Search and Go

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# Section 1: Identification and Requirements

## Background Environment

Our group is a part of Dr. Maurer’s research team in the ASE lab. In the lab we are currently working on the Brigade project, a system that will create a multi-surface prototype to support an immersive retail environment and will allow users to interact with product information across different devices, such as tabletops, iPhones and wall displays. The idea behind that project is what inspired our idea for this classes project. We will scale the Brigade project down and implement an interactive information kiosk for a retail environment. The retail store that we have chosen to make our system for is Sport Chek. Sport Chek is the largest Canadian retailer of sporting goods with locations all across Canada. We chose Sport Chek because of its store size and variety. A large store with a lot of variety is more difficult for customers to navigate and it is difficult for the customers and employees to find products quickly. Currently, Sport Chek employees use a text base system that runs on Windows 2000 to look up product information. These systems are slow and only accessible to the employees. If a customer wants information on an item they must seek the assistance of an employee. The systems used for searching are the same systems used for purchasing items and are located at the cash desks. This means that if all the tills are being used to ring people’s products through, the customer must wait for a computer to become available for the employee helping them to use. The current system also requires the search criteria to be very specific, the employee needs to know the products exact name or the “UPC” code. Employees at Sport Chek say that, most often, if they do not have the product name or UPC code it is faster to manually search the store for the item. This is why our system is coming in. The goal of our system is to enhance the customer experience and to help employees work more efficiently.

## What the System Will Be Used For

Primarily our system will be used for quickly searching for items and view product information. With our system customers and employees will be able to quickly check product information such as availability, location, description, ratings and reviews, price, sales and similar items, users can browse categories such as sale items and customers can request the help of an employee. The main purpose of our system is for the users to access desired information fast and efficiently. The system will not be used to completely replace the current system because it is not intended to work as a checkout till. Our system is intended to be running on computers placed throughout the store for speedy access. The general expectation of our system is that users will be able to access product information fast and easily. In other words, our system is expected to be more efficient to use to search for products than the current system and more efficient than manually searching the store.

## System Constraints

### Our Personal Constraints:

We as a group face various factors that will constrain our system and limit the design. As per the course requirements, we will be developing our system in C# using Visual Studio 2010 therefore our system will only be able to run on a Windows computer. Since this is a course project we have no budget so we are limited to the resources we can access for free, such as the computers in the tutorial room. We are also limited by time, we must have the project done by the due dates.

### Sport Chek’s Constraints:

If a company as large as Sport Chek brought in our system they would have much different constraints on the system that would limit the design. They would have to have a large enough budget to install a few kiosks in all their locations. It would have to be compatible with their database and it would have to be implemented in both English and French since they are a national retailer.

## Identification

### Expected Users

Our expected users can be broken down into two groups:

1. Customers
   * + Adults and Teenagers
       - New customers
       - Returning customers
2. Employees

### Work Context

### Concrete Task Examples

Our tasks were collected in a few ways. First we went to a few Sport Chek locations. At each location we observed how people shopped in the store as it currently is, in order to see what kind of people come in and their shopping patterns. We then talked to a few customers and asked them how they liked the store layout, if products were easy to find and what kind of information they would like to see in a system like the one we are making. We also spoke with employees, asking them about the current system and what they thought would be useful for them. Next we went to Chapters because they have an information kiosk very similar to the system we are making in place at their locations. Again we first observed how people interacted with the system, noting typical behaviors, difficulties and expectations. Then we talked to the customers and the employees asking them how they liked the system, how it could be improved and how easy they found it to use.

Our findings from our observations and the feedback we gathered from talking to users led to the following task examples:

Task Example 1:

* + - Willard is an older man looking to buy a pair of runners that his granddaughter recommended to him. He has the name of the company and a picture but does not know any other product information. He goes to a local Sport Chek, finds a kiosk and types in the name of the company and specifies “shoes”. He finds the right style and sees they are in stock in his size. He then requests the assistance of a sales associate. When the sales associate arrives he notes the shoe style and size then takes Willard to the shoe section, retrieves the shoe from the back storage and gives them to Willard to try on. Willard likes the fit so he takes the shoes to the front of the store and pays cash for them. Willard knows how to work a computer but he is not very “tech savvy”. He also does not like to spend a lot of time shopping.

Discussion:

* This is an example of a routine task, as validated by a Chapters employee and observations. At Chapters many people come into the store and immediately go to a kiosk to search for an item. Many people also do not have exact information. Sport Chek employees also validated this task as routine. Many customers come in and want to know specific information like size and availability and they require assistance.
* Willard is an example of a typical user. He is familiar with computers but not necessarily proficient with them. He knows what he is looking for but not all the specific information. He wants to accomplish his task quickly.

Task Example 2:

* + - Erica is a sales associate at Sport Chek. She often has customers come to her and request information about items. In this situation, Erica has a customer come to her and ask if they have any women’s black Adidas hoodies in size small. Erica takes the customer to a kiosk and searches for black Adidas hoodies size small. The customer points out the one she is looking for but notices it is not stock at that location. Erica shows her which locations have it in stock; the customer thanks her and leaves to go to the other location.

Discussion:

* + - Erica introduces the Sport Chek employees as a user of the system. Employees are often required to do searches in order to find specific information like size, stock, colours, etc. If the store is busy these searchers need to be done quickly.
    - This task is frequent and important because employees encounter this several times a day and many people want to know specific information on a product. This task also shows how some customers may not want to interact with the system directly but instead, through an employee. This could be because of a disability or because they are not comfortable/familiar with computers or touch based systems.

Task Example 3:

* + - Brett is a 17-year-old boy who plays on a hockey team. Brett frequently shops at Sport Chek for his gear so he is very familiar with the store. In this scenario, Brett and he father come to Sport Chek to buy a new hockey stick. They go straight to the hockey section and pick out a stick. Since the store is busy Brett’s father decides to pay with his credit card at an available kiosk to avoid the long lines. They find the nearest kiosk and search for the hockey stick. When they find the right one they select it and choose the purchase option. Since Brett’s team is a part of the Team Assist program he scans his card and a 5% credit goes on his teams account, at the end of the season his team will receive a gift card with all the team’s savings. Brett’s father finishes paying, gets his receipt and they leave the store. Brett is a teenager so he is very familiar with technology and his father works with computers everyday for his job.

Discussion:

* + - Brett and his father are examples of an unusual user because people who purchase items at a kiosk are less frequent, most people prefer to go to a till and have an employee complete the transaction for them (verified by Chapters employees). However, Brett is also an example of a typical customer because he is a frequent shopper and is familiar with the store.
    - This task is infrequent and minor. According to a Sport Chek employee, not a lot of customers come in who are apart of the Team Assist program. The task is minor because our system is not designed to replace the current system, so purchases can still be done at the tills.

Task Example 4:

* + - Kevin is a young adult who regularly comes into Sport Chek to see the new products. Kevin does not want to over look an item he may like by browsing the entire store so he goes to an information kiosk to see what is new. At the kiosk he selects the new items to browse. While browsing, he sees that Under Armour, a brand he likes, has a new style of shirt. Kevin selects the shirt and sees that it has 3 available colours. He selects the blue colour to view and he sees that they have his size at this location. Kevin is not sure if he will like the colour in person so he notes where in the store it is located and goes to see the shirt. Once he finds the shirt he sees that he does like the colour. He then finds his size, takes it to the till and pays with debit. Kevin does a lot of shopping online and is comfortable with browsing items on a computer system.

Discussion:

* + - Kevin is an example of a more occasional user. The majority of the people using the system will be searching for product information on a specific item (as observed with the Chapters system). There will be fewer users who use the in store system to browse.
    - However, this task is an important task because people like to have fast access to new and sales items.

Task Example 5:

* + - Becky is an 18-year-old recreational volleyball player. Becky comes in to Sport Chek to purchase new kneepads. This is her first time shopping at this location in a while so she goes to the information kiosk to see what kneepads the store has and where they are located. At the kiosk she searches for women’s kneepads and browses the results. She sees that there are a few results that match what she is looking for. She wants to compare 3 of them so she adds them to the compare list and views their features all at once. She sees that one pair has the best price and the best reviews from the three and they are in stock so she notes where they are in the store and goes to find them. Once she finds the right pair she takes them to the front and pays with debit.

Discussion:

* + - Becky is an example of typical user because she is very familiar with computers and knows how to navigate them easily. She is also an example of a typical user because she does not shop at Sport Chek very often and is unfamiliar with the current layout of the store.
    - This task is and example of an infrequent but still important task. Not many people will want to stand at a kiosk for a long(ish) time to find items and compare them, but it is important because the customers who like to compare items will really value this feature. A lot of people like to compare shop but they may not like to do this at a stand up kiosk.

## Tentative List of Requirements

### Must Include:

* User can search for an item.
* User can specify search criteria.
* User can view product information.
* User can browse new items.
* User can browse sale items.
* User can browse categories.

### Should Include:

* Users can check the availability of items at multiple locations.
* User can view item section location on a map of the store.
* Users can request assistance from an employee.
* Support for French

### Could Include:

* User can purchase an item.
* User can sign in/register for an account.
* User can register team for Team Assist program.
* User can use Team Assist card when making a purchase.
* User can view other store locations on a map.
* User can get directions to other store locations.
* User can have a wish list.
* User can change the text size.
* User can send wish list from phone app to kiosk.

### Exclude:

* Users can compare items.