Rest Area Kiosk

Introduction

The goal of this project is to create an easy-to-use, interactive kiosk that will help travelers along the highway find nearby businesses and their current location at rest areas. The kiosk will provide the user with the ability to find the nearest gas stations, lodgings, and/or restaurants and it will also allow the user to locate and learn more of their current location through interactive maps and screens.

Initial Design

This design has five main screens: main screen in which the user can manipulate an on screen map to find his/her current location; a gas station screen that displays an interactive map that displays the nearest gas stations along with a list of these gas stations; a food screen that is the same as the gas station screen except that it displays the nearest restaurants; a lodging screen that is similar to the previous two screens; and a directions screen that displays a map that graphically shows how to get to the destination along with written directions.

Four main buttons are always present on the left hand side of the screen. These are the 'gas station' button, which takes the user to the gas station page; the 'restaurant' button, which takes the user to the food page; the 'hotel' button that takes users to the lodgings page; and the 'You are Here' button that takes users to the main screen   It is important to note that in this design the buttons are named gas station, hotel, restaurant, and 'You are Here' for later on these names are changed.

On the maps displayed on the gas station, food, and lodging pages there are red dots. These red dots represent the corresponding businesses and each dot has a number that corresponds with the result that has the same number under the results list. A red star is also apparent on these maps, as it is with the map on the main screen. This star displays where the user is currently at. One other part of these business pages to note is that on the gas station page, there are more results than can be displayed on the screen. To handle this, there are next and previous buttons on the screen that allows the user to go to the next screen of results or the previous on.

Each of these business screens also display a results list, which is initially ordered by distance from the user's current location. But the user can change the ordering by clicking a button labeled 'Business Name,' which lists the results alphabetically, or the user can also press 'Miles' to switch the ordering back to distance.

On the main screen there is a map that is displayed along with six other buttons. There is one button per side of the map – these buttons move the map in which these buttons point – and there are two buttons that look like magnifying glasses. One magnifying glass has a plus on it and is labeled 'Zoom In' and the other magnifying glass has a minus on it and is labeled 'Zoom Out.' These buttons zoom in and zoom out, respectively, which means that the depth of the map increases or decreases, so that the user can see more of the highways or more of the local roads. This type of interactivity is seen on the maps on every page except for the directions page.

First User Test

The most notable and most severe problem is with the 'You are Here' button. It appears that both users are greatly confused with this button for two reasons. The first being that the word choice for the label does not infer that pressing this button will lead the user to the main screen. These reason that these words had been chosen is that the main screen contains a map that displays where the user is currently at, and so, initially, it made since that the words 'you are here' would refer to the main screen. The users do not seem to make this connection very well; eventually, though, after playing with the interface the user understands what this button does. Another factor that brings confusion upon the usage of this button is the fact that this button appears on the main screen, causing the users to think that this button will lead the user to some other screen like the gas and other buttons do. The users are confused as to why this button appears on the main screen if it is a link to the main screen. Obviously, this problem needs to be fixed because both users have great difficulty with this button, causing frustration, confusion, and wasted time.

One user desires to be able to interact with the map that is on the directions screen. The user seems to want to be able to move the map around to be able to get a better picture of where these directions are occurring and to help orient the user. At the moment, this map is just a picture and no manipulation can be done to the map. Another noted problem with this directions screen is the visibility of the 'Back to Results' button that takes the user back to the results page from whence he/she has come. The users seem to have some difficulty in finding this button. What adds to this problem, is that this button is rather important, for it is possible that the user could have entered the

directions screen by accident and would desire to go back to the previous screen. This button is rather important, yet it is hard to see and therefore hard to find.

The red star on the maps is found to be a problem for one of the users as this user felt as though the star was rather large and covering up streets that he/she would like to be viewing. Another problem with the maps, is that on the business screens, i.e. the gas station and hotel and lodging screen, the red dots that represent businesses disappear if the user keeps zooming out. This causes a little confusion in the user as he/she is wondering where the red dots have gone and whether this has been caused by something the user did wrong. This disappearance creates unnecessary anxiety, but there is a trade-off if these dots were to not disappear. When zooming out the dots will become closer together for the scaling on the maps becomes smaller as one zooms out – this will cause a red mass to form which can cause confusion as to what this red mass represents and will also make it difficult to distinguish individual businesses from one another.

The final problem is that one user finds the position of the Previous and Next buttons on the gas station screen to be at an unnatural place. Currently, these buttons are at the bottom of the results list, but this user feels that it would be more natural and easier to find them if they were larger and at the top of the results list.

Second Design

These reports about problems are taken into account and are used to develop a better, second design. The 'You are Here' labeling problem is fixed by changing the labeling to 'Main Map' and having this button appear on all screens except for the main screen. To make this button appear different than the rest, so that users will not think it

leads to a different screen like the other buttons but that the users will understand it will lead to the main screen, a line is drawn around the button making it appear like a tab that is attached to the current screen. This picture is provided to make it clearer as to what was done:
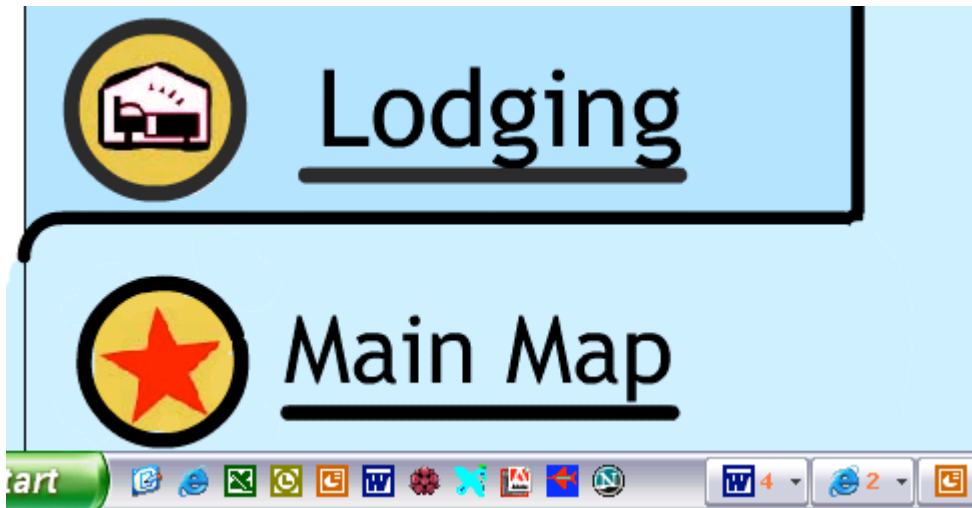
To fix the problems with the directions page, the 'Back to Results' button has been replaced with a button with an arrow on it pointing left and labeled 'Back.' The left area is the standard representation for going back, so hopefully users will easily and quickly understand the purposed and affects of this button. The map on this screen has been made interactive by adding a button to each side of the map, allowing the user to move the map up, down, left, and right.

On the maps, the humongous red star has been downsized so that more roads will not be covered up. The red dots were made apparent even when the user zooms out. When the user zooms out, it is clear that red dots exist, but they are very small, so if the user desires to get a better look, the size of the dots will hopefully cause the users to zoom in to get a better look. These red dots still disappear, though, if the user zooms out far enough, because there is no way to represent them at such a small scale, but hopefully

the user will realize that this is the reason why. Considering, when zooming out, that on the last map that contains these dots, the dots are very small and much smaller than the dots on the previous screen then it seems that it would be natural for the dots to disappear if the user zooms out once again for the dots would be too small to see.

For the Previous and Next button problem, these were made larger and placed at the top of the results list.

Even though no users have problems with these labels, the 'Hotel' button became 'Lodgings' and 'Restaurants' became 'Food.' The user may believe that the 'Hotel' button would give results of just hotels, when actuality the results on this screen are all types of lodgings, not just hotels. The word 'lodgings' has been chosen because it is more general and inclusive of various types of places to sleep. The label 'restaurants' has been changed because it might create images of a sit down, nice-place-to-eat type of place when actuality the results of this screen are all types of places to eat, including dirty fast food joints. The word 'food' seems to be more general and inclusive, just like 'lodgings.'

Second User Test

First with the good; the users have no problems at all with the 'Main Map' button that has replaced the 'You are Here' label. They seem to clearly understand what this button will do for they have no hesitation in pushing it or show any signs of shock when the kiosk displays the main screen. The users also seem to be able to easily use the big 'Back' button on the directions screen, having no difficulties in finding or understanding its function.

The users seem to enjoy the ability to move the directions map, which is a fix to one of the problems from the first user test, but one user wants to be able to zoom in and out. This is an important problem to fix, for being able to zoom in and out could quite possibly help the user visualize the directions better and get a better understanding of the directions.

Another problem that has come up that is related with a fixed solution to one of the previous problems, is the placement of the Previous and Next buttons on the gas station screen. One of the users this time feels as though have these buttons placed at the top of the results list is unnatural, causing this user to have troubles finding these buttons. This user feels as though it would be more natural to place these buttons at the bottom. This is an interesting result, considering that is where these buttons were initially placed.

When given the task to find a place to sleep for the night, the users make comments that they wish they knew what type of place these lodgings are, for the users have never heard of such places like 'Candlewood.' Since the users are most likely unfamiliar with the area they are at, considering they are at a rest area, then it seems quite reasonable the users would have no clue if a business was a hotel, motel, or some other type of lodging. These categories are important, for these are very different types of places to sleep. The same goes for food – there are various kinds of food and people will most likely not know what type of food the local restaurants serve. People are also particular about the places at which they sleep and eat, so it is important to allow users to know what kind of restaurant or lodging these businesses are.

One user brought up a rather important function – the ability to print out the directions. The user stated that it would be an annoyance to have to write down the

directions him/herself but it would be nice if the kiosk would actually be able to print these directions out for him/her. Printing is extremely important for it would be incredibly annoying to have to write out long, complex directions or even simple ones and to also find paper and pen to write the direction down with. This is just asking too much from the user; this kiosk is supposed to be helpful and not cause any annoyance.

The last problem that has come up is more of just a comment that it would be nice for there to be some explanation on the main screen that the red star represents where the user is located. One user feels as though the star could be confused as a capital city or something other than a location indicator, and the user wishes that there was some indication that this red star is a representation of where the user is located.

Final Design

To give a final touch up to the directions screen, zoom in and zoom out capabilities are added to the directions map. Another depth to the zoom in has also been added so that the user can see more clearly where the directions lead. This idea of adding one more level of depth seems like a good idea, so all maps now go one more level into detail. A printing button now exists on this directions page, which, when pressed, pops up a screen stating that the kiosk is printing. Initially, a stop button was placed on this pop up window, but that makes little sense considering that all directions are going to be fairly short considering this kiosk displays 'The Nearest ….'. So if there did exist a stop button, by the time the button is pushed and registered, the computer would most likely be done printing anyways.

Categories have been added to the food and lodging screen results and if the user clicks on the label 'Type' then the results will be listed according to the type of restaurant or lodging depending on which screen the user is in. Since adding this category setting takes up room on the results list, the 'Map/Directions' button has been decreased to just 'Directions' so that it will take up less space.

To fix the Previous and Next placement problem, both placements have been provided. So whether it is more natural for the user to look for those types of buttons at the top or bottom, both ways are provided for.

Lastly, a star has been added to the main screen underneath the text 'You Are Here' so that the user will understand that this red star, when seen on the maps, is a representation of where the user is currently located.

Other Fixes that Could be Made but I did not think of until after the final design

One idea is to make the red dots on the business screens interactive, so that if the user clicks on a red dot, the directions for how to get to that red dot is displayed. I actually attempted to provide for such methods of interaction, but the coding was too difficult for me and no user mentioned wanting such capabilities, so I did not consider too important to create.

Making the directions map more interactive by having a car drive to the destination so that the user could see through motion how to get to his/her destination, would be a good idea. This could help users if they are confused with directions. And as the car drives, the road it has traveled changes color and the instruction that it is currently following is highlighted. Instruction being directions such as 'stay on 1-79 for 26 miles.'

One capability that I wish I could provide is the fast scrolling, i.e. when the user holds down on one of the buttons on one of the edges of a map then it will move the map slowly at first but then start moving it faster. That would help the users to move around the map with more ease. The problem is that I didn't think of it until the final design was sent in and I do not know how to make that work – I am sure with a little time though it could be figured out.

Allow the user to click on a business name and a window pop-up giving a description and picture of that place.

Display landmarks on the Directions map to help users find their destination.

Task Script

Coasting down I-79 on your trip from Pittsburgh to North Carolina, you realize that your family is getting a little antsy. You decide to pull on over into a rest area off of the highway to give everybody time to release some energy.

1. Looking at the gas gauge, you realize that you are almost out and you better get some soon. As you walk into the rest area station, you see an interesting kiosk that offers some information. Use the kiosk to find out where there are some gas stations nearby.
2. Almost with no gas, you decide that you will go to the closest station as possible. Having no clue how to get there though, use the kiosk to help you out.
3. Thinking about it some more, you are very critical about where you get your gas. To help you find your special gas service, make the results display in alphabetical order.
4. With the gas taken care of, you are interested as to where exactly you are on your trip. Use the kiosk to find your current location and take some time using the kiosk to explore this location.
5. As you are having fun with the kiosk, your family comes up and starts to complain about eating food and wanting some dinner. Being a wonderful parent, find out the closest places to eat so that your family can eat soon.
6. As you think about it, you realize that it is getting late and if your family is going to eat, then you might as well just stay the night. Use the kiosk to find out the closest places to spend the night.
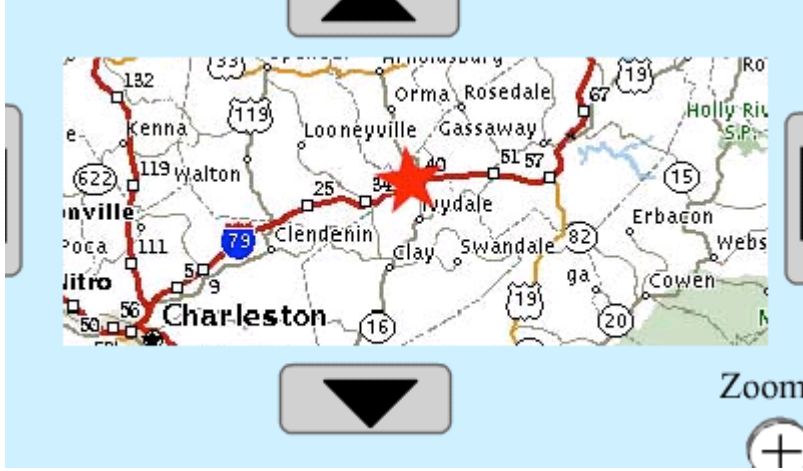
Questions

-   Are there any functions that you wish the kiosk would provide?
-   Are there any functions that ought to be fixed/changed?
-   Is the visual layout easy to comprehend and use? Is there anything that you think ought to be fixed or would make it look better?
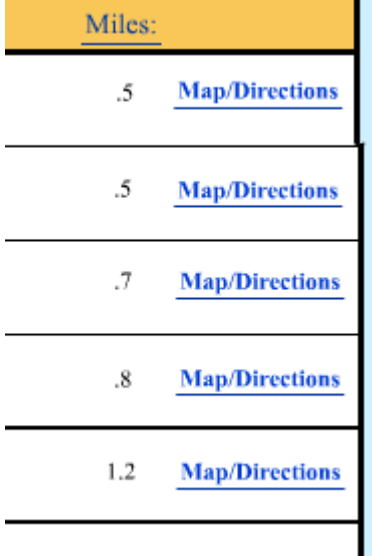-   What are your opinions on the zoom in/zoom out and direction buttons?

Study Name:	
Daniel Zinzow	
Date of Study:	
4/19/2004	
Experimenters' Names:	
Daniel Zinzow	
Subject ID:	
User 1	

No. 1 TA	**Problem**

Name:
Labeling of Main Menu Button

Reference:
On all Screens

Evidence:
Interface aspect:
Pressing "You are Here" button leads user to main menu, which displays an interactive map of the area the user is in.

Explanation:
The labeling is confusing to the user; the user does not associate the main map screen with the words "You Are Here."

Severity or Benefit: Severity - 4/5 Confusion causes hesitation and might cause the user to not be able to find that main screen map. It is the only other option, though, on the screen to get back to the main screen, so it isn't extremely severe of a problem.

Possible solution and/or Trade-offs:
Solutions – Use the label "Main Map" or another more suited label.

Relationships:

No. 2 TA	**Good Aspect**

Name:

Red Dots Representing buildings

Reference:

On Gas, Hotels, and Restaurant Pages

Evidence:

Interface aspect:

The red dots are numbered, which correspond with the result list underneath the map. These red dots represent food, gas, or lodgings that are located nearby.

Explanation:

The user realizes numbers on the red dots correspond with the numbers in the results list and finds that this makes it easy to interpret the results list and map. It is clear and obvious to the user that these red dots represent the buildings that are in the results list.

Severity or Benefit:

Benefit   5/5   This is an extremely good benefit because the red dots could have caused confusion considering that they do not look like gas stations or other types of buildings. The user may not have realized what the red dots represented, but it appears that there are no problems and the red dots are affective in their usage.

Possible solution and/or Trade-offs:

Relationships:

User 1: no. 4

No. 3 TA	**Problem**

Name:

Humongous Star

Reference:

On all Screens

Evidence:

Interface aspect:

On all maps there is a star that represents where the user is currently located.

Explanation:

The user has a hard time seeing the roads near the star because it is so large. The star is covering up some of the roads and brings a little bit of annoyance to user.

Severity or Benefit:

Severity   3/5 The star does not prevent the user from accomplishing any tasks; it only causes an annoyance. It is a slight problem in the fact that it covers up the roads a little bit, but the user can easily zoom in to see the roads better.

Possible solution and/or Trade-offs:

Solution – Make the star smaller on the maps

Trade – offs - Making the star smaller may make it harder to notice and realize that it is there.

Relationships:

No. 4 TA	**Problem**

Name:
Red Dots Disappear

Reference:
Map on Gas, Hotels, and Restaurant Pages

Evidence:
Interface aspect:
When the user zooms out the red dots disappear from the map

Explanation:
The user is confused as to why the red dots seem to disappear. The user wants to see the red dots – noticeable but not to big.

Severity or Benefit:
Severity   4/5   It is hard to see the red dots because the zoom is so far out that the placing all the dots onto the map would create a mass of red. Another fact is that the star would cover up most of the dots anyways. But the user is confused because he/she wants feedback to where these gas stations or lodgings are. User may think they have accidentally gone to a different screen, or may have messed something up.

Possible solution and/or Trade-offs:
Solution – Put red dots on the map
Trade-offs – There will be a clump of redness on the map, making it hard to decipher the individual red dots. It will also cover up the roads.

Final Solution – Put small red dots on the map, making them large enough so the user realizes they are still there, but small enough that they do not take up too much space.

Relationships:
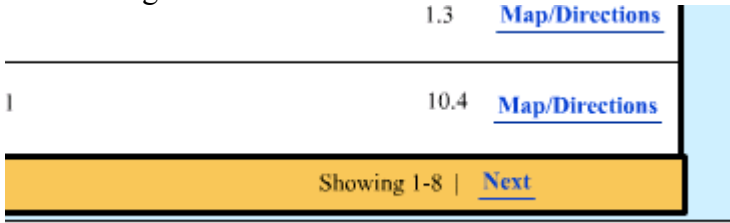
No. 5 TA	Good Aspect

Name:
Map/Direction Button

Reference:
On Gas, Hotel, and Restaurant Pages

Evidence:
Interface aspect:
Pressing the Map/Directions button leads user to the Directions Page

Explanation:
The Map/Directions buttons are very visible and the labeling is clear as to what the function of the button is, according to the user. The user has no difficulties in using these buttons and finds that their location feels natural.

Severity or Benefit:
Benefit 5/5   The user has no difficulties in understanding the function of these buttons and therefore is able to complete the task of finding direction with great ease. The positioning results in good visibility that aids the user in finding the button.

Possible solution and/or Trade-offs:

Relationships:

Study Name:	
Daniel Zinzow	
Date of Study:	
4/19/2004	
Experimenters' Names:	
Daniel Zinzow	
Subject ID:	
User 2	
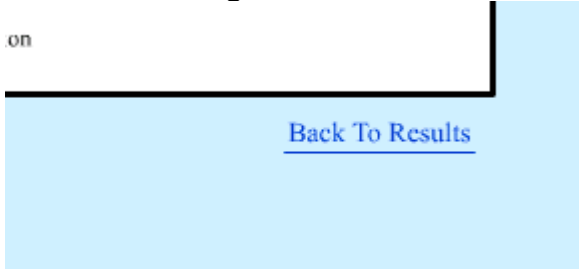
No. 1 TA	Problem

Name:
"You Are Here" labeling

Reference:
On all Screens

Evidence:
Interface aspect:
"You are Here" button leads user to main screen where there is an interactive that displays where the user is currently at.

Explanation:
User is unsure of what "You are Here." The user makes a guess that it leads the user back to the main screen, but still the user is unsure. He/she is even more confused by the fact that this button appears on the main screen – if it takes you to the main screen, why would it exist when you are already at the main screen?

Severity or Benefit:
Severity 5/5   The user is daunted by this button, for he/she is unsure of what it will do if he/she presses it. The fact that the button appears on the main screen further confuses the user of the buttons function. This creates much confusion – but the user is still able to complete the task of going to the main screen from one of the other screens, e.g. the gas, lodging, or food screen. Even though the task can be completed, this confusions is still bad because it takes time and playing around to figure out the buttons function.

Possible solution and/or Trade-offs:
Solution – Change the labeling of the button to something that corresponds better with a map that displays where the user is at, such as "Main Map." Also make it so that this button does not appear on the main screen, but only appears when entering on of the other screens.
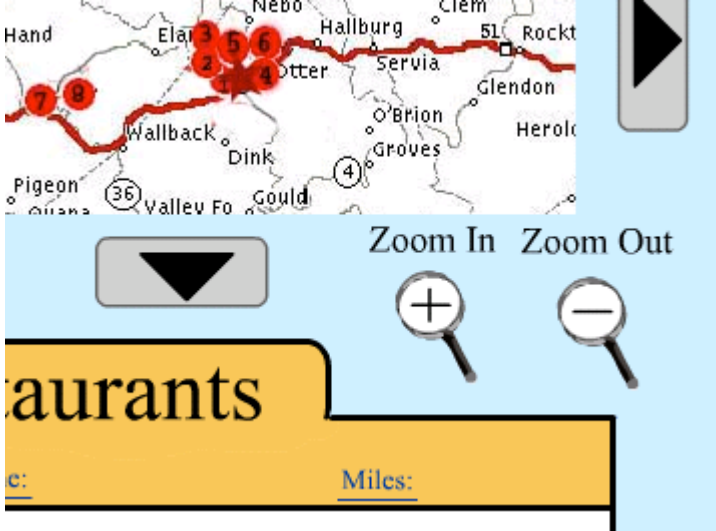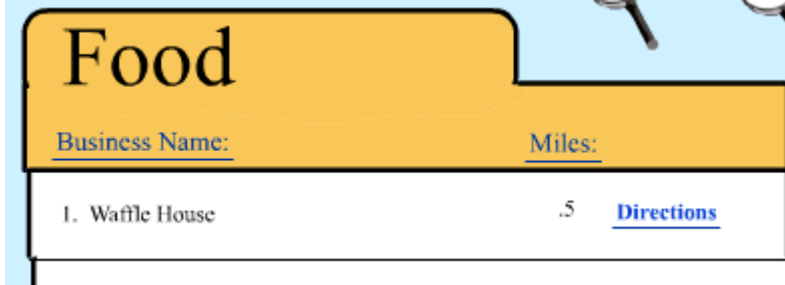
Relationships:
User 1: no. 1

No. 2 TA	Problem

Name:
Previous and Next buttons on Results List

Reference:
On Gas Page

Evidence:
Interface aspect:
Pressing Next takes user to the rest of the results and pressing previous takes user to previous results.

Explanation:
The size of the buttons are hard for the user to see. The placement of the buttons also make it complicated to find the buttons. The user wishes that the previous and next buttons were at the top of the results list instead of being at their current place at the bottom.

Severity or Benefit:
Severity 2/5 The user is still able to easily complete the task of going to the next and previous display of results. The presentation of the buttons hinders the user, but only a little bit. The user clearly understands what these buttons do, the only problem is that the user had a hard time spotting them. The desire for the buttons to be on the top of the results list is an opinion that may not be shared by others.

Possible solution and/or Trade-offs:
Solutions – Make these buttons larger and appear at the top of the results list.
Trade-offs – Other users may wish to have these buttons at the bottom.

Relationships:

No. 3 TA	Problem

Name:
Interactivity with Directions Map

Reference:
Direction Map Page

Evidence:
Interface aspect:
The user cannot interact with the Directions Map

Explanation:
The user wishes to be able to interact somehow with the directions map. The user is most concerned with moving the map around.

Severity or Benefit:
Severity - 4/5   The user is a little irritated that he/she cannot move the map left/right or up/down. The user expects to be able to interact with the map, but such abilities do not exist. It would be very beneficial if the map could move to help the user orient him/herself with the directions.

Possible solution and/or Trade-offs:
Solution – Allow user to move map up and down like all the other maps.

Relationships:
User 3: no. 2

No. 4 TA	Problem

Name:
Back Button on Directions Map

Reference:
On Directions Page

on

Back To Results

Evidence:
Interface aspect:
Pressing the Back button on the Direction page leads the user back to the results page from
whence he/she has come.

Explanation:
The user has a hard time finding the back button and therefore is confused as to how to return to
the previous page of results. This causes quite a bit of irritation in the user, as he/she attempts
pressing the back button on the web page (which takes the user back to the last viewed web
page.) Obviously the user has great difficulty in finding this back button and really desires to
have the ability to go back.

Severity or Benefit:
Severity: 5/5 Going back is an extremely important function, for the user may have entered this
direction page by accident. Not being able to find this button is a great hindrance to the user's
productivity, abilities, and enjoyment with the kiosk.

Possible solution and/or Trade-offs:
Solution – Make the 'Back to Results' button much more noticeable, such as making it a
different color than blue and make it large with an icon.

Relationships:

No. 5 TA	Good Aspect

Name:
Zoom in and out

Reference:
On all Screens with a map except Directions Page

Evidence:
Interface aspect:

Pressing 'Zoom In' zooms in on the map and pressing 'Zoom Out' zooms out on the map.
These buttons look like magnifying glasses with a plus or minus. Plus for zooming in and minus
for zooming out.

Explanation:
The user states that the use of the magnifying glass icon made it easier for him/her to find the
zoom buttons and the plus and minus inside of the icon also aided in understanding what each
button did. The icon speeds up the user's ability to find these buttons, because buttons that are
just words do not stick out, whereas pictured icons do. These buttons also produce the expected
results of the user.

Severity or Benefit:
Benefit 5/5 The user has no problem with zooming and the use of the icons aids greatly in the
user finding and using these buttons. This increases users speed and understanding the kiosk.

Possible solution and/or Trade-offs:

Relationships:

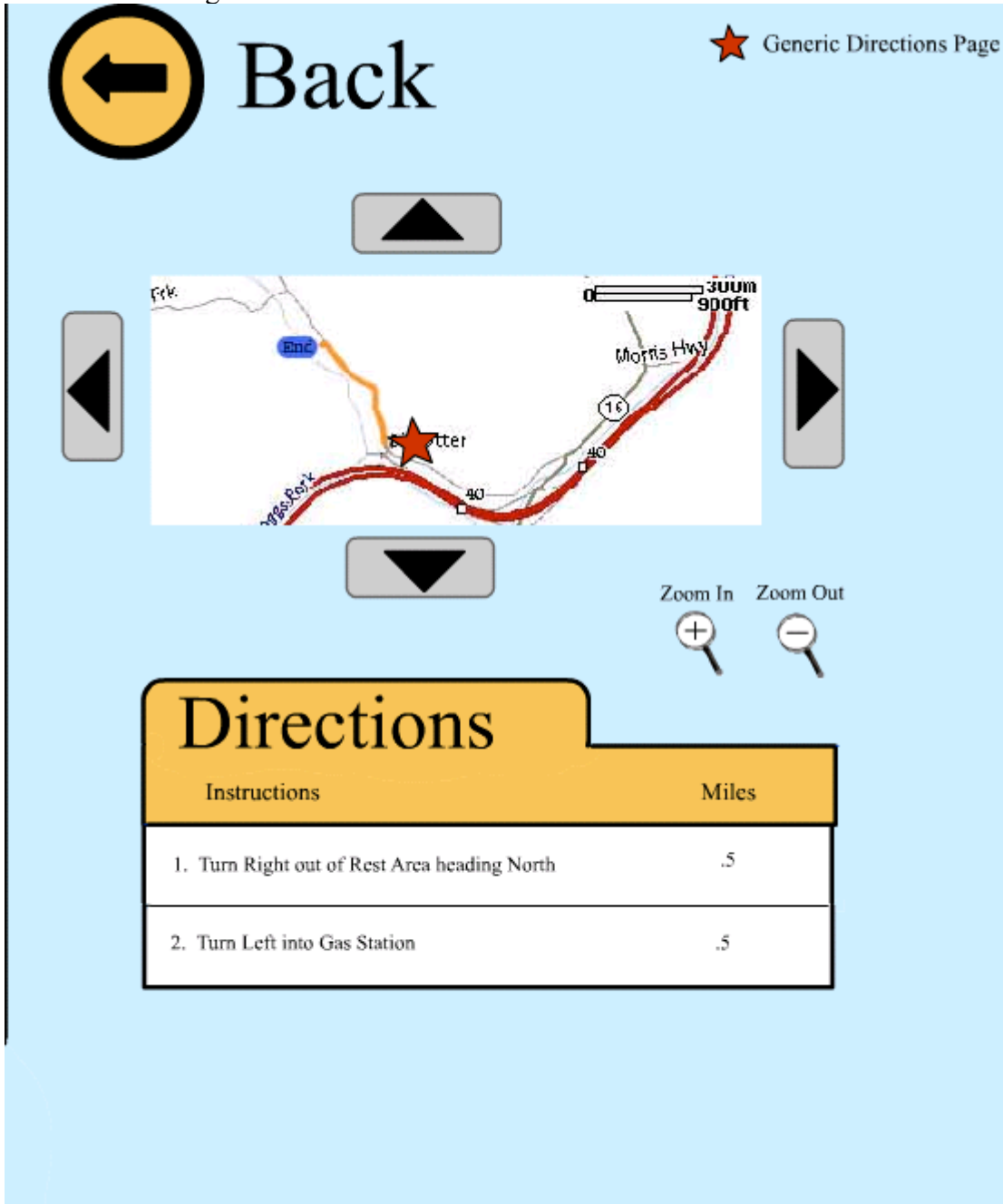|	
Study Name:	
Daniel Zinzow	
Date of Study:	
4/20/2004	
Experimenters' Names:	
Daniel Zinzow	
Subject ID:	
User 3	

No. 1 TA	Problem

Name:
Categorizing Business Types

Reference:
Food and Lodging Pages

Evidence:
Interface aspect:
The user can list results in alphabetical order or in order of miles, but these lists cannot be listed by the type of business, e.g. motel or hotel. The results do not give further details of the type of business the businesses are other than food, lodging, or gas.

Explanation:
The user desires to know what type of lodging or what type of restaurant the listed businesses are, for the user is often interested in a more specific type of business other than just food or lodging.

Severity or Benefit:
Severity: 5/5   Considering that this is a kiosk in a rest area off of the highway, the user probably does not know the nearby restaurants or lodgings and therefore would not what type of business these are. Knowing whether or not a lodging is a hotel or bed and breakfast is rather important for those are very different types of lodgings.

Possible solution and/or Trade-offs:
Solution - Add a 'Type' category to the results page and allow the results to be listed by type by clicking on this word, like the Business and Miles labels.

Relationships:

No. 2 TA	**Good Aspect**

Name:

Interaction with Direction Map

Reference:

On Direction Page

Evidence:

Interface aspect:

Can move map around, but zooming capabilities do not exist.

Explanation:

User enjoys the ability to move the directions map around to get a better orientation of locations.

Severity or Benefit:

Benefit 4/5   Moving the map around does not seem to be too important to the user, but the user does enjoy having such an ability.

Possible solution and/or Trade-offs:

Relationships:

User 2: no. 3

| **No.** 3 TA | **Problem** |

Name:
Zooming with Directions

Reference:
On Directions Page

Evidence:
Interface aspect:
The user can move the directions map around, but cannot zoom in and out of the directions map

Explanation:
The user desires to zoom in and out on the directions to get a clearer picture of how to get to his/her destination.

Severity or Benefit:
Severity: 5/5 Since this is a rest area off the highway, the user is unlikely to be familiar with the nearby city/state roads. The current display of directions most likely will not be good enough to help users find their desired destination.

Possible solution and/or Trade-offs:
Solution - Add the magnifying glasses from previous screens and allow the user to zoom in and out of the directions map. This added ability will hopefully help the user to understand the directions better.

Relationships:
User 2: no. 3
User 3: no. 2

No. 4 TA	**Good Aspect**

Name:

Main Screen Button

Reference:

On all Screens except Main Screen

Evidence:

Interface aspect:

Pressing the 'Main Map' button leads user to the main screen which displays an interactive map of the user's current location

Explanation:

User has no difficulty with the task of going to the screen that displays where the user is currently at. The user finds that the label 'Main Map' is a natural label and gives inference to where it leads, helping the user to easily get back to the main screen.

Severity or Benefit:

Benefit 5/5 In the previous implementation of this device, the users were confused with the label 'You are Here', but with the new label of 'Main Map' the user clearly understands where this button will lead.

Possible solution and/or Trade-offs:

Relationships:

User 1: no. 1

User 2: no. 2

Study Name:	
Daniel Zinzow	
Date of Study:	
4/21/2004	
Experimenters' Names:	
Daniel Zinzow	
Subject ID:	
User 4	

No. 1 TA	**Problem**

Name:
Printing

Reference:
On Directions Page

Back

Generic Directions Page

Directions

Instructions	Miles
1. Turn Right out of Rest Area heading North	.5
2. Turn Left into Gas Station	.5

Zoom In   Zoom Out

Evidence:
Interface aspect:
There are no printing capabilities

Explanation:
The user wishes to print out the directions, but he/she is gravely disappointed that there is no such option. The user feels that he/she wouldn't be able to remember the directions and would not likely be carrying pencil and paper around to write these directions down.
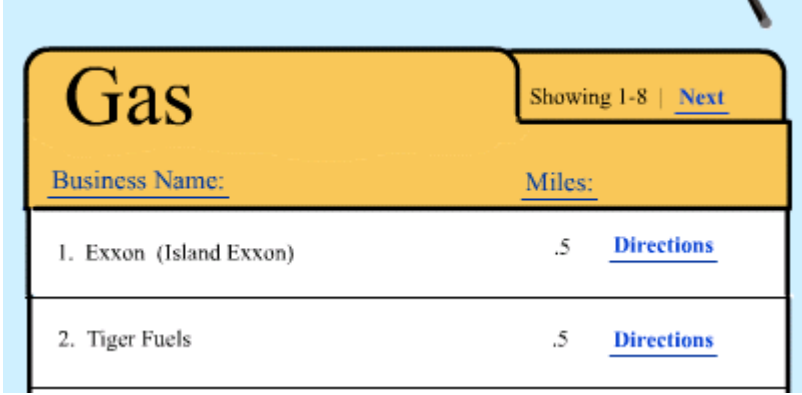
Severity or Benefit:
Severity   5/5
This one is extremely severe. The point of the kiosk is to aid the user in finding the nearest business of choice, but this task is rather difficult when it requires the user to remember long and complex directions. Even simple directions are hard to remember, resulting in load on user memory, which is bad.

Possible solution and/or Trade-offs:
Solution – Provide a print button on the directions page.
Trade-off – not a serious trade-off, but one that ought to be considered. Children might keep on pressing print and all the paper will be wasted. Another tradeoff would that paper would need to be reloaded into this machine. These tradeoffs are incomparable, though, to the severity of this problem.

Relationships:

No. 2 TA	Problem

Name:
Previous and Next buttons

Reference:
On Gas Page

Evidence:
Interface aspect:

Pressing Next on Results list takes user to the next page of results and pressing Previous takes user to previous page of results.

Explanation:
The user feels that it would be more natural to have the previous and next buttons at the bottom of the results list. Having it at the top causes this user to initially overlook it and then spend time trying to find it.

Severity or Benefit:
Severity 5/5 The placement of these buttons in unnatural for the user, causing the user to overlook these buttons. This creates wasted time and irritation as the user tries to find the next and previous buttons.

Possible solution and/or Trade-offs:
Solution – Put the Next and Previous buttons on the bottom of the Results page.
Trade-off – Other users may desire to have the previous and next at the top of the page
Solution – Also put Next and Previous at top of page. Trade-off – Visual clutter and unnecessary buttons.
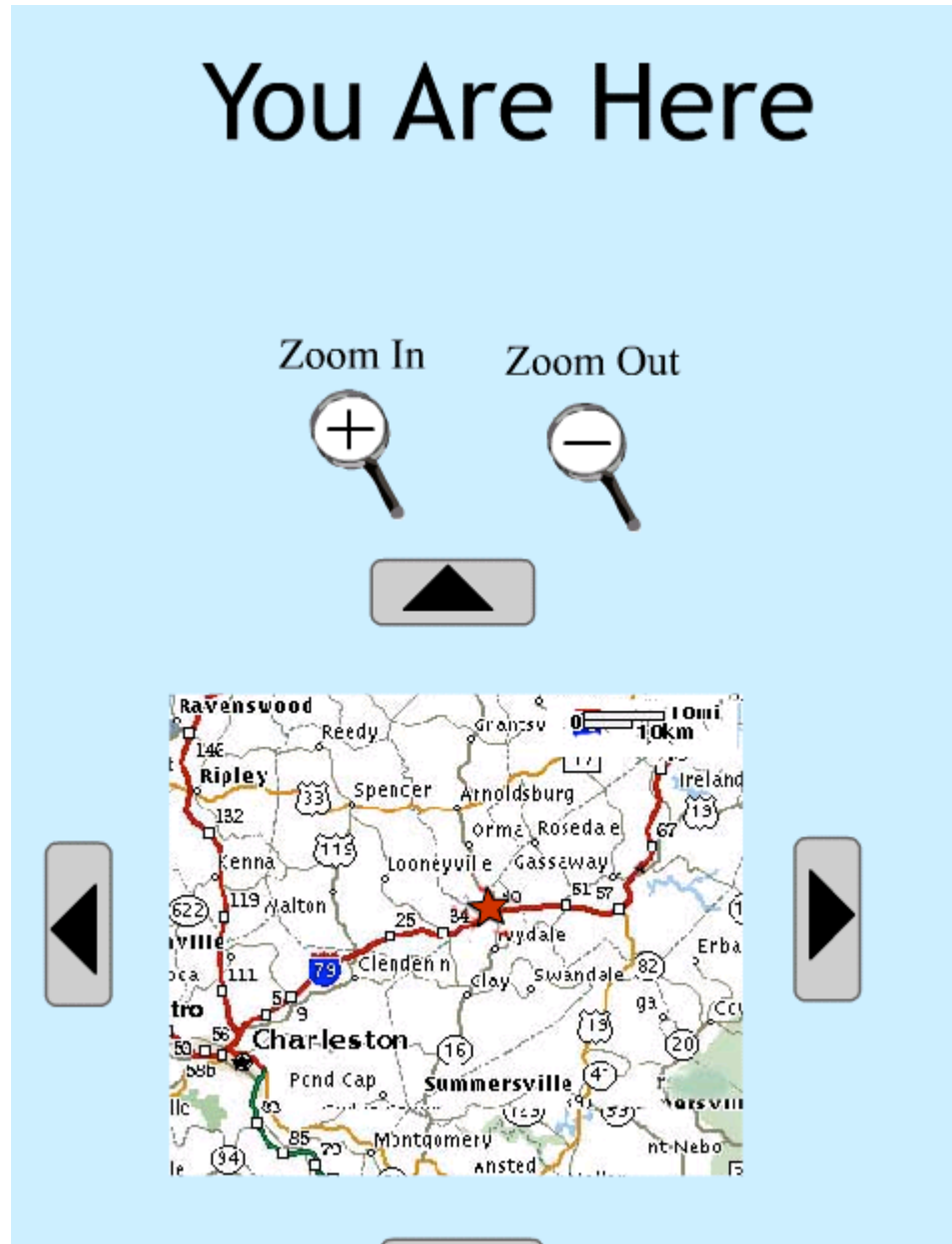
Relationships:
User 2: no. 2

Name:
Presence of Star on Main Screen

Reference:
On Main Screen

Evidence:
Interface aspect:

On the main screen there is a map with a star in the center and text box that states "You Are Here"

Explanation:
The user feels as though the presence of a red star near the text box "You Are Here" will aid users in realizing that the red star on the main map represents where the user is currently at. It is a little confusing to the user that the red star on the main map displays the user's current location.
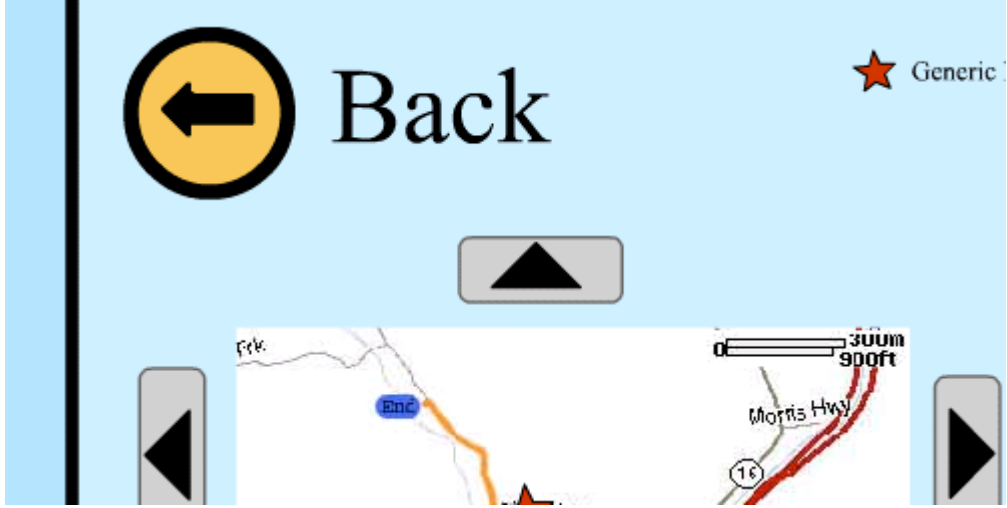
Severity or Benefit:
Severity 2/5 The user understood that the red star on the map represents the current location, it is just that the user spoke out that he/she felt initially confused if the star represented the state capital or something similar. This user did not display any signs of confusion when going through the tasks, so it seems as though this problem was not severe in the user understanding the kiosk and being able to use it.

Possible solution and/or Trade-offs:
Solution – Display a picture of a red star near the label "You Are Here" to associate the red star on the map with the user's current location.

Relationships:

No. 4 TA	**Good Aspect**

Name:

Use of Back Button

Reference:

On Directions Page

Evidence:

Interface aspect:

Pressing the Back button on the Direction page leads the user back to the results page from whence he/she has come.

Explanation:

The user is able to easily return to the results list with no problem. The user likes the fact that the back button is noticeable and at the top, a natural/standardized placement. Even without any instruction to use this button, the user presses it with ease and seems to receive expected results for he/she continues on with no hesitation or signs of shock.

Severity or Benefit:

Benefit: 5/5   It is an important feature to allow the user to return back to the results page from the directions page for the user may have accidentally clicked on the wrong result or many other unintended actions could have occurred. The back button is clear and it is easy to understand what will result if it is pressed, with is a great aid to users.

Possible solution and/or Trade-offs:

Relationships:

User 2: no. 4