Magario Accessibility Framework

Transcending accessibility in to experience

Intro

In this document I seek to explain a new view on accessibility. It is a future view from a blind visionary who wishes to bring accessibility to all. If you are a designer, developer, business decision-maker, a visionary or a person who cares, I am sure you will find some useful item in this document; and hopefully a valuable application to some part of your work. . Accessibility is the first step for full inclusion in the opportunities everybody should enjoy, and for ensuring dignity to everyone regardless of their dreams, desires or abilities.

Definition

Dictionary

accessible |akˈsesəbəl| adjective 1 (of a place) able to be reached or entered: the town is accessible by bus | this room is not accessible to elderly people. • (of an object, service, or facility) able to be easily obtained or used: making learning opportunities more accessible to adults. • easily understood: his Latin grammar is lucid and accessible. • able to be reached or entered by people who have a disability: features such as nonslip floors and accessible entrances. 2 (of a person, typically one in a position of authority or importance) friendly and easy to talk to; approachable: he is more accessible than most tycoons.

Accessibility as it applies to this context

We can easily realize that accessibility has some interesting verbs. To enter, to access, to approach, To use. Accessibility in terms of disability is always about generating barrier free places, products/services, and information so everyone regardless of the limitation they might face can access the same product/services and information as everyone else. Web sites, mobile sites and digital products/services will be the focus of this document.. My models also apply to physical places, products/services. However, different considerations must be taken in to consideration and it is a much more broad subject. If you are interested in this area please contact me.

Accessibility State of affairs

Today accessibility have so many definitions and it can be used in a series of contexts. But a few things are a fact according to my research. There is not an consistent way to benchmark accessibility progress or Create accessibility evaluations (AE) that reviews the factual extent of the accessibility.

However because something is accessible it does not mean it is usable. As an interaction designer I am interested in designing experiences, as MBA graduate I want to meet balance finance, research and development and social corporate responsibility. In addition, as a blind professional I want things to be accessible so i may have the same opportunities as others on my career,learning and living. As a visionary I want an simpler way to facilitate accessibility to every one. This is why I have combined my knowledge in my experiences and tried to create a frame work to check accessibility in an easer way.

Framework

This frame work Consists of three independent models that can be used together for better effectiveness. to look at accessibility as an integral part of the development. Or separately to check the accessibility of a particular product or service. - Magario Accessibility rating system (to aid in checking and validating the accessibility level) Magario's Multi-coding Approach (to help in the testing validation phase and creation of designs for everyone) - Magario Accessibility experience design process (to aid in the conceptual stages and considerations))

Magario Accessibility Rating system (mars - This means seas in portuguese)

Background

Reason

I developed this system due to the lack of standards for checking accessibility. There is the WC3 recommendations ADA and section 508 guidelines and requirements. But how do we validate the experience, knowledge or objectivity of the accessibility level of your accessibility consultant? There are many check lists and tools to do an accessibility check in a consistent way. However, all those just consider the ... WC3 recommendations and the legislation requirements. However, accessibility is not just about using a check list or a tool after the product is mostly developed. It is about experience.

Realization

When I first started as an accessibility consultant this happened because I was a good screen reader user on my university and the one willing to go through the site and make very specific notes. However, first I was not as knowledgeable of assistive technology, interaction design, business strategy or development as I am today. I noticed that some times I would say a site was accessible and then another user would say it was not. I started interviewing users, and developers in order to find out the root of the discrepancies. This let me to design research and a brother understanding of the accessibility evaluation issues.

Discovery

I found out on my interviews and conversations that most of the accessibility evaluation (AE) done in the passed 10 years have at least one of the characteristics below:
- AE was performed by a screen reader user who has no development Experience. - AE was performed by an advance screen reader with knowledge of advance features of the software and may have had some development knowledge. - AE was performed by a user of magnifier software with very limited experience with screen readers - AE was performed by a developer using a screen reader with very little knowledge of the keyboard commands and he or she used the mouse to get to perform a task without knowing if the screen reader can actually function. - AE was performed by a teacher or other professional who are familiar with screen reader, but cannot count for the different learning styles or identify user research elements.

Limitations

This discovery lead me to believe that if we don't have a consistent AE then how can we account for the true meaning of accessibility? Accessibility should be independent of the special capabilities of the tools of access, such as type of screen reader, or of the user's abilities and learning styles, such as the if the screen user is a power user or not. Instead, We should base accessibility in the common accessibility features across tools and system, plus UX research and in our own innovation abilities. Everyone should be able to access information; For that to happen we designers and developers need a model to ensure we are comparing apples to apples and not apples to oranges, and apricots.

Accessibility Evaluation (AE) Tools

Ever since bobbie approved seal, we have tools to run our content through and figure out if it meets WC3 standards and section 508 compliance. See list of tools in the resource section. It is a great direction. However, those tools cannot check for appropriateness of alternative text, usability and the over all experience. It is a valid tool as a automated system check for web elements. But this does not give you the full picture of what access is. Therefore a need to create a rating and certification system to really meet expectations and make it clear to the user, tot he law and the buyers the accessibility level of the product/service.

Accessibility experience

The current common practice is to check for accessibility in the later stages of the development process. . I am often called to consult after most of the system or sites are ready. It often feels like if it a second thought. Retro fitting accessibility is costly, complicated and often results in usability issues.
therefore I recommend that accessibility becomes an integral part of the development and design process, as well as of the tools, platforms and language features that will be considered for the development.

Experience

The digital age, the internet and globalization have transformed the way we learn, socialize, and do business. Therefore the era of experience started. Competition is beyond borders, specially with the digital deliverables and what creates the difference in between products and services is the type of experience we can design. As a UX designer I care about what kind of experience I can create for the users of the product/service I am designing. However, as a design thinking I also understand that the new era present bigger economical issues too. So as an MBA graduate I care about the balance between the experience, the finance of the product I am designing. As a visionary I care about the strategy, impact and the future of what I am proposing. As a blind professional I care about my access and the access to all people using the products/service and also about the professional social responsibility I have and others on the field of development and design have in make accessibility happen and create opportunities and dignity to all.

Usability

One of the 3 main questions we must answer as UX designers are:
- How effective is the product? (can the user even use it?, What parts are or are not usable) - How efficient is the product? (how long does it take to accomplish a task? Is that timing average or acceptable by the user and society standards?) - How satisfactory is the product? (how much does the user likes, identifies with the product or would use it again. Does it meet the need or fulfill a desire?)

I realized by creating a cross evaluation of Assistive technology products and regular services and products frequently used for people with disabilities did not have any usability analysis in the stages of efficiency and satisfaction in terms of the accessibility. However, In the main stream world of technology products do not survive if those same elements are not taken in to consideration. They might exist for a while until competition enters the market and offer better efficiency and satisfaction. Hens the creation of my framework to attempt to bring the status of main stream accessibility to both main stream and assistive supportive technologies. Efficiency is a very important element of successful products because In the main stream business, customers will not buy a product in the market if abetter more efficient substitute product is available as an option. I am over simplifying, but this does not exist much for assistive technology products for a several good reasons. But this does not mean we cannot do something about it.

Experience2.0

Web has already moved in to 2.0 a long while now. Every becomes more and more interactive, collaboration is a major component or work, school and development. however, the accessibility is staying behind. We still look through check lists, use tools that check for alternative text tags and elements that are not so dynamic.
In order to make accessibility keep up with web 2.0 and grow with it is to make the process part of the development and rating the sites to give a clarity to the users of what to expect. Usability, experience and accessibility must blend together in order to deliver true accessibility and dignity to those using your products.

rating system

1. Use the element check list to see what elements you will have or already have on the site. Here is an examples of elements:

Elements

2. buttons -check boxes
3. dropdown menus
4. media

Languages

5. Java
6. python
7. HTML
8. css
9. flash -php
   And so on.
10. Check each element for accessibility. E.g.
11. Do images have descriptions?
12. are all your images well titled or they are just a series of numbers
13. does all your buttons have names?
14. are all your drop down elements selectable by a keyboard?
15. is your drop down even recognizable by a screen reader?
    Is ok to check yes no or don't know.
    this first round will make you aware of the issues what you know and what you don't know.
16. Now is phase to check for the senses. See Multi-coding designing for the senses.

Scenario

Imagen you are only worried with screen reader users. Your user is a totally blind hong professional in marketing. Your site is on marketing strategies and you have a paid membership. Young professionals use your service to keep up in the latest news of the field, learn techniques and ask questions.

17. Look at your content visually and go through your previous sheet. The information you get by reading does it translate to the screen reader? do you have image of text? Do you have the alternative text all done?
18. now look at content does your descriptions or text represent the information you intended for the sighted people to get or understand? If not rewrite it. Never assume it is not important. You don't know every users, so you cannot assume for them what they need to know and what they don't. If it is decoration, it is still better to have a light description e.g. swirly pattern banner, or green plus sign than just saying decoration or 20304985.gif
    how you would feel if I said. Oh here, is a decoration, but you don't need to know what it is. How would you feel?
19. checking for access to the content
20. checking for efficiency
21. preliminary you can do it, but best results are using a real screen reader user
    -create a task analysis, what the difficulties the user have.
22. set up tasks and take the time, then take the time of the screen reader user compare
23. Ask your self, what can you modify to make it faster?

Multi-coding approach

Designing for the senses

Another thing I learned through my work is that it is not enough for me to show how blindness works, because disabilities is the limitation of a physical or cognitive sense. All individuals with disabilities like every other humans, have different learning styles, different talents, different personalities, desires and dreams. Even a blind person from another are not the same. Also, vision loss has different degrees of sight. So we can not boxed any one. therefore here is where accessibility becomes so complex. I cannot ask of designers and developers who have never have had experiences with a disabilities or with several different people with a range of disabilities to have to consider and think of what the limitations are. Therefore the need to have a lens and a framework to perform user research in the design process. But if you don't have the user available how can you develop a inclusive consciousness? By designing for the sense.
You have a concept. Now check it against each sense. Physical are the easiest. So lets start there.

Physical sense

- vision (eyes)
- Hearing (ears)
- touch (fingers skins)
- Mobility (this is not a sense but for the purpose of accessibility it is because it gives function and perception)
- Smell (nose)
- Taste (Mouth)

The less two are totally normal when speaking about physical experiences inane actual place, like hotels, restaurant and even office experiences. But for the purpose of digital accessibility the first 4 are most important.

Cognitive sense

This should really be like mobility, a function, cognitive functions is generated by the brain not just for sensing, but prime rely for function and perception. this is also a vast topic I will not cover in this paper. But several disabilities will matter in the digital experience here.
- reading disabilities e.g (dyslexia) - writing disabilities e.g. (disgraphia) -Attention disabilities e.g. (ADD, ADHD)

Process

You have a concept, so now you would hang each one of the senses/functions in front of your concept and see how it works. So if you have a page, you know all the elements you will have on it now you will ask your self:
- ear, can the ear hear all the information I can see? - what are the tools used to decode sound for this page element? - Mobility can all the function of each element be performed by a keyboard, switch access software screen reader, eye gaze tool? - for example, do you have a timing on your page to refresh and that might stop an slow person using a switch from going throughout he whole page? Or a screen reader that has to read every single text out loud? you can easily test by reading it aloud your self. It is true some screen readers are fast, but new or unexperienced users are not. - if the person reads the information through a braille refreshable display, are all the elements properly tagged with alternative text? - do you have short cuts or can create some? This does not exclusion from having to use the keyboard as a mouse. - don't assume incompetence e.g. (blind people do not use slides of manipulate pictures) - don't assume over competence if there is not a way to fully access your product.

note

- If this approach was taken more often more digital products would be accessible right out of the box.
- if the accessibility was embedded in the design pricess a lot more products would be more accessible even by accident.