Google Glass - Dazzling Yet Brittle Technology

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Abstract: In today's digital world, everyone's carrying a mobile phone, a laptop and a tablet. All the devices mentioned above need to be carried by an individual in his bag or in his pocket. Google tried to bring up a wearable revolution with the introduction of "Google glass". It is a wearable computer with an optical head mounted display that is worn like a pair of glasses. This paper will discuss the technology, working, benefits and concerns over the first wearable computer.

Index words: Augmented reality, Cloud computing, Gadget, Google glass, Invention, Marketing, Wearable technology, Wireless

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1. Introduction:

Google glass is a piece of technology that performs the tasks which can be performed by your smart phone through voice commands. In brief, the screen present in front of your eye is operated with your voice. Project glass (other name for Google glass) is a development program by Google to develop an augmented reality head mounted display. Augmented reality is a direct or indirect view of real world which is live. It is further related to mediate reality which deals with the view of reality that is modified by a computer [1]. The Glass is capable of performing multiple tasks such as performing a Google search on voice command, use Google maps to get directions while walking or riding a vehicle, answering phone calls using voice commands, clicking and sharing photographs, gain access to various applications and many more.

2. Working:

Glass makes use of Bluetooth or wireless technology in order to function. In order to gain access to multiple applications, the Glass needs to be connected to your smart phone via blue tooth. Even though it is a stand-alone gadget, its usage is very much limited if it is not connected to a smart phone. It can be switched ON by clicking on the ON/OFF button present on the right side. It is also provided with an USB port for the purpose of charging. A speaker is also provided for the purpose of answering and rejecting the calls. A 5 megapixel camera, mounted at the front is useful for capturing pictures and recording the videos. A Google+ account is mandatory for sharing the pictures through your account.

3. Technologies Used:

For the development of Google glass, multiple technologies such as Wearable computing, Ambient Intelligence, Smart Clothing, Eye tap technology, Smart Grid technology, 4G technology and Android operating system were brought into play.

- In wearable computing, there will be a consistent interaction between the man and the machine. In this case, the computer acts as an extension to the human mind [2].
- Ambience intelligence will create an electronic environment that is sensitive and responsive to the presence of people.
- Smart Clothing is the signal transfer fabric technology installed with the digital devices.
- Eye tap is worn in front of our eye and it is useful in recording the happenings in front of our eyes as well as displaying the computer generated imagery.
- 4G is the latest mobile communication technology whereas smart grid uses communication technology to gather and act on information for improving the efficiency and reliability of the product.

Glass is powered by OMAP 4430 processor which was previously used in Amazon Fire. The device came up with a total of 16 GB internal memory. Coming to the battery life, the producer claimed that it will last for a full day if it is completely charged.

4. Benefits and Limitations:

It is an easy to wear device capable of providing access to videos, maps, web pages and many more. It has got the potential of making a place for itself in the hearts of fashion lovers. Being a wearable device, you need not carry it just like you carry a laptop, mobile phone or a tablet. It is an excellent piece of tech for the handicapped. Even though equipped with a wide range of benefits, Glass has its share of limitations. Being a sensitive device, it has the potential of getting damaged very easily. It cannot by worn by people having eye sight. The most important limitation is, it is very difficult for a person using Google glass to focus on his surroundings.

5. Release and Reception:

TIME Magazine recognising Glass as "One of the best inventions of 2012" raised the curiosity among technology lovers. In mid-2013, intrigued potential Glass clients were welcome to utilize a Twitter message, with hash label

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#IfIHadGlass, to qualify as an early client of the item [3]. The qualifiers, named "Glass Explorers" and numbering 8,000 people, were told in March 2013, and were later welcomed to pay $1,500 and visit a Google office in Los Angeles, New York or San Francisco, to get their unit taking after fitting and preparing from Google Glass guides. Amidst all the fanfare Google started selling its most hyped gadget to the qualified ones and later made it available to the public at the same price. Google had high hopes on the penetration of this wearable gadget into the public. But after its release, the story was different [4]. All the euphoria surrounding the latest technology vanished in a second.

6. Potential reasons for failure:

- During the development of glass, an ardent split was framed between engineers about the most essential elements of Google Glass [5]. One group contended that it ought to be worn throughout the day, similar to a "popular gadget," while others thought it ought to be worn just for particular utilities. How will they end up with a successful output if the engineers itself are unclear on how it should be worn?
- The marketing strategy followed for Google glass was flawed. Instead of releasing it directly to the public, Google released its product to a few explorers. This shows the level of insecurity Google had about the outcome of the product. Early reviews from the "explorers" affected the sales in the long run. If a company is thinking of releasing a successful product, it must make sure that it is complete, which is not the case with the Glass.
- Google glass had serious privacy and security issues. Usage of Glass in places like cinema halls will increase piracy.
- Wearing the glass while driving an automobile will distract the driver leading to accidents.
- Most importantly, there was a question among many on "Why to use an alternate device when you have your mobile phone performing all the operations?"

7. My take on Google glass:

The central idea of this item is defective. Who needs a diverting screen coasting around beside one's field of vision? Nothing amiss with wearable innovation, yet it ought to be found where clients have the decision of whether and when to raise the screen to view it - pretty much as they do now with cell phones. Protection concerns still flourish, however they do with any cell phone with the ability to look on the web. From what I read about Glass, it was not really the "stealth" item everybody dreaded. The genuine risk protection is face-acknowledgment programming, which wrecks our "road obscurity" out in the open. It is an unpleasant weight. Actually, I detest it less in the hands of the administration than in those of overall population.

8. Conclusion:

If you are taking a shot at an achievement item, or any new item, errors should not exist. If care had been taken in the development and marketing strategy of the Glass, the wearable tech would have created wonders. In spite of failing, Glass will certainly encourage people to work on wearable technology. Reports suggest that Apple is working on Google's idea of wearable tech and let's hope that it overcomes all the flaws of Glass. With all the benefits and reasons for failure discussed in detail, the title of the paper is justified.

9. Acknowledgements:

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