



Google Glass: The Future Technology

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ABSTRACT

New gadgets — I mean whole new gadget categories — don't come along very often. The iPhone was one recent example. You could argue that the iPad was another. But if there's anything at all as different and bold on the horizon, surely it's Google Glass. A wearable computer, it consists of a small camera, video recorder and data display mounted to a pair of lens-less glasses that give hands-free access to a smartphone-like interface. The voice-augmented monitor — which sits just above the right eye — layers data over the physical world, integrating it into the wearer's vision. Google has said that eventually, Glass will have a cellular radio, so it can get online; at this point, it hooks up wirelessly with your phone for an online connection.

Google Glass with a focus on finding medical uses for this type of wearable computing technology. While I believe that it is analytics capabilities that will allow us to realize the value of health information technology, the convergence of hardware and software combined with an explosion of wearable sensor technology is providing powerful opportunities for some disruptive innovation in the healthcare marketplace, the practice of medicine, and other fields too. This paper presents the current and future of Google Glass.

INTRODUCTION

Google's prototype of a device you wear on your face. Google doesn't like the term "glasses," because there aren't any lenses. The Glass team, part of Google's experimental labs, also doesn't like terms like "augmented reality" or "wearable computer," which both have certain baggage.



Glass looks like only the headband of a pair of glasses — the part that hooks on your ears and lies along your eyebrow line — with a small, transparent block positioned above and to the right of your right eye. That, of course, is a screen, and the Google Glass is actually a fairly full-blown computer. Or maybe like a smartphone that you never have to take out of your pocket.

Google Glass is futuristic and good-looking (in a geeky way). The software *looks* like it's been designed to help you lead an easier life. Glass is convenient and can get you useful information instantaneously. The Google Glass screen is unlike anything you have ever seen before. Think Star Trek, Iron Man and the likes only simpler. The build quality of Google Glass is also exceptional owing to the titanium used. It seems *very, very* sturdy.

You can control the software by swiping a finger on that right earpiece in different directions; it's a touchpad. Your swipes could guide you through simple menus. In various presentations, Google has proposed icons for things like taking a picture, recording video, making a phone call, navigating on Google Maps, checking your calendar and so on. A tap selects the option you want. In recent demonstrations, Google has also shown that you can use speech recognition to control Glass. You say "O.K., Glass" to call up the menu.

GOOGLE GLASS BRINGS PERSONAL VIDEO RECORDING TO THE WORKPLACE

Google Glass is still in beta, but one enterprising company is already figuring out how to use its video recording feature in the office. At the recent Streaming Media West conference in sunny Huntington Beach, California, Scott Lawson, director of IT architecture for enterprise resource planning software company QAD, sat down for a red carpet interview to explain how his company is already finding uses for Google Glass.

"So a new employee comes on. We want to introduce him to the whole team. QAD is a global company; most people are not at the corporate office. So we can make a quick interview video with them, not a lot of fuss, and then publish that right away and have everybody meet this person before they leave on their very first day," Lawson explained. "Another use case is down in the server room. I work for IT and we have racks and racks of servers, and identifying those servers with somebody upstairs or at another location who's working the firewall, who's trying to figure out what's going on, you can have sort of a man-on-the-street as it were."

Working with Google Glass will certainly take some adjusting. Lawson offered a few tips based on his experience so far.

"You can't record a ten minute video on Google Glass. Although it would work, it would probably kill the small battery that you have," Lawson explained. "The other thing is you want to be ready. It's all in one take, so you have to go and think about what you're going to do. As soon as you turn it on, you have to give a title and extend the video and talk and then close it up. It's like being a newscaster or a broadcaster."

Google Glass can make the creation of video content for business, education, and entertainment easy for all people who want to communicate simply and quickly.

8 Things You Can Expect From This High-Tech Eyewear.

1. Tiny (But Powerful) Hardware

It's amazing how the Project Glass team has managed to squeeze all of its features into a tiny 'computer' supported on a lightweight yet strong frame.

Google Glass is packed with Bluetooth, Wi-Fi, GPS, speakers, a camera, microphone, touchpad and possibly a gyroscope that detects head-tilts.

Then there's the main piece, a tiny screen the size of your finger, which shows you all the information you need at your fingertips.

2. Heed My Command!

Well, all that hardware is put to good use: Google Glass has voice input, which makes everything a lot more interesting. The built-in microphone combined with Google Now connects you directly to the search engine.

You activate Google Now by saying "**Okay Glass**" then send a command or question. Tilting your head up does the same thing.

You can take a photo or record a video, all by just saying the command for it – more on that, later. On the right, is a touchpad where you can swipe through, to get to menus; tapping, registers your selection.

3. Life Pauses for No One

Google Glass users can now live in the moment, and keep that memory in pictures or videos. No more foraging around for a camera, tuning the settings of your photo apps, and letting the moment go by without a single snap. Just say,

"Take a Photo" and your view at the moment is captured, hands-free. Imagine the possibilities.

Other than photos, you can do the same with videos, which spells opportunities for extreme sports, real-life tutorials and more. Of course, picture quality coming from a device this small would not be comparable to a DSLR camera, but oftentimes, you'd rather not lose out on the moment.

4. Always On Call, Literally

With Glass being able to record videos, it can also act as a webcam with the data connection from your home or smartphone. You can use Google Hangout for a group conference, and still do what you need to do without being confined to a desk.

The powerful voice input feature also allows you to dictate text messages, attach videos and pictures alongwith and sending it via your mobile data connection, without having to remove your phone from your pocket.

5. Never Get Lost Again

Since it's built with a GPS chip, it'll be able to help you navigate, with help from Google Maps. This will take away the need to look down at your smartphone and it will be especially handy when you are driving, when you're walking through crowded streets or when you're hiking through the countryside.

Travellers, backpackers and even long distant cyclists won't have to stop and check on where they are. In fact, this is the perfect example of augmented reality.

6. Blend In With The Locals

If you have read this recap on Awesome Things Google Search Can Do For You, know that you can do all of this on Glass as well. What's the difference? Think about travelling and visiting a place where you don't speak the local language.

You can now convert the currency rate, understand the measurement system (metric or not), or translate your questions and their answers on the spot. Get the fun facts, best drinking spots, and gain access to the local secrets when you are still there, not when you are back in your apartment looking through vacation photos.

7. Live from the Field

Live information that is shown to you would come from the predictive software of Google Now. On Android's Jelly Bean, Google Now knows when you're leaving your home for work and can warn you of bad traffic before you get stuck in it.

You can also set your favorite sports team and it'll give you the latest news, scores and updates from the team, whenever they play.

All those features are available on Android, but with Glass, you can skip checking your device and just get it shown to you as and when it happens, or as news feeds. Google Now cards also shows you your boarding pass, next appointment, hotel or restaurant reservations, reminders for important birthdays and events in your calendar.

8. OS Compatibility Not an Issue

Google Glass works not only with Android phones but also with the iPhone, according to this report. Apart from the GPS chip inside, Google Glass is dependent on the Wi-Fi or mobile

connectivity to deliver its features. It is only fair game if it is available like any third-party accessory.

When paired up with your smart device, it can show social network notifications and let you communicate via the same channels as you would on the computer. This removes the need of looking at your smartphone constantly, giving you more time to concentrate on the task at hand.

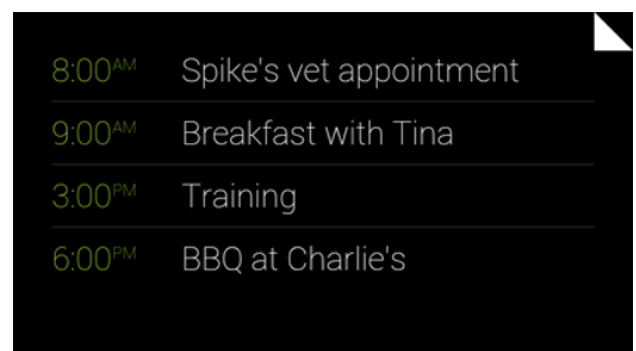
FOLLOWING THINGS THAT GOOGLE GLASS WILL DESTROY:

Microwave Meals

A prime example of Google Glass apps that can solve an old problem. With recipes displayed in front of your eyes, there's no need to ruin the phone or buy that hefty cookery book (at least without access to app content).

Rebellion

Constantly reminded when you're breaking from routine? It could get worse with Google Now and Google Calendar serving right into your eye, with suggestions built on months of habits, and meetings you are ever-more beholden to. Remember, you've got to opt-in with Google Now, it's all or nothing.



Trust

Winky allows you take a photograph with a wink. There has already been much discussion of this capacity of Glass, to observe virtually unnoticed. We've already seen a YouTube generation born;

Getting Away From It All

Through-Glass allows other people's photographs to pop up in your eye as they are taken. An end to the cloistered view - everyone in your face just like they're now on your phone.

Thinking on Your Feet

Your Show allows you to check your presentation notes as you talk and strut about the stage like Tom Cruise in Vanilla Sky. Will ad-libbers become few and far between?

Meeting People At A Party

This is the other much-spoken about use for Glass – displaying relationship status. Icebreaker allows you to gamify good conversation by 'hunting' other users and snapping them with Glass (whilst trying to get them to like you, I guess). Those happy accidents, meeting someone at an impromptu soiree and then spending thirty years with them, will be eroded further than dating sites have already eroded them.

Dude, Where's My Car?

Tesla links Glass to your Tesla Model S, giving you plenty of info about your vehicle, from charge in the car (its electric) to routes and whether it's locked or unlocked. No more losing your car and mounting a circuitous, drug-heavy plan to get it back.

knowing that anything they do can be recorded and uploaded. Hopefully Glass' inherent undermining of privacy will help to push society towards a greater culture of seeking consent. But it could get messy first.

HOW GOOGLE GLASS WILL CHANGE SCIENCE

Google Glass is still in its infancy; however, the potential breakthroughs that it can offer in the fields of medicine and science are astounding.

Surgeons at the Ohio State University Medical Center are already using the device as training and consulting tool while in the midst of surgery. Physician wearing Google Glass are able to transmit a live video feed to colleagues and medical students anywhere in the world. This is a true game changer in education as it gives students valuable exposure to live surgery in real-time from a surgeon's point of view.

Aside from its communicational value, Google Glass has the potential to actually be used as an integral part of surgical practice. Physicians hope to be able to call up medical images or other important patient data during the course of surgery.

Smart technology continues to provide a vast amount of benefits for individuals, businesses, cities, healthcare, and the environment. The use of certain smart eyewear can help prevent automobile accidents by eliminating blinding glare; help identify certain things for a person suffering from dementia, and increase safety awareness. Smart technology will increasingly get

smarter and provide an even greater amount of benefits which have yet to be seen.

CONCLUSION

The speed and power, the tiny size and weight, the clarity and effectiveness of the audio and video, are beyond anything I could have imagined. The company is expending a lot of effort on design — hardware and software — which is absolutely the right approach for something as personal as a wearable gadget. And even in this early prototype, you already sense that Google is sweating over the clarity and simplicity of the experience — also a smart approach.

In short, it's much too soon to predict Google Glass's success or failure. But it's easy to see that it has potential no other machine has ever had before — and that Google is shepherding its development in exactly the right way.

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