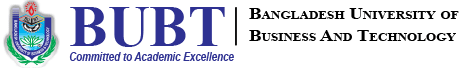
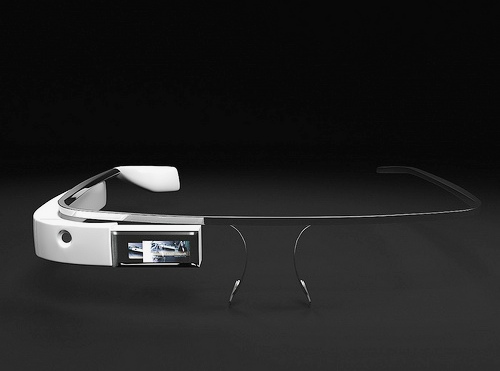
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**Project name: Google Glass or Project Glass.**

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| \*\*\***Prepared By**\*\*\*    **Bishwanath Sarker**  **ID No : 13141203032**  **Intake : 16th**  **Section : 01**  **Program : B.Sc. Engg. in CSE** |

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| --- | --- |
| **Google Glass** | |
| [Google Glass logo](http://en.wikipedia.org/wiki/File:Google_Glass_logo.svg) | |
| [Google Glass photo.JPG](http://en.wikipedia.org/wiki/File:Google_Glass_photo.JPG)  **Google Glass Explorer Edition** | |
| **Also known as** | Project Glass |
| **Software developer** | [Google](http://en.wikipedia.org/wiki/Google) |
| **Manufacturing by** | Foxconn |
| **Type** | Augmented reality(AR), Optical headd-mounted display(OHMD),Wearable technology, Wearable computer. |
| **Release date**  **Introductory price** | Software developer (US), Feb-2013.  Consumer (US): TBA  Explorerc version: $1,600 USD User version: "around the average smart phones" |
|  |  |
| **Operating system** | Android (4.4.2) |
| **Power** | Lithium polymer batterys (2.1 Wh) |
| **C.P.U** | OMAP 4430 SoC, dual-coree |
| **Memory** | 2GB RAMs |
| **Storage** | 16 GB Flash (12 GB of operable memory) |
| **Display** | Prism projector, 640×360 pixels (equivalent of a 25 in/64 cm screen from 8 ft/2.4 m away |
| **Sound** | Bone conduction transducer |
| **Input** | Voice control through by microphone, accelerometers, gyroscope, magnetometers, ambient light detector, proximity detector |
| **Controller input** | Touchpad, My Glass phone applications. |
| **Camera** | Pictures – 5 MP, video recording – 720p |
| **Connectivity** | Wi-Fi 802.11b/g, Bluetooth, micro-USB |
| **Dimensions** | 22x21" |
| **Weight** | 50g |
| **Backward**  **Compatibility**  **Website** | Any Bluetooth-equal phone; MyGlass companion application demand Androids 4.0.3 (Ice Creams Sandwich)/ higher and any iOS 7.0 /higher  google.com/glass |
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**Initiation:**

Google Glass is one kind of wearable technology with the **Optical Head- Mounted Display** (OHMD). It was formulated by Google with the target of producing the local-market ubiquitous computer Google Glass shows information in a android-phone like hand-free format.Wearers communicate by the Internet through natural language voice commands Google began marketing Google Glass to certified "Glass Explorers" in Unitated States on the date of 15th April , 2013 for a bounded time as $1,500, earlier it became usable to the world on the date of May 15, 2014 for the same cost.

Google allows four prescription figure choice for $225.00 US & free by the purchase from any fresh Glass unit. It's essential to remove a little screw in a order to move Google Glass one frame to the another frame. Google enter in a contract with an Italian eyewear company owners named the Ray-Ban & other brand, to offer extra frame patterns

[](http://en.wikipedia.org/wiki/File:MannGlas_and_GoogleGlass1_crop.jpg)

[](http://en.wikipedia.org/wiki/File:Google_Glass_with_frame.jpg)

Google Glass was formulated by Google X the facility of Google dedicated to technical advancements like as driverless cars, Journalism & mass media apps, Healthcare apps, Applications for discover emotions by analysing expressions, apps for agriculture department etc.

**My Glass:**

Google extends a companion Android & iOS apps named **MyGlass**, which permits the user to assemble and handle the device .

**Voice activation:**

Otherwise the touchpad and the Google Glasses can be commanded using "**Sound** **Actions**". To activate the Glass, wearer tilt their head 30° upwards (that can be altered by taste)/ tap the touchpad, & say "OK., Glass." At one time Glass is activated, wearer can order an action, like as "Take the picture", "Record the video", "Hangout with [someone/Google+ circle]","Google 'which year was Wikipedia established?'", "Give me guidances for the Eiffel Tower", & "Send message to John"(lots of these instructions can be discovered in that product video published in February 2013). For search result which read back to user, the voice reply is relayed applying bone conduction through a transducer which sits beside ear, thereby rendering audio almost unhearable to other people.

**Applications:**

Google Glass apps are free application program built by the third-party software developer. Glass also applies many existing Google apps, like as Google Now Google Maps, Google+, and Gmail.

The Third-party apps declared at South by the Southwest (SXSW) include Evernote, The New York Time, and Path(social\_network)

On25th April , 2013, Google published the Mirror API, permitting developers to begin making applications for Glass.In the conditions of service, it's stated that programmers may not place ads in their applications or charge fees; a Google representative said The Verge that may change in the next.

Many programers and companies have constructed applications for Glass, adding news applications, facial recognition, exercise, picture manipulation, translation, & sharing to the social networks, like as Facebook and Twitter

On16th May, 2013, Google declared the publish of seven new applications, including reminder from Evernote and fashion news from Elle,& news alert from CNN Following Google XE7 Glass Explorer Version modify in the date of July 2013, certify of "Glass Boutique", a storage that will allows synchronization by Glass of Glassware and APKs , was noted.

Version XE8 built a debut with Google Glass on 12th August, 2013. It adds an integrated video recording player with a playback control, the ability to mail an modify to Path, & lets users preserve note to Evernote. Various other minute betterments include volume controllers, improved voice recognition & several new Google at present cards.

On19th November, 2013, Google revealed its Glass Developing Kit, showcasing a displacement app Word Lens, a cooking apps AllTheCooks & an exercise apps Strava among other as successful examples.

Inthe date of 15th May, 2014**,** Google declared 3 news applications TripIt, FourSquare & OpenTable in order that entice travelers.

On25th June, 2014, Google declared that notification from Android Wear will be mailed to Glass.

**Awards and praise:**

In November 2012, Google Glass received identification by Time Magazine which one is the "**Best Inventions in the Year of 2012**", alongside inventions like as Curiosity Rover

Later a tour to the University ofs Cambridge by Google chairman Eric Schmidt in February 2013, Wolfson College professor John Naughton valued the Glass & compared it by the achievement of hardware & networking pioneer Douglas Engelbart. Naughton spelled that Engelbart trusted that machine "should do which machines do better, thereby freeing up human to act what they perform better".

In December 2013, Daved Datuona became the 1st artist to incorporated Google Glass in a contemporary function of art.The artwork performed at a secret event to The New Symphony in the Miami Beach, Flurida, U.S.A & was traveled to the Miami Pattern District for the world debut.Over 1500 people applied Google Glass to experiences Datuna's U.S.A flag from his "**Point of view of Billions**" series.Instances like this manifest that Glass can modify perspective, with the hypothesis of opening new dimensions for the visual arts.

**Journalism & mass media applications:**

Pentatonix singer Sccott Hoying wear Glass for part of the "Voice of America and Google Glass" serial publication.

In the year of 2014,the Voice of America TV Correspondent Caralyn Presutti & VOA Electronics Technologist **Jose Vega** started a web project named "**VOA** and **Google Glass**," what explore the technology's potential applies in journalism.Such series of news article examines the technology live reporting apps, including conducting interviews & covering reports of the reporter points of view. On 29th March, 2014, American cappella group Pentatonix provided by the Voices of America while lead singer Sccott Hoying wore the Glass in band's functioning in DAR Constitution Hallat Washington, D.C. ,at that time the band's worldwide visit - the 1st use the Glass by a head singer in a master concert.Starting in the fall,2014, The (**USC**) Universitys of Southern California will guide a course named "**Glass Journalism**," what will explore the device apps in journalism.

**Healthcare applications:**

Several validations of idea for Google Glass has been suggested in healthcare.

In the month of December 2013, Medopad London,U.K based mobile health solvent provider, declared the 1st wearable health record & had an official showcases of engineering at the CeBIT group discussion, the world's biggest tech expo, in the month of March 2014. With Medopad application for that Glass, doctors can check patient records, access live patient vital, collaborate by sharing whatever they are watching in surgery with upto five other doctors, & record video also take picture with patient permission.

drchrono, a Mountain Sight, Calif., founded electronic medical history company has built up a new app for that device it arrogates is the 1st "wearable health record." Doctor who register for drchrono application for Glass can apply to record the consultation and surgery with the patient permit. Videos, pictures & notes are stored into the patient's electronics medical record/ in Box, it is a cloud-based store & collaboration service & can be shared by the patients on request.

Dr. Phil Haslam & Dr. Sebastian Mafeld established the first idea for Google Glass for the field of interference radiology. They evidenced the manner by the idea from Google Glass could help a liver biopsy & fistulaplasty, & the pair submitted that Glass has the possible to improve patient protective, operator comfort & process efficiency with the field at **interventional radiology**.

In July 2013, **Lusien Engelen** commenced investigate on the serviceability & impact of the Google Glass to the health care area. on August 2013, Mr.Engelen, who is founded at Singularity University & in Europe to Radboud University of Medical Center,is the 1st healthcare master in Europe to take part in the Google Glass Explorer curriculum.His inquiry on Google Glass (beginning 9,August ,2013) was conducted with operating theatre, ambulance, trauma helicopter, general exercise, and home concern as like as the apply in public transport for visually and physically impaired. Inquiry contained creating pictures, video streaming to other location dictating operatives log, having student see the procedures & tele-consultation through with Hangout. Engelen authenticated his finding in blogs, videos, pictures, on **Twitter** and on **Google+** and is still on-going.

In Australia, on January 2014, Melbourne technology start Small World Social collaborated by the Australia Breastfeeding Association to produce the beginning hand-free breastfeeding Googles Glass app for new mothers.The application, named **Google Glass** **Breastfeeding application** trial , allows mother to nurse their child while seeing instructions about mutual breastfeeding matters (latching on & posture etc.)and call alactation consultant via a dependable Googles Hangout, who can see the issue by the mother Google Glass camera.The test was successfully complete in Melbourne in the date of April 2014 & 100% of participants made up breastfeeding confidently

**Google Glass Used to Discover Diabetes-Related Condition:**

Prompted by Google Glass , investigators have now formulated a wearable eye-monitor that could guide to early detection from a mutual diabetes-related neurological term.

Diabetic autonomic neuropathy is commons among people with Type 1 & 2 diabetes.

The Modern technology is a little, wearable device named a pupillometer wich can hang in a twin of eye-glasses & just weighs 78 grams - a bit heavier than Google Glass.

"Compared with the existent diagnostic technique, the pupillometer is more reliable, efficient, portable and cheap solution for diagnosis diabetic autonomic neuropathy by its former stages," claimed lead investigator Mang OU-Yong from Internal Chiao-Tung University at Taiwan.

The device is planned to be worn as half an hour about in the doctor's chamber, during what time it would supervise a someone's pupils.

By carefully measurement five parameters related by the pupils, doctors might then it able to find the earlier signals of diabetics autonomic neuropathy.

The term progressively involves the autonomic nerves operating vital organs like as the heart & gastrointestinal system.It can lead to troubles like as fainting, incontinence, nausea, cardiac arrhythmia & an raised danger of bacterial contagion.

Detecting person's asymptomatic diabetics autonomic neuropathy early & treating it correctly may guide to far best health results for them.

Presently, the condition is frequently not found until moderate nerve harm & organ dysfunction is present.

"To diagnoses, doctors rely on detecting change in digestive speed, pulse rate and pressure to find diabetic autonomic neuropathy only this bounds their ability for build a diagnosis early," OU-Yang added.

Supervising the pupils of someones with diabetes might be a best approach, findings, appeared in the journal Used Optics, showed.

**New Google Glass Applications Use to Discover Emotions by Analysing Expressions:**

German scientists have invented a application for Google Glass for measurement people's emotions with analysing their expressions and addition to gauging somebody's age & detecting gender.

Investigators at **Fraunhofer Institute for IC** adapted it's **SHORE** realistic-time face detecting and analysis software system to work by Google Glass , the 1st application of its kind.

By the care with Glass'' integrated camera'', the application detects human faces and determine emotions and analysing their facial expression.

The Glassware (Google Glass applications) simultaneously estimates the human's age and detects their gender among other matters, but this can't determine their identity, investigators said.

Wholly calculations are executed at real-time with the Central Processing Unit integrated to the eyewear. The picture data never goes out the device.

The advanced opens up a entire spectrum of fresh standard eyewear apps, include communicating helps for someones with disorders like as autism, lots of whom have trouble interpreting emotions through with looks.

This lacking information should be superimposed for the person's visual field with data glass.

Still visually impaired can profit by the new application by getting auxiliary audio information about someones in their environment, investigators said.

By taking benefit of the additional capacity to determine person's gender and judge age, the software system could be applied in other apps like as interactive games and marketing research studies.

Supervising the pupils of someones with diabetes might be a best approach, findings, appeared in the journal Used Optics, showed.

**Google Glass Behind Now Demo All Notifications of Our Android Mobile:**

The search engine on Wednesday declared the Notification Synchronism lineament as Google Glass toward Android smart mobiles, which imparts whole notifications from paired device during the head-up display - previously, just notifications from choice compatible applications were established.

Now we're establishing Notification Sync from Glass, that means we can watch our Android phone application notifications at a peek. You might have so soon seen such on Android Wear, but at present when we place Glass on, we can bring the information we need while we need it all absent taking our Mobiles out of our pocket," declared Google+ post.

Google has put up a little video for instruction. Users will demand to turn-on Notifications sync of the application settings and appropriate My Glass approach to whole notification posted along the system or whatever set up apps.

Previously, Google accepted updated Glass on the power to access whole contacts with the headset. Google declared that the Glass team induced detailed that user will be capable to find out 20 contacts near voice command, although the rest give notice got at by swiping. The Great deal View firm accepted granted Glass users to prefer however they message people through the receiver, on a tap in a contact display choices as Hangout, email/SMS.

**Google Glass Take Sports Fans Nearer to the Action:**

Your preferred teams are playing for that title & you are in middle of the playground.

Google Glass is easy becoming more mutual in sports for teams & broadcasters try for bring sports fan closer to the activity. The U.S.A football team Philadelphia Eagle will trial the Internet-linked eyewear for game apply, & a company with by a key

app for the technology tells it has ensured a fresh round of financing which will assist roll out it's Glass plan to sports, entertainment & other fields

"When I speak to teams & ask them about which technology are they viewing, which technology are they knowing of, the two replies I mostly ordinarily get are **Google Glass** **& Snapchat** " stated Eric Fernandz, a founder & managing partner at SportsDesk Media, fan analyze & digital media activating company.

The futuristic eyewear was recognized as "Project Glass " when the glass was introduced by the Google by a video & blog post in the month of April 2012. The United State. company began marketing $1,500 glasses from a choose crowd after on that year, but it just recently became usable to the general public.

The role of that Glass in the sports has developed of trendy athletes dunking their toes into the water by a tool for the team searching draw fan to arenas & stadium, and then hold their concentrate on the activity, instead their omnipresent android-phones & tablets. It comes by endless revenue hypotheses, ranging from financial support deals for the fresh content streams by a possible attending boost for the teams with empty decks.

"I imagine fan know one(1) is the one that is really hitting strong," stated Eric Johnsen, business developing guide for Glass in Work," & the performance line citizenry are dabbling with, that is actually interesting."

Punter Chris Kluwae applied the eyewear in the developing tent last year to bring fans inside the exercise of Oakland Raider, an U.S.A football team at California. Some other team let it's key participant wear the glasses in media day & Roger Federer applied one while he hit by previous tennis superstar Stefan Edberg on a visit into Google's field.

But it's the big-picture application program that offer intriguing possiblenesses for teams& leagues concerned about attending in 21st century, while flat-screen TVs & rising prices in sporting events have built the in-house experience still more appealing.

In 2014 Recognize the Fan Report, developed by Sporting Super BowlJournalism, Kantar Media & SportBusiness Group, got 45% fans use a 2nd-screen device when watching sports on Television, a definite factor the willingness of squads and broadcasters to accept a closer view Glass, which has thumbnail-sized screen connected above to the right eye .For that one user can check out email or Twitter posts without inducing to grope by a phone. This report was founded on a survey about 1,000 American adult conducted at February.

"The direction has been via sports in a broad way, how do we get people utilizing their phone to interact on the game?" told Rob Laycock, Vice president dept.of marketing for Indianapolis basketball team Indiana Pacers & Fever.

**Google Glass Be the Future Big Thing for Agriculture Department:**

Imagine being capable to view a cotton harvest, taking area notes and snapping images, mailing videos of incisively what you are viewing to experts, or prescribing notes, whole hands-free. In a farm, especially bigger ones, everyday checks for troubles similar pests, rodents and fungous infestations is vital, and it's the task from a harvest scout to check out the fields and collect information after optical review to prevent damage earlier it pulls of hand.

Then the Basecamp Networks comes by the images. This Georgia constituted company has formulated IntelliScout, an apps that utilizes Google Glass to pass lighter for the harvest guides to log any effects they discover, without causing to get out a camera /yet a smart phone. The wearable survives possible as the scout to contribution precisely what it is seeing, dictate observes and even shoot a little video and immediately e-mail it, when still in the farm.

Craig Ganssle, Founding father and Chief executive officer of Basecamp Networks, is a Google Glass programmer at present. Ganssle tells he came on with the topic of IntelliScout a direction to build crop exploratory survey hands-free and ever accessible for farmers something he trusts will be utile not just as the large conglomerates but also little and intermediate scale farms in U.S.A. Testing the app started on that year . Ganssle and his group have been processing mapping different harvests which are arisen in different divisions of the Earth.

"IntelliScout provides picture recognition from harvest types, harvest sicknesses, insects and other defect," tells Ganssle. "We are examining it using several crops .That can be applied by farmers everyplace."

One of the harvests that IntelliScout have been examined on rubber - a conventional cash crop at India. "The picture identification will provide automating certain functionalize, for example IntelliScout can be applied for spotting imperfectnesses on rubber planes," tells Ganssle. "That can observe the problems from the planes best from the man's eye. In the event of the corn harvest, it shell be applied for machine-controlled kernel calculating. In the event of cotton plant it can be use to calculate the nodes."

Ganssle tells we wants to open branch internationally. We work with all farmers and authoritieses where farming is still depending on traditionally accepted exercises.

"We are seriously viewing at developing internationally," says Ganssle. "We are looking at the larger companies which works these fields to help encourage IntelliScout and the Google Glass in place like Africa & Asia. The main profit that we see is, IntelliScout will assist reduce the delay among diagnosing the trouble and utilizing the solution.

**Texting By Google Glass is a Distraction for Driver : Study**

Texting while driving by Google Glass which is a clean distraction on road, tells a study.

"SMSing with either a mobile phone or Google Glass make distraction & should be avoided when driving," told head investigator Ben Saouyer from University of Central Flourida.

"Google Glass did help driver in our study retrieve more rapidly than those SMSing on a mobile phone. We desire that Glass directs to technology which can help bear information with minimum risk," he added.

The study is the1st scientific consider applying Google Glass to SMS when driving.

"As distractive regulates threaten become more mutual & numerous in driver's lives, we detect the limited profits provided with Glass a hopeful mark of technological solvents to do," Sawyer noted.

Sawyer & his team install the experiment on 40 young persons.

They drove by a car machine with either Glass and a cellphone and were pushed to oppose to a vehicle going up forward by slamming at the simulator's brakes.

Investigators compared messaging players' reactions by every device.

Those applying Glass were no improve to hitting their brakes at time, later their close call came back to driving generally more rapidly.

"While Glass-applying drivers demonstrated some fields of bettered performance in retrieving from brake event and the device didn't better their response by the event itself," Sowyer remarked.

More significantly, messaging by either device negatively affected driving performances.

When Glass feeds drivers the selection of applying head motions and voice instructions to view & respond to SMSs, thereby avoiding motions of the thumb, SMSing with the technology even causes distraction, the authorities concluded.

**Termination:**

Now a days's society have become rapidly accustomed to emerging techs around us, cell phone turning Smartphones & android, iPad, tablet, augmented reality, camera, mp3, GPS, robots that is a totally different story. Engineering has changed dynamically through out the years from computer to laptop to now all being all-in-1 on our phone. To mean that, that will everything today be in a couple of glasses is amazing. Google glasse are an emerging tech that uses increased reality to take pictures, videos, utilize GPSs, explore the web for data & more was made by Google X engineers & discoverer Babak Parviz.

Google Glasse will affect society by aiding users become more affiliated by reality rather than acquiring caught up with the technical world. Google glasse is light, durable & comfortable, they comes in different colors & are very stylish for this technological world . The glasse is leading to other product like increased reality contact for the military & ordinary users. The Google glasse do have results, they are extremely valuable & the price range from $1500 to 3000. The largest issues that review by the ACM ethical code is secrecy & recording issues. Users are touched on that since they'll n't be able to recognize when someone is "seeing" them, they trust that it's versus their privacy right for the product to pass. Google Glasse will sooner make cell **phone, camera, computer, tablet & GPSs** die out since the glasse contain all these element in one simple tech.