Mystery behind Pioneer Wearable Technologies

Wearable technologies represent a new era of personal computing. The smart phones and tablets which are more popular these days will soon become obsolete as wearable technologies are emerging at a faster pace. In a couple of years, we are going to witness a new generation of users wearing smart glasses, watches and clothes which can do a lot of things than what smart phone does.

In this article, we explore a few pioneer wearable technologies and the features that they offer. In addition to that , we will also see the components that they are made up of and the mystery behind the working of it.

Google GLASS

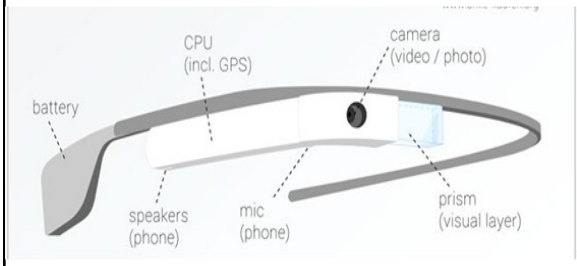
The most popular smart glasses is Google glass. This glass offers a lot of features beyond one's expectation such as

- Reminds the wearer of appointments and calendar events.
- Alerts the wearer to social networking activity and text messages.
- Offers directions
- Alerts the users to travel options
- Offer updates regarding the local weather conditions.
- Take and share photos and videos.

Wondering how a pair of glasses can do these things? Let's take a look at the components that a Google glass contain and how they could help in providing the above mentioned features.

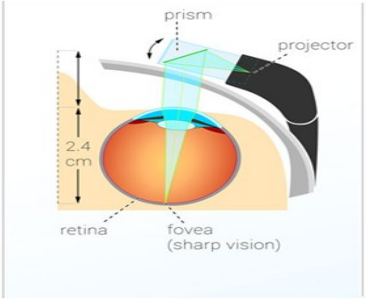
Google Glass contains the fundamental bits of any computer, including a CPU (ARM based microprocessor) , sensors such as GPS, speakers, microphone and battery, to which are added a tiny projector and a prism

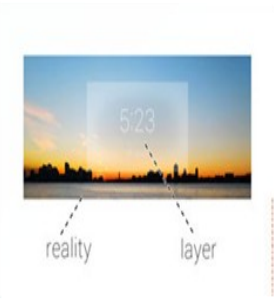
Anatomy of a google glass



the device as light as possible, most of the processing actually takes place in the cloud. Thus, a good mobile broadband signal is essential for google glass to remain operative.

Google glasses can be controlled either by using a capacitive touchpad along the right side of the glasses or through voice commands. The glasses overlay the real world with a virtual layer by projecting the screen onto the retina by a prism.





Looking at the future, google glasses can help in keeping track of one's life .With a facial recognition software and social networking, one can even get the complete profile of anyone they meet.

Pebble Smart Watches

Even though Smart watches do not get the status of a technology as most of the processing is done by the smart phones. They play an important role in making the life easier. This watch connects to the android or iOS smart phones and brings the text messages, alerts of incoming calls and notifications to one's wrist.

Seems to be quite interesting ? Isn't it?

The smart watch is equipped with e-ink display rather than a LCD display as it consumes lower energy. The e-ink display offers good readability even in the sunlight and constantly displays time or other information even in standby. It also has a Bluetooth antenna, a Vibrating motor and 3-axis accelerometer with gesture detection

Pebble offers a huge number of watch faces and apps for download in its App store, and is one of the few advanced smart watches fully compatible with Android and iOS. A interesting app "cycling" comes pre installed with the pebble smart watches measures speed, distance and pace of a cycler through GPS technology.

For developers, it offers pebble kit (SDK) to create new apps and games . The major feature of pebble kit is that it offers two way communication between watches and smart phones using AppMessage Framework.

Fitbit's Flex Devices

Flex is a small wristband which acts a activity tracker. It is a wireless connected tracker which through Bluetooth capability transfer the statistics acquired to a smart phone or computer.

Fitbit tracks the following information

- Steps taken
- Distance traveled
- Calories burnes
- Very active minutes
- Sleep time and quantity

How does it track?

Flex uses a MEMS 3-axis accelerometer that measures the motion patterns.. An accelerometer is a device that turns movement (acceleration) of a body into digital measurements (data) when attached to the body. By analyzing acceleration data, the trackers provide detailed information about frequency, duration, intensity, and patterns of movement to determine the steps taken, distance traveled, calories burned, and sleep quality.

The 3-axis implementation allows the accelerometer to measure your motion in any way that you move, making its activity measurements more precise than older, single-axis pedometers.

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