tickets from our app. Besides, they will be able to select different events, open and close maps. These interaction types belong to manipulating.

Instructing
People will need to search for some information they are interesting in, such as their past events, interesting plants, attractions, so we must provide a search function, which belongs to instructing interaction type. Besides, the user will be allowed to tell the system what type of information he or she wants about the destination, an event, etc.

Card Sort Summary and Report

We used Storm board as a tool to help users organize their thoughts and ideas for the card sorting.
We selected our contextual inquiry subjects as well as 4 other individuals that we knew and performed closed card sorts. We consider that our subjects will be more aware of

their aims, while other individuals will give a more general outcome.
We used closed cart sort because we believe it will be performed more quickly, and users will be more guided, we provided an option of “others” so that users can still make a quick decision when they are confused. Then after the card sort, we refined the “others” category, changed the items in it, and continued to the next card sort.
Some of the categories we chose were taken directly from our system metaphors and conceptual concepts, the results are reflected in the navigation map, but we discovered that a lot of options could be sorted into more than one category; therefore, there was a need to give multiple routes, under multiple categories to get to the same options.

Navigation Map

Conceptual Design_Map

Wireframe Model

Conceptual Design_Wire

Process Retrospective

- We had several versions and a heated discussion on our six and two focus scenarios, we even thought about changing our user type. After discussing with each other, we kept our user types and had two members working on scenarios. We modified several times until it looks good to us now.

- The metaphors and interaction types were a bit tricky. We asked professor for help (actually the 'visit planner' was an idea from professor) and it was really a great inspiration.

Team Member Contributions

Team Member Name	Email Address	Specific Contributions
Soudea Forbes	soudeaforbes@gmail.com	Contributed to scenarios Created Storm board Contributed to process retrospective
Ayesha Ewing	chrisanthamum24@yahoo.com	Created system information Contributed to metaphors and interaction types Final edits Contributed to process retrospective
Collin Aycock	collin.j.aycock@gmail.com	Created wireframe Axure prototype Final edits Contributed to process retrospective
Fei Gao	email.gaofei@gmail.com	Contributed to system information Contributed to scenarios, metaphors and interaction types Created navigation map Created wireframe PDF output Final edits Contributed to process retrospective