Obstacles for Google Smart Glass

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ABSTRACT

Now a day's technology goes on beyond expectations which are even a common man can't think it will happen. By that way we have seen form of communication was changed from letters to telephones and later telephone to wireless phones and faxes were used. Being in the 21st century now we are using smart phones which are very comfortable to use and grasping the human interest towards it by extraordinary features like sensors, internet browsing, pictures, videos records, online booking, health update like heart rate and what not everything can handle with technology. Now this technology goes on extreme extent that is google smart glass which is produced by Google.

Google planned purpose behind google glass would be a hand free showing of data at present accessible to most of the smart phone users. It uses the 4G technology and can easily make communicate with the help of Wi-Fi to mobile. By the commands it will respond quickly. It involves many technologies.

Unfortunately google failed towards catching the world vision market because of unfinished product, safety purposes, no clear function and heavy radiation which cause main health issues. In this paper we will conclude the why google failed to impress customers, represent an overview of google idea towards its product and make a necessary decision to get back the google smart glass into market.

Introduction:

Glasses are the one of the tools to provide the vision for most of the people. Now a days wearing the glasses are most common thing. The advancement of glasses as a typical treatment for blemished visual perception took hundreds of years, with numerous splendid pioneers clearing the way to the ideal vision you get the opportunity to appreciate today. First wearable glasses are invented in Italy during the 13th century. Romans originally found the capacity to use to glass to improve their capacity to see little content, making little amplifying glasses with circles. Italian glasses are become popular and these glasses were materialistic trifles of intelligence and thriving. For several centuries technology changes glasses developed to be "without hands" with the improvement of sanctuaries to reach out over the ears. After this, the development had speed up.

Benjamin Franklin added to the adaptability of glasses by designing the bifocal focal point, which permitted an individual with both close and far-located insincerity to utilize one sets of glasses rather than two. After that 'Scissor Spectacles' was introduced the advantage of this is we could easily store in pockets. These spectacles are mostly used by those who are uninterested to wear glasses daily.

In 1800's glasses became more affordable with the help of lens technology and exact prescriptions. In 1900's glass making became trend like making glass with fashionable and stylish. These glasses are available in different shapes, materials etc. In 20th century sunglasses are become trendier and used for protection from the sun. Present day innovation keeps on improving glasses with defensive coatings that lessen glare and UV light (See Into The Past: The Fascinating History Of Eyeglasses, n.d.).

Smart glasses are items that are mounted on the head like ordinary glasses. They furnish the client with data and innovative conceivable outcomes, e.g., to take pictures or record video. Glasses as we know them today – with edges that go behind the ears – date from the late eighteenth century. Even though laser tasks and contact focal points are promptly accessible today, there are yet numerous individuals who wear glasses. Before remedy glasses wound up typical, they were an object of incredible consideration and a specific anxiety about what they could do. For medieval man, the amplifying and decreasing properties of glass were enchantment, similarly as today numerous outcasts see advanced conceivable outcomes as something mysterious.

Innovation of smart glass:

Steven Mann is the inventor of the smart glass. He is a Canadian researcher well known for inventing the wearable computing. Smart glasses are the computerized internet connected glasses with transparent heads up display. It is wearable computers that add information to what wear sees. It collects the information from the internal and external like the other computers. It has all features like we see in smart phones. It always supports the wireless connection like Bluetooth, Wi-Fi, allows the GPS. Some of the smart glasses have the capability to track the some of the functionalities like measurement of distance while running, heartbeat count etc. (Stevens, 2018)

These glasses are an optics innovation dependent on a Heads-Up Display (HUD), a Head-Mounted Show (HMD) and, specifically, an Optical Head Mounted Display (OHMD). In briefly, there is a plastic item at eye-level, through which the client can see both an on the web, computerized world and a disconnected, physical world. It is, generally, such as having a cell phone appended to the face. Be that as it may, not at all like the cell phone or different wearable's and body-incorporated innovations, which require the client to look down or away, savvy glasses permit one to watch straight out at the world without depending on the utilization of one's hands. This gives a totally extraordinary association circumstance and profoundly new applications.

Smart glasses are used head mounted displays is a paired device to forehead like a helmet. In this the objects are placed by user point of view in both virtual and physical images. In smart glasses some curved mirrors like Vuzix, Olympus and laser technologies are used for display purpose and another two displays namely Virtual retinal displays used for raster display, Technical Illusions cast augmented reality (AR) is a different technique used for clear glass. with the assistance of AR innovation data of genuine world winds up intelligent and carefully manipulee. These are available in different modules like Vuzix M300, Epson Moverio BT- 300, Sony Smart Eyeglasses, Jins Meme.

Vuzix M300 was introduced in 2013. It can be runs in all the latest versions of androids. It has features like camera with 13 mega pixels, head tracking support, two cancelling microphones. This technology mainly used in military, industrial applications. Epson Moverio BT-300 was launched in 2016. It has an excellent is having the front camera with 5 mega pixels. It only uses android Lollipop. It has HD resolutions (Orcutt, 2014)

Sony Smart Eyeglasses are was introduced in 2015. It had many features like gyroscope, brightness sensor, sub microscope with noise suspensions. It supports all the androids from 4.4 versions and above. In the year 2015 Jine Meme was introduced, it was used to detect the body movements in healthy manner, track the health and fitness ranges. It is also used for tracking the tiredness.

For display information, sensing, processing, actuation we can use with single display. For virtual, diminished display we can use glasses with dual display.

BENEFITS:

Camera: there are many advantages by camera like quality video, pictures, hand's-free, view are excellent.

- These are convenient for navigation, notification, memory.
- In medical we can use medicine consumptions, measure the sugar level in blood.
- For safety measurements like detection or reactions while accidents, warn when we are in danger etc.
- In education there are many uses like virtual classroom, experience the virtual objects etc.
- Used for performance measurement and comparison in sports

Disadvantages: Smart glasses have some disadvantages like

- Data in accuracy
- No privacy
- Expensive
- Battery runs down quickly etc. (Schmitz, 2013)

Statement of Purpose:

Being one of top 5 businesses in world, Google accepted its failure about Google smart glass which is Google X. We all know that Google always try to achieve customer demands and make a solution for customers. But 1st time they think out of box and innovated google smart glass which make huge criticism on google and make them to

accept the failure of their product in market. In our paper we are going to find main failure reasons and why product didn't get huge applause around the 21st century.

Literature review:

In recent days there are many smart glasses are released but there is no kind of google glass.it is released in 2014.the main goal of the smart glass is to give augmented reality for the customers. It converts the computer images into physical images for the real world. This paper investigates before and after release of the smart glass such that we can examine the situation after a google glass release.it is featured in many magazines and advertised by top celebrities and shown as future of technology but it failed. Google smart glass innovation become joke in the public eye and showed to the public what the useful of glass and worth of using it is, but it ended at 2015.the founder of the Google glass even doesn't know why it failed? Most of the talks about google glass failure were about privacy and security since there are cameras in front of the glass the myth is if the people stand opposite us wearing a google glass, we don't even know whether they are capturing or recording us, so these are many security issues and it depends on privacy. Many states banned wearing google glass it can distract driving and may cause accidents if we wear and drive and in theatres because it has camera in front of it.

We can't say it is a bad product, but we can assume that it is not ready to release this much earlier without any detailed development of product. From all the perspectives it is in developing mode. All the things about security and privacy are predictable google should be worked out on these before advertising and releasing into the market. (Heinzman, 2019).There are different features in google glass for example if we show something for camera in google glass it gives the details of the product and suggests related information what we are showing in the camera it also works on voice commands if we give a command it actually gives all the information about command and helps us surprisingly we can read the information of our command in the small screen of the glass for this thing glass looks like past generation dreams product for everyone.

The main problems in the glass are if we wear the glass, we look like an old age engineers in 1950's with a huge suspenders dress having screw drivers and other repair kit in the pockets although the google team made the design of the glass with the leading sunglass producer Rayban. this glass made everyone uncomfortable who are

wearing that even the bouncers in the clubs have stopped the people who wears glass saying privacy as reason. When it ended in 2015 all the privacy advocates who drew problems with the glass felt happy with this. And then after a bit time google announced glass 2.0 which is very useful for industries named as 'Enterprise Edition' aims or the destination for all industrial applications. A factory in Minnesota which produces tractors uses the enterprise edition of google glass but normally they use the predesigned safety glasses but after the enterprise edition they are using the smart glass and when the google team visited the aircraft manufacture company, they found that workers in the industry are using smart glasses for guidance help. for example, if they are doing a repair or investigating process in the company they are guided by higher official or higher engineers how to do that by using smart glass if they can't guide face to face if they are far away (naughton, n.d.)

We can see amoral in story the way Enterprise edition raised from the original version we can forgot the number of products which has failed before and after release by watching the success of enterprise edition. For example, Flickr emerged as an online game and Instagram which is a start of developing a square for rival and podcasting project Odeo failed and comes as twitter (naughton, n.d.).

The different way of journey begun for the glass by using it in workplace by using it for real time information and hands free to even google don't know that it can be used in workplace it's an option between the augmented and reality and technology of the world in between the working shifts in the work place.

Some companies in the industrial sector gives a trust that helmets with mixed reality with overlay graphics and actual camera attached to helmet can use for workplace but they are huge and not comfortable and not suits for the day to day tasks on the floor in the process.in a case when every worker needs information transfer the helmet couldn't be used since it is heavy and costly. This glass is less in weight set for reality experience can handle it comfortably rather than helmet everyone in the workplace can receive the information at if the workers needs offering less weight than the helmet. Before any intimation from the producer who is google these clients started using the glass after the post production release google noticed that we are getting new than what we thought. Jay Kothari from the googles glass team lead says that they reached all their explorers who are using google glass product and he realized that corporate space has huge legs to explore than what we do.

All the corporations suggested that effective work should be done on glass for helping industrial sector. In 2014 April team google started Glass at work programmed in the same year some of the team visited Boeing they got mind blowing visuals in the workplace by seeing how the workers glass helping the workers by creating side by side interface doing comparison for wire framing work with the help of glass (Levy, 20147)

Now the google decided to work on the glass which is full difference from the consumer glass that help the workers place such that process flow can be easily managed since workers have their interaction in between the work.

How google overcame other smart glasses:

To overcome these disadvantages in other smart glasses, Google introduce the Google smart glass. As the technology becoming penetrating the easily in the world, Google realized that consumer technology not on the standards. They started interacting with people and decided to design to make easy to utilize technology effectively.

Google Glasses could mean a totally different period for the up and coming age of Travelogues, particularly if you are creating it for a prepared group of onlookers on one of your most loved long-range informal communication locales. It would resemble having a whole film generation unit going with you consistently.

Google glass is a wearable PC with an optical head mounted presentation that is been created by google in the undertaking glass innovative work program. The glass is developed by Google X Lab. Astro Teller is the head of the Google X lab. Google X is the research and development lab in this works can be goes on future purposes. This can be manufactured by Foxconn and released for developers in US in the year 2013 and for consumer it was in 2014. The objective of Glass is to take your base tangible experience of the world and convey it to you in a superior, progressively reasonable, increasingly agreeable, increasingly wonderful way.

Purpose of Google Smart Glass:

The planned purpose behind google glass would be a hand free showing of data at present accessible to most of the smart phone users. It uses the 4G technology and can easily make communicate with the help of Wi-Fi to mobile. By the commands it will respond quickly. It involves many technologies.

Wearable computing technology used for any general or special purposes technology and development of media. Smart clothing technology involves fabric technology and digital technology that is clothing is prepared for transfer the signal with fabric technology is installed with the help of digital devices. With help of Eye Tape technology, we can record and display the sense available to the eye. By using the 4G technology can improve the data rates and mobility is up to 1gbps. It runs on androids having the Linux based software's devices. Augmented technology helps to sensing the input devices like sound, videos, GPS data (EADICICCO, 2014)

Begin tap to begin utilizing Google Glass, you tap the casing of the glasses and you're taken to the home screen. We will see only a straightforward overlay box that conveys any data. To issue an order, you tap the edge again and state "OK Glass".

It has a small display to display the video hands free information, pictures or videos can be taken in glimpse with the help of front camera. These photos and videos are stored in flash memory having 4GB storage and can easily store on social websites. It has speakers designed for making or receives the calls and there is microphone is setup to make telephonic communications.

The excellent feature in google glass is shows the text messages on display and replying by it with help of voice commands. It is very convenient for people and can easily text their massages without help of hands. If we need an answer for question it can easily access the internet and helping with simplified version.

Glass is an integrated version of maps so enable to identify the locations. It has a capability to change the sentences from language to other languages. Numerous alternatives are made accessible which enables the client to utilize either voice directions or little hand signals for working this astonishing gadget. At the side of the glass there is touchpad is located for controlling the device. The sound creation happens with the assistance of vibrations which

is considered as less rough when contrasted with earphones. This is additionally called as Bone-Induction idea. The clearness of the sound is additionally truly great when contrasted with typical earphones or speakers.

In the starting of 2015, Google will likely dispatch Google Glass to a more extensive open. There are as of now different items available, however the publicity about Glass recommends that, over the long haul, we might discuss a distinct advantage. Google Glass (for short, Glass or GG) however for the most part about shrewd glasses. Be that as it may, as Google Glass is the most outstanding, advertised and the one I have been experimenting with, the precedents will regularly be from Glass encounters and reflections (sherly, 2014)

Google Glass is as cutting-edge device has found as of late. It's constrained in extension at this moment, yet the future, Google accepts, is brilliant and the gadget itself is "extraordinarily convincing".

Failures for Google Smart Glass:

There are mainly five reasons for failure of Google X. There are

1. **Safety and Health Concerns:**

   ➢ There will be chance of getting distraction when the person in the driving to display the pictures and videos

   ➢ There is more concern about the privacy and piracy of opposite men and shoot films.

   ➢ Chance to facilitate criminal activities

   ➢ Many people felt uncomfortable while carrying the Google X every time, they get carcinogenic radiation close to head.

2. **Aesthetically Unappealing:**

   ➢ It a sensitive and easily broken. As it is a sensitive device can't be used while in running or any other physical activities.

   ➢ It looks like unbaked cake which is not tasty. Its looks like prototype and still people were in confused state why it looks incompletely.

3. **Little progress to bring the product out of the beta stage:**

   ➢ Google glass got very little progress after it released two years. By that way it seems confused was its final product or else it is a prototype.

   ➢ It makes to worse sometimes, it won't update the firmware and stops working.

4. **No Clear Function:**

   ➢ Google doesn't make any sense about benefits from this to customers. Any product will be released due to its demand or else the product should solve problems of customers.

   ➢ Even engineers behind his could agree with exact usage of this product.

   ➢ So many arguments about usage and this make google couldn't won the business.

5. **Google Glass Explorers:**

   ➢ Unfortunately, google make worse market publicity because of 1ST explorers who brought google glass for $1,500. They didn't satisfy with the features and could not able to carry daily.

   ➢ This group consists of mainly tech Greeks and journalists, so they spread a lot about this failure features (Doyle, 2016)

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