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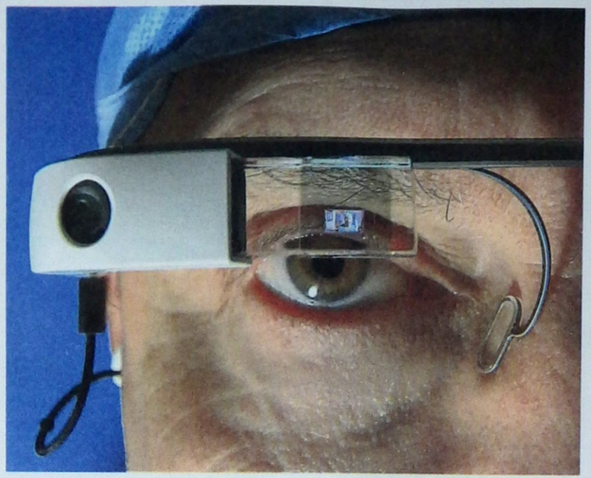

P. KEVIN MORLEY/TIMES-DISPATCH

Dr. Joe Niamtu, a plastic surgeon in Richmond, is trying out the glasses in the Google Glass explorer program. He has found the glasses to be useful.

Giving Google Glass a look

Local surgeon explores personal, work uses for wearable computer

BY JOHN REID BLACKWELL
Richmond Times-Dispatch

It's been a little more than two months since a package containing a strange-looking tech gadget arrived for Dr. Joe Niamtu III.

It arrived from Google, the Mountain View, Calif.-based Internet search company and technology developer whose experimental projects have included driverless cars, hoverboards and reportedly a space elevator.

The device the company sold to Niamtu and a limited number of other buyers nationwide is Google Glass, a type of wearable computer. Though not in wide public use yet — Google began releasing limited test versions late last summer — Google Glass has been much-hyped while also stirring some controversy.

Perched on Niamtu's brow, Google Glass looks like a pair of glasses without lenses and a larger-than-normal frame on the right side.

It could easily be mistaken for some sort of high-tech medical tool as Niamtu, a cosmetic facial surgeon, wears it around his office in Chesterfield County.

The pioneering smartglasses aren't a medical tool, but Niamtu can use Google Glass to make phone calls, check email, search for information online, record videos and take photographs.

Since buying Google Glass for $1,500 as part of a special limited sale by Google, Niamtu has been figuring out ways to integrate the wearable computer into his daily life.

"There are some days I wake and put this thing on while I am exercising," he said.

"I might do some Internet surfing. I might listen to some music. When I go to work, I might put it on for a case," meaning that Niamtu will use Google Glass when consulting with patients, to search for information or to have a video recording of the conversation.

He has even used it during surgery to have a video recording of a procedure that the patient might want to see later, or for training purposes for the medical interns and residents who train with Niamtu.

Niamtu is quick to add he uses Google Glass only with a patient's permission, and that the device does not block his field of vision during a procedure.

The experience of wearing Google Glass can be hard to describe.

It fits snugly on the brow, with a protruding arm just above the right eye that contains a small digital screen.

Tilting your head back about 30 degrees or saying "OK Glass" activates the device. The screen appears as if a tiny computer were hovering just above your right eyebrow.

As Niamtu describes it on his personal blog, "the monitor sits above your line of vision, so you are not 'looking through it,' but rather glancing up at it."

The computer connects to the Internet via Wi-Fi and is controlled by voice commands or by touching controls on the right side of the device, above the ear.

Ask Google Glass what year Lincoln was born, and the computer does a quick online search and the answer appears before your face, or, rather, just above your face.

The device also includes modes such as wink

Continued on the back page

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Glass *Continued from front page*

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Dr. Joe Niamtu, wearing Google Glass, meets with his office coordinator, Carla Lane.

recognition, which allows you to take a picture simply by winking your eye.

"In the first five minutes of putting them on, I was taking pictures and videos and walking around the house saying, 'OK Glass,'" Niamtu said.

While the device has not dramatically changed how Niamtu works as a doctor, he can foresee a time when it might, as the technology develops.

He also is using Google Glass in his personal hobbies, such as hiking and fishing.

"When you hook a good fish and you want to document catching that fish; it's great," he said.

A limited public sale of Google Glass in March reportedly sold out in one day. The company has sold the device to individuals and organizations as part of its Google Glass Explorer program.

The company says on its website that it has run out of spots for those wanting to get one as part of the program, but it may have more to share. Those interested have to put their name on a list on the Google Glass website.

Google did not respond to numerous requests for comment for this story.

Niamtu speculates that the company might not be sure exactly what to do with the technology yet. So the company is putting the device out there on a limited basis to see what useful functions other people come up with. "They say necessity is the mother of invention," he said. "In this case, invention may be the mother of necessity."

For instance, CNN reported a story in February about a firefighter in North Carolina who has developed an application for Google Glass that can feed information and directions to an emergency directly to a firefighter wearing the device. The firefighter reportedly is working on another app for Google Glass that can provide instructions to someone administering CPR.

In the Richmond area, students and teachers at St. Bridget School are using Google Glass as a learning tool in the classroom. Eric De Boer, the school's instructional technology specialist, bought one of the devices this year after parents donated the money through a social media fundraising campaign.

Thanks to Google Glass, which records video from the point of view of the person wearing the device, parents and teachers have been able to watch videos of the school day as seen through the eyes of their children.

Teachers have used the device to record instructions in science and art classes so that students can review the videos whenever needed. De Boer says it can be useful in recording field trips for students to re-watch and review what they saw and heard.

"We love to explore new ways of using it," he said.

The reception for the early rollout of Google Glass has not been all pretty, however.

For starters, the $1,500 price tag has come under criticism.

The obvious privacy concerns of wearable recording devices also have raised some hackles. Some bars and nightclubs have made news by banning the devices from their property.

Tech websites lit up in April with news that a survey by market research firm Toluna found that 72 percent of people won't buy Google Glass because of privacy concerns.

Niamtu agrees that any Google Glass user should be careful and considerate about when and where they use the device.

"There are many days that I never wear it," Niamtu said. "It is something that at this point is a novelty."

In other words, Google Glass is a device that has some nifty functions right now, but it needs more development before it becomes a tool as indispensible as smartphones have become, Niamtu said.

Among the downsides that Niamtu describes are difficulties accessing his phone contacts list using the device, and that all the music you can play on the device must be bought from Google.

Niamtu wrote on his blog that the music restrictions alone "will be a deal breaker for Google Glass if their final release does not change."

Yet Niamtu remains optimistic about the potential for the technology.

In medicine, he foresees Google Glass and similar wearable technology as potentially revolutionary.

Besides being useful in training, as a way to record medical procedures from a first-person point of view for teaching, the device also could change the way doctors record and read medical records.

He said the device could be useful in endoscopic surgeries, in which doctors now have to watch a monitor to see what they are doing. With a wearable computer "you wouldn't have to take your eyes off the patient," he said. And vital signs could be fed directly onto the screen, making them visible at a glance.

Beyond medicine, the applications range from engineering to aviation to scientific research, entertainment and recreation.

"That is what excites me," Niamtu said. "It's not so much what it is doing right now, but what it can do, and what it will do."

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