**EC601\_Project3 Accessible Design**

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1, Accessibility Design for mobile and web applications

a), accessibility design on IOS

Mobile devices supporting IOS contains lots of accessibility applications in it. For instance, VoiceOver speaks items on the screen in real time. And Voice Control can control the machine by simply speaking. For people with vision imparity from color blind to simply nearsighted, they can all set the display options in Display and Text Size.

In addition, IOS support 3D touch, creating a new dimension and give more possibility on the 2D screen. However, if someone have difficulties touching the screen, they can adjust settings to help better select items on the screen, or just close the option.

b) accessibility design for web applications

Since keyboards become a input device for webpages where seldom appears on mobile apps, along with the increasement of information, designing a web app for better accessibility design becomes a harder problem.

More information means more dependence on vision, so web page design has more rules on it.

The first problem is about color. For people with slight vision imparity, color adjustment need higher contrast, (front :background=4.5:1) to avoid texts and backgrounds mixing up. However the designer shouldn’t rely on color too much, otherwise it will cause problems. For example, people with colorblindness can’t recognize the difference between red and green, which are the most commonly used color for alert and permission. The resolution can be adding signals or design with monochrome, but using slashes, dots and lines to highlight. For the worst case, the designer need higher contrast, or just turn to TextToVoice for help.

In addition, media on the webpage should also be noticed. On the one hand, multimedia will help people with vision imparity to better understand contents on the webpage; on the other hand, too much media can’t be absorbed by those people. In some cases, flashing media would even cause Photosensitive Epilepsy(PE). Design for media should restrict the content and flash, and leave enough time for everyone to read thoroughly.

2,The art options to design accessible features.

a)UI/UX:Skeuomorphism

The fashion of UI/UX design has changed from flat design, which was proposed by Microsoft and promoted by Apple, to Skeuomorphism, trying and mimicing how real-world objects and interfaces appear and function when users interact with them. For example, the setting button designs like a gear, the “mail” app designs like a envelope, etc.. In recent years, designers are trying to mimic the whole page to real objects. They design an online piano-playing website as a real cartoon piano, in which you can press the key as if in the real world, while adjusting complicated arguments to adjust the tone by the sidebar. The better point for skeuomorphism is that you can only rely on your common sense to understand the webpage, instead of facing those similar boxes designed by flat design. Using common sense means it can reduce the negative impacts brought by physical imparity.

b)Color design: High contrast

High contrast means you can distinguish the information from the background, especially when the app page/web page is messed up. The standard for contrast is no less than 4.5:1, otherwise it would lead to hard recognition. For people with vision imparity, the standard should be higher, sometimes it needs a special high-contrast mode or just reverse all the color.

3.Examples- iPad3

All apple mobile products have nice accessibility designs. Let’s use iPad3 as example.

iPad3 is an old version of iPad, so old that it doesn’t support FaceID and 120Hz refreshing, and the chip is awful even when I open a bit more windows for one time. However it does its best on accessibility design as it always been.

IOS’s accessibility modification has a separate room in settings. It supports from vision to color to hearing imparity. And I’m glad to see it suitable for the old machine like this. It supports Vioce Control, VoiceOver to manipulate the device by voice, and Motion settings help reduce the touching disability’s problems.

References:

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