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Consumer Watchdog Study Finds Google Glass Unfit For General Use Don't be a Glasshole

Summary

Today Google is ramping up a massive PR push behind Google Glass, the Internet giant's wearable computing device, as it apparently hopes to make the controversial gadget generally available and acceptable to the public. Consumer Watchdog has been testing Google Glass and found the device inappropriate for the broad consumer market. It threatens the privacy of both people whose images are captured unbeknownst to them and the user of the device. It can distract the user at critical moments, perhaps when driving, posing a safety hazard. As Google itself acknowledges, Google Glass can pose health risks in some circumstances. It can easily be used for improper and even criminal purposes. It is a stalker's delight and our tests of the device demonstrated how easily it could be used to surreptitiously capture a person's PIN when they use an ATM. As will be detailed in this report, Consumer Watchdog's best advice: Don't be a Glasshole.

How Google Glass Works

Google Glass is a wearable computing device worn like eyeglasses that includes a camera and a high-resolution display screen that is the equivalent of a 25-inch high definition screen from eight feet away. It connects to the Internet via Wi-Fi or through a smart phone via Blue tooth. Audio is available through a bone conduction transducer.¹

The device responds to voice commands that start with "OK, Glass." It also responds to the touch of a finger and the position of the head. You can also sync the device to take a picture with the blink of an eye. The Internet giant describes the device like this: "Everything from

¹ Google Glass Tech Specs, https://support.google.com/glass/answer/3064128?hl=en&ref_topic=3063354, visited 4/10/14

maps, voice search, and video calls to email, calendar, Google Now and photos are all packed into a tiny hands-free device that's on when you need it and off when you don't.²

Google Glass is in so-called Beta, or test, mode and has been made available to about 10,000 "Explorers" who paid \$1,500 plus tax for the device.³ A number of apps have been developed for the device, called Glassware including apps from Path, Evernote, CNN, New York Times, Twitter, Facebook, Elle and Tumblr.⁴ Tuesday, April 15, Glass will be offered to anyone in the United States.

Invading the Privacy of Others

Certainly the most obvious problem with Google Glass is the privacy threat it poses to others. Google Glass users can easily photograph and video people without bothering to seek permission. Unlike a smartphone where it is obvious that a person's image is being captured and the subject can object, there is no simple indication to bystanders that Glass is taking photos or videos of them. Simply put, Google Glass is a stalker's dream come true. Consider the possibility of a pedophile wondering around a park or playground capturing images of kids at play and sharing those images over the Internet.

Google Glass is not only a handy tool for stalkers, but it can easily abet other nefarious activity. In tests with a Google Glass device obtained by Consumer Watchdog, we demonstrated how Glass could easily be used to video record PIN information for an ATM card.

Privacy concerns have prompted some business establishments including bars, casinos, strip clubs and movie theaters to ban the wearable computing device.⁵ Indeed under its current policy Glass would not be allowed at Google's own annual shareholders meeting. Rules for the session

² What Does Glass Do? <https://sites.google.com/site/glasscomms/whatdoesglassdo>, visited 4/10/14

³ Glass FAQs, <https://sites.google.com/site/glasscomms/faqs>, visited 4/10/14

⁴ What Does Glass Do? <https://sites.google.com/site/glasscomms/whatdoesglassdo>, visited 4/10/14

⁵ Five Places Google Glass Has Already Been Banned, Huffington Post, http://www.huffingtonpost.com/2013/04/10/google-glass-banned_n_3039935.html, visited 4/11/14

scheduled from May 14 say, “Cameras, recording devices, and other electronic devices, such as smart phones, will not be permitted at the meeting. Photography is prohibited at the meeting.”⁶

Belatedly Google has apparently begun to recognize the intrinsic privacy invasive characteristics of its dystopian device and has exhorted “Glass Explorers” not to “be creepy or rude (aka, a ‘Glasshole’).” Google warns Explorers, “In places where cell phone cameras aren’t allowed, the same rules will apply to Glass. If you’re asked to turn your phone off, turn Glass off as well. Breaking the rules or being rude will not get businesses excited about Glass and will ruin it for other Explorers.”⁷ Exhorting techies to play nice with an inherently privacy invasive device is hardly adequate protection, particularly from a company whose Chairman says its policy is to get up to the creepy line, but not cross it. Too often Google does not stop at the line.

Another real privacy concern that Google Glass poses is that the device could be used in conjunction with facial recognition software to identify people the user sees. Recently Google tried to say there is no problem because Glass does not do “facial recognition (and other dodgy things).” “Google has banned face recognition apps in the MyGlass app store, as it doesn’t want people to use the device to invade people’s privacy. Google is not saying facial recognition will not come to Glass, but until it could properly address the many issues raised by that kind of feature, it will not be made available to Explorers.”⁸

The fact is that facial recognition software has already been developed for Google Glass and installed on some devices. Google is merely saying that it won’t make the facial recognition apps available through its official Glassware store, but there is nothing to stop apps developers from making it available. Nor, is there any indication that Google won’t make it available fairly soon.

⁶ Google Investor Relations: 2014 Annual Meeting of Stockholders, <http://investor.google.com/proxy.html>, visited 4/11/14

⁷ Glass Explorers Dos and Don’ts, <https://sites.google.com/site/glasscomms/glass-explorers>, visited 4/11/14

⁸ Google+; Google Glass; The Top Ten Google Glass Myths; <https://plus.google.com/+GoogleGlass/posts/axcPPGjVFrB>, visited 4/11/14

One hacker, Stephen Balaban, founder of [Lambda Labs](#) in San Francisco has successfully managed to get facial recognition technology to run on Glass. Lambda Labs predicts Google will allow facial recognition software “or be replaced by something that does.”⁹

Glass runs on the open Android software operating system and Google in fact is actively encouraging apps developers to hack Google Glass.¹⁰

Invading the Privacy of the User

Google Glass clearly threatens the privacy of people who a Glass wearer decides to stalk and record, but it also poses substantial risks to the user’s own privacy.

When the wearable computing device is tied to the Internet through a Bluetooth connection to the user’s smartphone and to the user’s Google+ account Google knows the user’s geo-location and has access to the data on the account.

Indeed, under Google’s Terms of Service (TOS) the Internet giant says “you give Google (and those we work with) a worldwide license to use, host, store, reproduce, modify, create derivative works (such as those resulting from translations, adaptations or other changes we make so that your content works better with our Services), communicate, publish, publicly perform, publicly display and distribute such content. The rights you grant in this license are for the limited purpose of operating, promoting, and improving our Services, and to develop new ones. This license continues even if you stop using our Services.”¹¹

⁹ Hacker Gives Google Glass Facial Recognition Using His Own OS, Wired.co.uk, <http://www.wired.co.uk/news/archive/2013-07/19/google-glass-facial-recognition>, visited 4/11/14

¹⁰ Google Reveals How To Hack Google Glass Device (And Void Your Warranty), Forbes, <http://www.forbes.com/sites/roberthof/2013/05/16/google-reveals-how-to-hack-google-glass-device-and-void-your-warranty/>, visited 4/10/14

¹¹ Google Terms of Service, <https://www.google.com/intl/en/policies/terms/>, visited 4/14/14.

In other words, Google claims the right to whatever it wants with your material. And, once tethered to Google's cloud through Glass, the user is encouraged to share ever-increasing amounts of data with the Internet giant.

Perhaps some Google Glass users are comfortable with letting Google compile digital dossiers about them so they can be sold to advertisers. But there is another way that Google Glass users' privacy is threatened that goes beyond Google's very business model. The device apparently is very easy to hack.

According to *Ars Technica*, a smartphone hacker has shown that Google Glass can be surreptitiously modified to give anyone with physical access almost complete control over the device.

"With the security exploit, I can pick up your Glass, turn on debug mode, and get root access on it in a way that doesn't leave a trace," Jay Freeman told *Ars Technica*. "Then I can modify any of the software on your device. I can make it so that for the rest of your Glass' lifetime I'm in there, too, able to get access to your camera, listen in on your microphone. I can turn off debug mode and make it look like there's nothing changed from your perspective. And when you get it back, you're screwed."¹²

Dangers to the User

In addition to privacy threats to users and people who are surreptitiously recorded by a Glass user, the wearable computing device poses the possibility of actual physical harm. One can easily understand how the safety of the user who opts to drive a car while wearing Google Glass and is distracted by the device presents a serious threat to himself and other motorists and pedestrians. Nonetheless, Google is lobbying against laws that would prohibit wearing Google Glass while driving.¹³

¹² Rooting exploit could turn Google Glass into secret surveillance tool, *Ars Technica*, <http://arstechnica.com/security/2013/05/rooting-exploit-could-turn-google-glass-into-secret-surveillance-tool/>, visited 4/14/14

¹³ Exclusive: Google sets roadblocks to stop distracted driver legislation, *Reuters*,

Google warns that Glass can cause headaches and eyestrain. “If you've had Lasik surgery, ask your doctor about risks of eye impact damage before using Glass,” Google says. It says children under 13 shouldn't use Google Glass “as it could harm developing vision.” In an apparent nod to the Children's Online Privacy Protection Act, Google notes, “Also, kids might break Glass or hurt themselves, and Google's terms of service don't permit those under 13 to register a Google account.”¹⁴

Conclusion

Google has mounted an aggressive PR and sales effort reminiscent of a used-car dealer's tactics opening Google Glass sales to anyone in the United States for just one day. Perhaps the company wants to dump the remaining stocks of the device at \$1,500 or hopes to build enthusiasm for Google Glass before attempts to launch in the general consumer market. The fact of the matter is that the device is fundamentally privacy invasive and poses threats to safety. Consumers should avoid this unnecessary device that is seeking to be a solution to a problem that it has yet to define.

<http://www.reuters.com/article/2014/02/25/us-google-glass-lobbying-idUSBREA1O0P920140225>, visited 4/14/14

¹⁴ Google Glass Help FAQ, <https://support.google.com/glass/answer/3064131?hl=en>, visited 4/14/14