

The Future of Wearable Technology and

It's affected out Come on Its Users

Gabriela Ibanez-Alers

George Mason University

"By placing this statement on my webpage, I certify that I have read and understand the GMU Honor Code on <http://oai.gmu.edu/the-mason-honor-code/>. I am fully aware of the following sections of the Honor Code: Understanding the Honor Code, Understanding the Consequences. In addition, I have received permission from the copyright holder for any copyrighted material that is displayed on my site. This includes quoting extensive amounts of text, any material copied directly from a web page and graphics/pictures that are copyrighted. This project or subject material has not been used in another class by me or any other student. Finally, I certify that this site is not for commercial purposes, which is a violation of the George Mason Responsible Use of Computing (RUC) Policy posted on http://copyright.gmu.edu/?page_id=301 web site."

The Future of Wearable Technology and

It's affected out Come on Its Users

Introduction

The purpose of this paper is to show what the future has in store for its consumers with the idea of wearable technology and how its impact will effect ones everyday life while changing the way people think about it through Google Glass.

In an environment that heavily relies on technology to meet ones goals and objectives on a daily basis, comes the future of wearable technology in the form of a stylish eyewear piece that can be incorporated into ones everyday looks called Google Glass. They were presented to a select few of the consumer market in the later part of 2012 and were not released to the general public until around May of 2014. In which its objective was to create a seamless piece of technology in the form of a pair of glasses with all the compatibilities and functions of a smart phone and more. This piece of wearable technology was developed by Google X, which is known for their driverless cars and its primary objective being in creating technology advanced products. Google glass was created to have all the functions of a smart phone and some of a computer system all packed into a small hands-free pair of glasses that use voice recognition, head and eye movement to kick start its functional uses. The plus side of this piece of Technology is that it cost around the same but just a little more than your average smart phone cost nowadays.

Google glass is an all in one eye wear that allows its users to search things, take photos and videos, send message and phone others, and much more in an instant all in a simpler manner of using the user's voice or movement to command its functions. Its primary objective was to simplify the consumer's already hectic life by allowing its user to receive the information they need at any given time without them having to stop what they are already doing. With Google glass its users never have

to miss a moment of their life and can live on the go without any interference that can prevent them from reaching their end goal at the end of the day. The benefits of using Google glass in ones everyday life are absolutely incredible with all the things that can be accomplished. The benefits of this technology has helped in many way not only the consumer market but also people in the medical field, not to mention those with disabilities, but it also has its own share of controversial privacy issues that have arisen since the product launch that can in turn be more of a hindrance to the product in the long run.

Potential Benefits

For the average consumer, Google Glass allows them all the information or tools they may need at any given time or moment right at their finger tips. Not to mention that they never have to miss a moment of their life with the product because they can use the function of the Glass while still continuing on with what they were already doing. Plus the instant streaming of video and photo allows it users to capture every important milestone they may come across that otherwise without the glasses they would not be able to relive. For businesslike related needs, no longer do corporate officials need to sit in office type setting for conference because now with the technology of Google Glass they can have instantaneous live streaming and conversations with others from any part of the world. The health department has also benefited from the release of this new wearable technology. In 2013, Rafael Grossmann became the first surgeon to use the technology while conducting a surgery because of this he opened many doors for medical research. Now medical students whom before used to observe surgery from a far, now can watch every minor detail and process of the surgery though the eyes of the actual surgeon doing the procedure. This allows those of the medical field to build platforms from their observation and improve their health decisions. Google Glass also benefits those with extreme debilitating disabilities by providing them information better fit their needs. Google glass is ultimately

changing the life of many people with disabilities. Now that the technology is available those that are deaf can now see verbal manuscripts through the Glass as their friends are speaking to them. Even those with permanent paralysis have found a new form of living in which they can now answer phone calls and send texts, where before that would have never been possible for them. It is not only life changing but also revolutionizing the way we once understood things as final that no longer are.

Legal and Ethical Concerns

With any piece of technology that arises there is bound to be some form of controversy about it because as a society in a whole it is very difficult for us to accept things that are foreign to us when all the variables are yet to be defined. That being said some of the legal and ethical issues that are currently present with Google Glass as stated by the magazine company Wired "Welcome to the New World, one in which companies are retaining control of their products even after consumers purchase them." is that even though you bought the product you do not technically own it in terms of what the company has already stated about the product. This means that they hold the right to manipulate your eye-were whenever they feel like it if the product is currently at the time in use. For example, A user could be recording a concert that is happening at their local park and the creators of Google Glass could be seeing everything that person is seeing as well. This for most people is an invasion of privacy, not to mention morally wrong to pry in the lives of others. If the company wanted rights to their product then their product should have been free instead of charging people for it. For now since it is fairly new there is still so much that consumers as a whole need to learn and experience from the product to understand the justifications of the companies' statement towards these issues.

Security Concerns

One of the main security concerns facing Google Glass is the abilities of its user to record video or photographs anyone at any given moment without the other person realizing it. Not to mention that

Glass users can use facial recognition to identify someone they may have come across and find all the available information about that person through their social media or Google plus accounts. For many this is a scary predicament to be in because a stranger can access all your information and find out who are without even knowing it at all. With this piece of technology not only can Google and possibly hackers can gain access to not only the users whereabouts but also all the places they have been through because of the systems in-home GPS inside the product but they can also see live images of what the user is currently seeing while it is in use. A study done by two Cal Tech graduate students recently shows how easy it is to gain information without the users knowledge because of the many loop holes in the Glasses policy for installed apps. In this study the students created an app called malnotes in which once it was download to the Google glass software they were able to control that users glasses even while it wasn't in use. This brought out some serious security problems with the products and even though the company says app like those used in the study are prohibited there was really nothing set up to prevent them from publishing the app and getting those results. Those are some of the most concerning security problems that Google Glasses faces as they further development of the product.

Conclusion

As time moves forward and technology continue to advance at a remarkable rate, we start to see a wide range of new product developments like one of the most commonly know wearable technology, Google Glass. Google Glass is a hands-free eye wear product whose function mimics that of a smart phone. Instead of using ones hands to activate the product, it uses eyes, head, and voice commands. Some of its most recent benefits of the product are that it fits into the user's life almost completely seamlessly without interrupting the user's daily actives but instead enhancing them. It has also allowed for new ways for research and medical procedure to occur. Where they can have an in depth

prospective of what is happening during the procedure while seeing it through the eyes of the surgeon itself which has never been able to be done until now thanks to Google Glass. Although the ethical and security issues with the product are concerning, the product is still fairly new and constantly being develop. So has time progresses within the product and eventually any issue consumers might have with the product will slowly disappear as it becomes more widely accepted.

References

Greenberg, Andy. "Developer Warns Of Google Glass Security Risks Following His Jailbreak Exploit."

Developer Warns Of Google Glass Security Risks Following His Jailbreak Exploit - Forbes.

N.P., 30 Apr. 2013. Web 1 Oct. 2014. Seen Oct.3 2014

<http://www.forbes.com/sites/andygreenberg/2013/04/30/developer-warns-of-google-glass-security-risks-following-his-jailbreak-exploit>

"A study done by two Cal Tech graduate students recently shows how easy it is to gain I information without the users knowledge because of the many loop holes in the Glasses policy f or installed apps."

Sterling, Bruce. "Augmented Reality: Google Glass Contractual Restrictions." *Augmented Reality:*

Google Glass Contractual Restrictions / WIRED. Web 1 Oct. 2014. Seen Oct.6 2014

[http://www.wired.com/2013/04/augmented-reality-google-glass-contractual-restrictions/.](http://www.wired.com/2013/04/augmented-reality-google-glass-contractual-restrictions/)

"Welcome to the New World, one in which companies are retaining control of their products even after consumers purchase them."

Walker, D. (2014). Google glass: A teaching tool and a street-shooting device. *Photo District News*, 34(1), 28-28, 30 retrieved from

<http://search.proquest.com/docview/1467264190Accountid=14541>

"In 2013, Rafael Grossmann became the first surgeon to use the technology while conducting a surgery..."

Shalvey, K. (2013, Jun 06). Google addresses glass privacy, gun ads, china. *Investor's Business Daily*

Retrieved from <http://search.proquest.com/docview/1365286407?accountid=14541>

"Glass users can use facial recognition to identify someone they may have come across..."

Coming soon: Google glasses. (2012). *Information Management*, 46(3), 12. Retrieved from

<http://search.proquest.com/docview/1019286519?accountid=14541>

“...eye wear that allows its users to search things, take photos and videos, send message and phone others, and much more in an instant...”

Bradshaw, T., & Waters, R. (2012). Google unveils prototype 'smart' glasses. *FT.Com*, Retrieved from

<http://search.proquest.com/docview/1022451343?accountid=14541>

“...developed by Google X, which is known for their driverless cars and its primary objective being in creating technology advanced products...”