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Brain Glass Technology

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Abstract- The aim of this research was to explore the possible integration of Google Glass with Brain Mapping technology towards the development of enhanced version of Google Glass that can directly mapping the brain impulses and execute commands of users.

It refers to technologies like Brain Mapping, EEG and the Google Glass Device.

I. INTRODUCTION

Brain-grass enable users to control devices with electroencephalographic (EEG) activity from the scalp or with single-neuron activity from within the brain.We demonstrate here for the first time that electrocorticographic (ECOG) activity recorded from the surface of the brain can enable users to control a one-dimensional computer cursor rapidly and accurately.

Through the use of ECOG ,google-glass a wearable computer with an optical head-mounted display (OHMD) displays information in a smartphone-like hands-free format that can communicate with the Internet via signals sent by ECOG.

II. COMPONENTS IN USE

Brain–computer interfaces (BCIs) convert brain signals into outputs that communicate a user's intent. Because this new communication channel does not depend on peripheralnerves and muscles, it can be used by people with severe motor disabilities. BCIs can allow patients who are totally paralyzed (or 'locked in') by **amyotrophic lateral sclerosis(ALS)**, brainstem stroke or other neuromuscular diseasesto express their wishes to the outside world. However, practical applications of BCI technology to the needs of all people impeded by the limitations and requirements of current BCI methodologies.

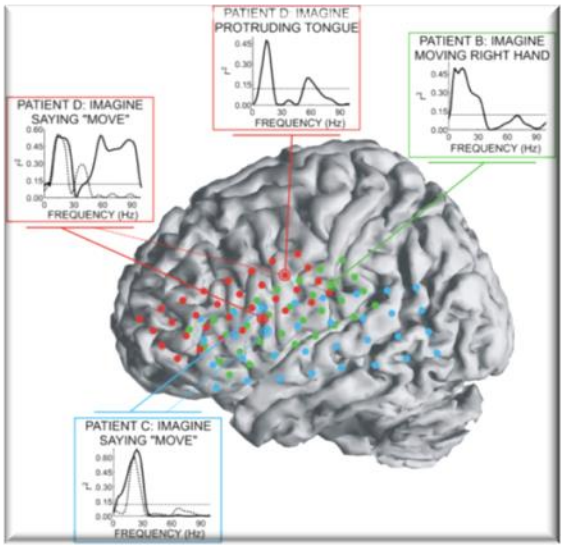
BCIs can use non-invasive or invasive methods. Noninvasive BCIs use electroencephalographic activity (EEG)recorded from the scalp. They are convenient and safe but they have relatively low spatial resolution, are susceptible to artifacts such as electromyographic(EMG) signals, and often require extensive user training.

Invasive BCIs use single-neuron activity recorded within the brain. While they have higher spatial resolutionand might provide control signals with many degrees of freedom, BCIs that depend on electrodes within cortex facesubstantial problems in achieving and maintaining stable long-term recordings.

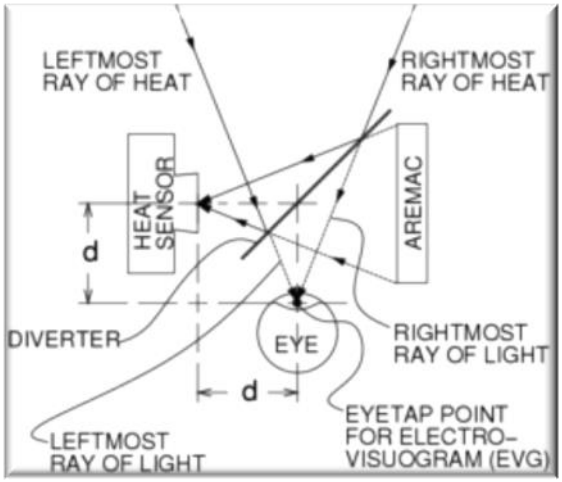
III. BRAIN CURVES ANALYSIS

The below figure depicts the various convex and concave regions from where the electrods can be placed to monitor the impulses during thinking process of Human.These records will help to identify the objective thinked by Human.

Then use ECOG to convert that singnals to computer data that analyse it to a meaningfull word in human readable.



View to Brain -glass



IV. EYE LENCE ALALYSIS

The above figure gives the idea of Human eye vision and the glass used to display the Picture/images to the user.

The above figure's working is control by google glass a device developed by Google.

Google glass:

Google Glass is an attempt to free data from desktop computers and portable devices like phones and tablets, and place it right in front of your eyes.

Essentially, Google Glass is a camera, display, touchpad, battery and microphone built into spectacle frames so that you can perch a display in your field of vision, film, take pictures, search and translate on the go.

The principle is one that has been around for years in science fiction, and more recently it's become a slightly clunky reality. In fact, the "heads-up display" putting data in your field of vision became a reality as early as 1900 when the reflector sight was invented.

Google Glass uses display technology instead to put data in front (or at least, to the upper right) of your vision courtesy of a prism screen. This is designed to be easily seen without obstructing your view. According to Google the display is "the equivalent of a 25-inch high definition screen from eight feet The embedded camera obviously does not need a viewfinder because it is simply recording your first-person perspective, allowing you to take snaps or footage of what you are actually seeing.

Any function that requires you to look at a screen could be put in front of you.

Controlling this data is the next neat trick. With a microphone and touchpad on one arm of the frame, you can select what you want to do with a brief gesture or by talking to the device, and Google Glass will interpret your commands.

Google Glass can also provide sound, with bone-induction technology confirmed. This vibrates your skull to create sound, which is both more grisly sounding and much less cumbersome than traditional headphones.

way". There's no official word on native resolution, but 640 x 360 has been widely mooted.

Overlaying data into your vision has obvious benefits; many of which are already functional in Google Glass. Directions become more intuitive (although it sounds like there is no GPS on board so you will have to pair it with your phone), you can view real-time translations or transcriptions of what is being said, and you can scroll through and reply to messages - all on the fly.

What can Google Glass do?

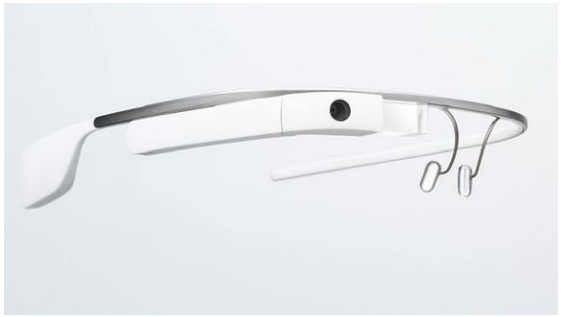
As well as Google's own list of features, the early apps for Google Glass provide a neat glimpse into the potential of the headset.

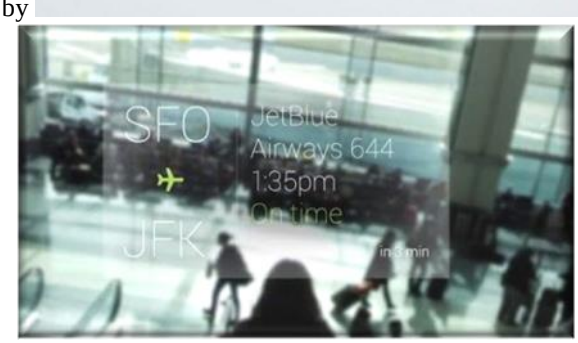
As well as photos and film - which require no explanation - you can use the Google hangout software to video conference with your friends and show them what you're looking at.

You'll also be able to use Google Maps to get directions, although with GPS absent from the spec list, you'll need to tether Glass to your phone.

To do that, Google offers the MyGlass app. This pairs your headset with an Android phone. As well as sharing GPS data, this means messages can be received, viewed on the display, and answered using the microphone and Google's voice-to-text functionality.

Google has given its Glass project a big boost

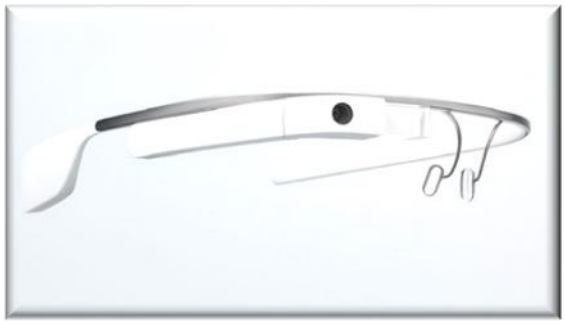
by 



That functionality will also bring the ability to translate the words being spoken to you into your own language on the display. Obviously you'll need a WiFi connection or a hefty data plan if you're in another country, but it's certainly a neat trick if it works.

Third parties are also already developing some rather cool/scary apps for Google Glass - including one that allows you to identify your friends in a crowd, and another that allows you to dictate an email.

The New York Times app gives an idea how news will be displayed when it's asked for: a headline, byline, appropriate image and number of hours since the article was published are displayed.



V. OUR IDEA

Our idea is to transfer the records/data recorded by ECOG to embed into the Google glass's chip to get the command from the brain and not from the voice command which google glass provide till now.

VI. CONCULSIONS

To design a device that can be handle by the as per thinking of the person and not as per voice command.

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