

# GOOGLE GLASS: YAY OR NAY?

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## ABSTRACT

Will Google Glass be the revolutionary, emerging technology it strives to be? Or will it be more of a burden than a benefit? This paper identifies and assesses the impact of the main advantages and disadvantages of Google Glass on individuals, businesses, and society. By shedding light on the implications of Google Glass, this paper aims to forecast the future of the product and extend the ground for future research in the area of emerging technologies.

## INTRODUCTION

In today's rapidly developing world, the technological footprint is bigger than ever. Over the years, we have witnessed technological breakthroughs that have changed the way people live and do things entirely. From mobile computing to social networking, and from virtual worlds to emerging technologies, we have seen it all. But one tech gadget is aiming to revolutionize people's lives like never before. It involves taking pictures with a mere wink of the eye, tracing data through a screen visible to the individual user's eyes alone, and adding a whole new meaning to 'on-the-move' computing. This nifty gadget is Google's latest project called "Google Glass".

Is it a fashion item alone? Is it something that is meant to add a tangy twist to what already exists? Well, if you look at it curiously, you'll realize that it's just a pair of bulky glasses! That is, a pair of glasses equipped with a camera, auto-command functionality, mobile computing and communication capabilities, and screen-like lenses. Sounds like a cool package, doesn't it? We are told that this product has the potential to become the face of tomorrow by radically changing the way we do things today. However, it is important to analyze the advantages and disadvantages of using such a product in our everyday lives. People in various sectors have begun trialing Google Glass and are on the verge of fully implementing it in their businesses and entities [8]. Governments, hospitals, and airports have also shown significant interest in Google Glass [8]. However, having only been launched in June 2014 [1], the world has already begun hearing problems about the product [4]. So, the overarching question is: Will the benefits of Google Glass outweigh the burdens?

## ADVANTAGES

Google Glass can undoubtedly add significant value to business, government entities, individuals, and society at large. Therefore, it is imperative to explore specific areas in which the impact is most significant. It can be said that the main advantages Google Glass brings are, but are certainly not limited to the following:

### **Simplicity and ease of use**

Google Glass offers its users simplicity. By simply wearing the glasses, the Google Glass experience begins. The lenses turn into a miniature computer screen that will respond to your

commands instantly [3]. This smart eyewear helps users reach what they want within seconds, whether it is pictures, videos, messages, applications, etc. In essence, what Google Glass is offering today's tech-savvy world is a new, simple, and supposedly fashionable way of computing. Multi-tasking becomes much easier with this product too. Suppose you are about to take a morning jog and want to listen to your favorite song, whilst looking at a map of your city to find a perfect route to take, and at the same time feel like sending your friend a text message to make dinner plans. Well, Google Glass can make it happen altogether through a simple verbal command. To emphasize on the ease and user-friendliness of the product, if winking alone will capture an image or record a video for you, how simpler do you want things to get? Google Glass will also respond to verbal commands, provide answers to questions you have within seconds, translate messages for you on the spot, serve as a scheduling and planning management system, and have real-time functionality [3].

### **Fashionable computing**

Is technology meant to be fashionable or workable? Google's latest project has answered that question. Google Glass is an innovative approach to utilizing information technology. By converting what already exists into a more fashionable form, this gains the attraction of the public. But, how is this an advantage you say? Well, let's think of it this way... People nowadays are always in the fashion groove, looking for the hippest and hottest of apparel and accessories that will make them stand out from the crowd. Just imagine what people would think if they would see you wearing a computer?! Or communicating with friends through a virtual screen?! That in itself is enough to boost the psychosomatic response of the human mind, allowing more room for self-development and building confidence. From the business perspective, this can play a significant role in improving employee productivity and ultimately, the quality of the work being produced. Other fashion-related factors that contribute to the trendiness of the product include its availability in different colors and being able to request a branded version [5]. Louis Vuitton and Google being best friends? Now, that's cool!

### **Increased network effects**

Google Glass brings with it opportunities to stay connected with friends and colleagues through great ease [8]. Social media giants are eager to utilize Google Glass and integrate their services via this wearable computer. From a business perspective, this will definitely help increase network effects and marketing for firms. Through network effects, more and more users can be attained and therefore, marketing becomes much easier. This way, businesses can develop social marketing strategies that are a blend of both information systems and traditional marketing. More specifically, things such as advertisements, promotions, and engaging customers in the whole 'experience' that a certain brand or company has to offer become more fulfilling and innovative. For example, virtual networking can change the way a society functions. If both users and businesses were to engage themselves in virtual worlds on a much larger scale, people could experience things beyond their imagination. Think of it this way... How would you like it if you were wearing a pair of Google Glasses and the world around you could be viewed in a 3D-like and interactive manner? I think the idea of it just made work and day-to-day routines a whole lot more interesting.

## **Advanced interactivity**

Google Glass is supposed to change the meaning of interaction completely, especially in the context of social media. With this gadget and the advancements in social media, locating people, for example, becomes much easier. An integration of the Google Maps service and Facebook, for example, will allow the user to instantly tag pictures of your friends through motion and image recognition [8]. Locational services will help map the location of certain places such as restaurants and shops. This can later on be developed into a real-time review system for customers to share their experiences whilst they are actually experiencing a particular place. Furthermore, the integration of Google Maps and Google Glass can also help enhance a business's marketing schemes. In doing so, companies can tailor their marketing strategies to tackle the individual needs of the specific location or pool of customers. This clearly takes interaction to an entirely new level. Because Google Glass will also have real-time features [3], many applications can be developed to simplify current day-to-day procedures such as identification and medical treatments. This is where business intelligence tools such as web mining and data mining can also play a significant role in facilitating decision making based on real-time data. To be more specific, a certain application is being developed to support Google Glass in identifying a person through facial recognition techniques.

## **DISADVANTAGES**

Although the benefits that Google Glass can bring to businesses and society seem splendid, there is a downside to all of this. The most evident criteria people tend to use when assessing a new tech-gadget include price, functionality, user-friendliness, attractiveness, and value [1]. However, what people overlook sometimes are the health and ethical implications and consequences of obtaining such a product. Let's now look at the most eye-catching disadvantages of this product, which are primarily the following:

### **Pricey**

As attractive and awe-inspiring a product may seem, so should its price. Many people have begun to criticize the Google Glass product based entirely on its price [2]. They claim it costs far too much for an average person to afford; a pair of Google Glasses would cost around \$1,000 minimum. According to recent statistics, the average income for a typical American household is approximately \$50,000 per annum, which comes to around \$4,170 per month [2]. Therefore, for a typical American household to purchase a single pair of Google Glasses at minimum price, they would have to sacrifice around 35% of their monthly income! That doesn't stop there. A pair of Google Glasses can reach up to around \$5,000! According to network economics, information systems will become more valuable if more and more people use them to create value. If only a small percentage of people were to purchase and utilize the product, then what value can this product add to individuals, business, and society at large? So, the moral of the story is, in order for a product like this to be successful and deliver its intended value and benefits, it should attract a large user base to ensure value creation. By charging a price with four zeroes at the end doesn't seem like the way to do it.

### **Health and safety hazards**

Critics say that Google Glass poses risks in terms of eye health and general safety [6]. Continuous use of the product will lead to chronic eye problems such as myopia and redeye.

In the long-run, this will weaken the eyesight of the user and may indeed lead to other unintended problems such as surgery and medical treatment. It is very important for buyers to acknowledge this risk and the possibility of such problems from occurring, particularly if the current users are weak-sighted already. Some people may argue that the Google Glass lenses can be medically customized to match the user's vision power [1]. However, because this wearable computer requires the user to stare through screen-like lenses all day, the chances of optical problems occurring will increase by 50% [6]. Looking at things from another perspective, the physical safety of joggers, bikers, and athletes are also questionable when it comes to Google Glass. Some critics argue that the product can be the cause of accidents because of excess focus dedicated to the screen lenses rather than the road or surroundings [4]. Furthermore, because the Google Glass screen is interactive, users who intend on using the product on a very frequent basis, particularly in day-to-day activities such as exercise and cooking must understand that this product can distract them or distort their attention, leaving room for mishaps and accidents.

### **Design and service problems**

As great as the product may seem, the design, however, is rather questionable. First of all, Google Glass is not what you'd really call "pocket-friendly". If it isn't something convenient to wear, it is not going to be used. Similarly, the size of the frame and lenses is not adjustable, meaning to say we must par with the product in its existing form. This can become rather cumbersome for picky and fashionable people who are on the lookout for trendy yet customizable products that can be altered to meet their personal needs. In terms of longevity, this product has a rather tiny battery. The battery life of Google Glass is somewhere between 4 and 5 hours [3]. Therefore, the battery would require recharging at least twice a day for persistent users. This will then make the glasses unusable for a certain period of time until the product is fully recharged. From a service aspect, Google Glass has not been designed to have 3G compatibility [6]. This will not allow users to access videos on YouTube, for example, or live stream. Furthermore, having no 3G means slower data transfers as it relates to downloading, browsing, etc and less enjoyment of the product. Surely, you can connect to public Wi-Fi, but who wouldn't prefer high-speed internet over some congested and ever-slow Wi-Fi connection in a mall or restaurant?

### **Ethical and moral issues**

The ethicality of Google Glass is very questionable. However, despite its recent release, it has been banned in all UK cinemas due to the risk of piracy [7]. This is a major problem relevant to Google Glass, particularly in the context of media and film production companies. Unlawful acts as such have no place in society and by taking preventive measures as such, governments can protect the integrity and works of people. Other issues related to the unethicity of the product include privacy [7]. One of the biggest objectives of information technology is to secure the privacy of its users. However, cybercrime is almost inevitable as people tend to turn sour very quickly. Problems such as identity theft and personal invasion can occur. For example, the snapshot feature of the Google Glass that is triggered by a mere wink can intrude the private lives of people and certainly in confidential business matters [1]. This way, things such as stalking, identity theft, and cybercrime will increase vastly. From a business perspective, hacking and security breakdowns become much easier. To clarify even further, by using Google Glass, criminals can secretly obtain images of specific physical layouts of certain places such as banks, airports, and government offices, in attempt to plan

terrorist attacks, for example. Moreover, the unethically of the product can also be tied to the possible health risks discussed earlier.

## IMPLICATIONS FOR FUTURE RESEARCH AND PRACTICE

It is important to understand the benefits Google Glass will bring to business, individuals, and society at large. Therefore, by investigating some of the main advantages and disadvantages of introducing such a product, the ground for future research is set and can be built upon from multiple facets including predictable trends, the fashion of technology, strategic implications, and many more. The underlying question is, however, whether Google Glass is a revolutionary tool or more of a gimmicky emerging technology? In juxtaposition to the question at hand and in terms of the implications for practice, by studying newly emerging technologies such as Google Glass, a model can be developed for assessing the potential of future technologies and their implications for businesses in developing and sustaining competitive advantage.

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