

Interaction design project used with an iphone report

[Business](#), [Company](#)



EXECUTIVE SUMMARY

There are over 200, 000 applications in the iPhone Store and the increasing number of applications is posing a challenge for designers and users to differentiate apps. Users are, however, equipped with better choices concerning the applications that are useful. If an application does not meet their needs, finding another is a step away. The user experience determines how an application will stand out among the rest in the market. Well designed apps will ultimately attract and retain users. This literature focuses on the design of an iPhone interface that will be used for the access of a tax filling revenue. The paper will focus on the design principles of an application that is used by visually challenged persons such as the old to file their tax returns. It will also focus on the simplicity with which it is expected to perform such function with little complication.

iPhones are in such great demand that they outsell all other devices in their categories. The growth in their popularity is attributed to their multiple usage and portability. Users are able to browse the internet and make calls at the same time thereby getting the best out of it. If the web applications are not designed to take advantage of the extraordinary capabilities of these famous devices, the users will miss out on important aspects of usability and experience.

IPHONE INTERFACE

Designing an iPhone user experience is achieved through consideration of three fundamental design principles.

- Know the user

- Design lifecycle
- Attention to detail

Know the user

Millions of [people are using the iPhone everyday for work, find directions, determine their next meals and get in touch with friends and families. To fully understand how applications work, designers must have the knowledge of how users interact with this device. They must also understand how important the applications are and what will be accomplished through their use.

Design lifecycle

Applications go through a series of iterations and prototyping to yield a refined and usable device. Iterations normally happen before the launch of the device in order to save valuable money and time associated with a bad design. Users will more often than not be impressed by fully designed applications that meet all their requirements. For example the USA TODAY app went through numerous iteration processes before it was released.

Attention to detail

Most applications fail due to lack of attention to detail of the basic design principles. The lack of attention impacts on the aesthetic and functionality of the application. For instance, a news article with poor alignment will make hard to read while an iPhone screen with poorly placed icons will confuse the user in the navigation process.

IPHONE

The iPhone is a line of Smartphones produced by Apple Inc and can be used for a number of purposes including browsing the web, shooting videos, sending texts and receiving visual voicemails. The user interface is contained in a multi-touch screen with a virtual keyboard. The interface is based on a Home screen with graphical list of the presented applications. By default, the Home Screen has a number of application icons including Messages, Contacts, Apple Store, Calculator, Notes, Memos, Settings, Maps, YouTube, Calendar, Photos among others. Users have the capability to include their preferred applications on nine adjacent home screens accessed horizontally using a swipe. Other user centered interactive effects include horizontal slide sub-selection as well as vertically sliding keyboard.

The multi touch screen in iPhone is bright, crisp and gorgeous. The navigation is purely by touch. Different motions are set to perform different activities and the motion is enhanced by multi-touch capability. It allows more than one touch to be recorded at one thus interaction and engaging controls are enhanced. The controls used in the iPhone include flick, drag stretch and pinch. For instance a flicker of the finger is used to scroll through lists while sliding is used to bring forth a delete button. Drag is utilized for navigation of web pages and photos while pinching and stretching using two fingers zooms the display. The screen is made up of glass that is perfectly scratch resistant and it is not easy to spoil.

The involvement of the users in the design process aids in the identification of needs and the evaluation of the design process. Usability and user

experience goals are identified early enough in the design and utilized to evaluate the applications that have been developed.

CHARACTERISTICS OF THE USED WEBSITE

The website studied in this scenario is a tax collection federal site accessed via an iPhone especially by older generation or persons with disabilities. The design is simplified in a manner that such persons will not have problems while interacting with the website. The application will have free tax calculator that allows the users to compute their taxes easily without referring to external help. Other than maintaining a database of previous user record, they can subscribe to a free email service that updates them on matters to do with taxes such as refunds, among others.

Information architecture

Information in a web page needs to be classified and described in a process known as information architecture. The federal tax department webpage need to have a smooth navigation from one item to the other. Relational databases are characterized by highly structured query and answer mechanism to give specified answers to specific questions. Information structuring involves the process of obtaining granularity of the information atoms in the website such as the interface for Home, Products, Contacts among other essentials. In the design of the website, findability played a major role so that an interactive website capable of giving the users what they searched for.

In delivering a whole round service, the information architect ensured that while the user-centered design was the goal of the design process, a balance

was struck between it and efficient content management, clear policies and procedures. The website is sufficiently detailed to give the user what he wants as well as utilize the web content and space to display a friendly and easy to use website. Under information architecture, the field of the content management sets in with the integration of policies, processes and technologies that support the contents of a web page and provide links to social sites crucial for marketing.

Under interaction design, the website development team considered the tastes of the user seeking storage facilities. Most of the users are elderly business people and families without refined internet capabilities. As such, the website is easy to navigate and visually manageable. Product descriptions are displayed in a column which is easy to navigate. The Menu list is sufficiently displayed with descriptive graphics that the user can identify and in relation to the amount of space occupied. The list of interaction used in a profiling exercise is grouped into categories according to the functionality. In this scenario, the item based category aides in the fast tracking of products through search or navigation. Navigation from the top to the bottom of the page is the simplest since the user will familiarize with its need visually. In addition, the website utilizes the location interaction design.

CONTENT

Internet content is two-way information because it determines the length of the interaction between the user and the company. The federal tax department website contains contacts and an account page that has a

feedback section. Once a client creates an account with the company his details are kept safe in databases and can be used by the company for future direct advertising. The feedback section accommodates both the satisfied and the dis-satisfied clients, and once their claims are reviewed, the call team at the control center gives the client a personalized customer service to determine the genuinely of the claim and a response on the correction mechanism to be accorded.

The contents in the website are managed by content management tools that allow the admin to add and update the templates and forms on the site.

THREE LAYER APPROACH

Perceptual layer

The perceptual layer is manifested on the screen layout. In order to understand the size of the form, it is imperative to indicate clues to the user on what to look out for. For instance the first page should contain notes that indicate the number of pages. In most interfaces, this literature is found on the footnote. However in order to gather for the needs of special groups such as older persons, it should be indicated on the headers in order to be visible and attract the attention of the user. The perceptual layer can further be divided into three main parts; Page furniture, instructions and prompt/response pairs. The page furniture outlines the details found on the edge for example title, logos, tool bars and page numbers.

Finally there are the prompt/response pairs that allow interaction with the user. The form should consist of visible print with good contrast with the

background. The questions should be structured in a way that can easily read and understood.

Conversational layer.

The user's concerns resonate with those of other users who cannot fill on line forms with ease. Interfaces contain questions and require the user to feed in answers. Unfortunately many people find the questions either complicating or the spaces are too small to accommodate the answers. Likewise the ability to decipher which questions apply to which answer is significantly decreased in our focus group. The question and answer layer of the form seeks to address these underlying issues by creating meaning, aiding in finding the appropriate answer and placing it on the required space. The user may encounter an interface like this;

1. 0 What business-community work do you do

1. 1 With what returns

The government might want to know other works that user engages in for the purpose of tax exceptions or such. However the form should be as precise as possible with simple to understand questions. For instance it should be something like;

1. 0 Are you employed or self-employed. If employed state name of employer

1. 1 How much returns do you make annually from the business.

The form should also have radio buttons to click to save users lots of time. For instance a drop down menu with employment status would simplify the filling process for Mark. Because on line forms cannot be partly saved to

accommodate digging out of financial documents to support ones claims such as tax returns, it should be easily adaptable with "Need Help" buttons to help clarify information.

Relationship layer.

There is a distinct relation between the organization developing the interface and the user. The government interacts with the user through the on line tax return form. The task structure is the way the form manifests the segment of work between the government and him. The task structure and the relationship therefore determine the information the user will feed in and the time to do so. Since this information carry some consequences, e. g fines for tax returns and losses for transferring money to wrong accounts, the exchange of information should be simplified and easily to avoid confusion. For instance the e-government website for filling tax returns should only request for a pin number and return the full details of the user. Duplication of information such as entering names and addresses won't be necessary. The relationship that the form develops with the user is important to capture it's the attention and ensure continued use. For instance while filling the tax returns form, the user might be asked about the process and how it can be improved at the end of the process. In addition his opinion can be sought on how frequent he would like to fill the returns.

Fig. 2 A web-form interface

The three layers are interlinked together and one cannot function effectively without the other. The components including; screen, font, page furniture and the color scheme blend together but do not necessarily come up with a

form until the questions are added and answers are given.

Fig. 3 User action procedures.

The web interface displayed below has been designed to give maximum usability and accessibility for persons with visual impairments. These groups of people with visual impairments need special help in tax return form filling. The screen shots show detailed navigation from one part to the other. A click on the type of taxes button displays the figure below. The user then inputs the details then submits the form.

Fig. 4 A screen shot of on line tax form for feeding personal details.

The assumptions made in this discussion are that participants are not permanently impaired to warrant the need of screen readers. The partially impaired users only need screen magnifying glasses to visualize what is on the iPhone screen. The navigation through the web site was simplified by using big enough icons that can readily be visible.

OVERVIEW OF REDESIGN

A critique of this design would not achieve much due to the simplicity accorded to the form. However more details can be included to gather for the needs of the user. For instance eliminating unnecessary texts on the page with the form will enhance clarity and navigation.

The form should also be centrally aligned so that it is easily accessible. Users would be inconvenienced by switching back and forth to access the form.

In addition the three layers in the discussed model could be improved . The relationship layer could be enhanced so that once the user inputs the details, previous records are displayed on the iPhone. For example the government

tax form could be enhanced to give feedback of the previous year tax proceeds and the underlying circumstances such as the type of business the user is involved in.

Fig. 5 Recommended improvements.

The perceptual layer can be improved by using the color and font size more favorable to color-blind users. In the form users would be prompted to indicate if color-blind or not. The color blind users would use an interface which favors them particularly black while those that do not have the problem will utilize colored interface. Users could also be prompted if the system witnesses a delay in entering information. The fields containing the answer space could also be varied according to the length of the probable answer.

CONCLUSION

This paper has focused on the design of an interface for accessing tax payment site using an iPhone. It has explained the purpose of interaction design as concerned with the actions and responses of the products to user behavior. This paper is important because it concentrate on the special features that assist disadvantaged population especially the visually impaired and the old in getting and utilizing the same services provided by the government in the same magnitude as other persons. Users are, however, equipped with better choices concerning the applications that are useful. If an application does not meet their needs, finding another is a step away. The user experience determines how an application will stand out among the rest in the market. Well designed apps will ultimately attract and

retain users. This literature focuses on the design of an iPhone interface that will be used for the access of a tax filling revenue. The paper will focus on the design principles of an application that is used by visually challenged persons such as the old to file their tax returns. It will also focus on the simplicity with which it is expected to perform such function with little complication.

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