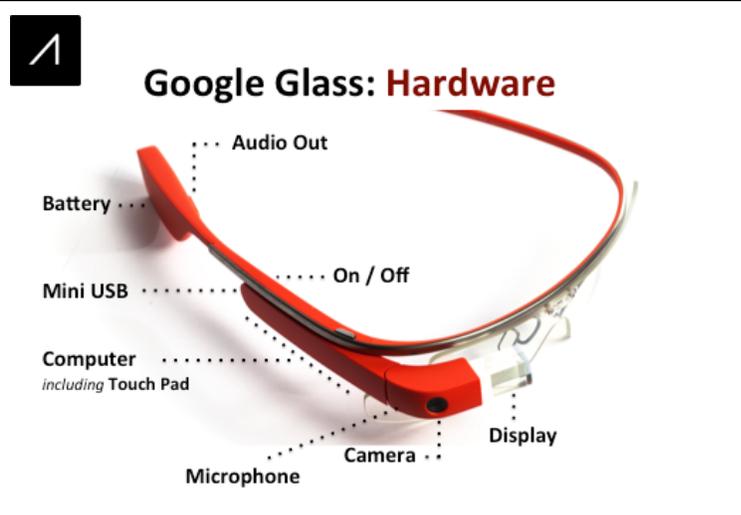


Writing with Wearables: Enriching Student Peer Reviews with Google Glass

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Jason Tham, thamx007@umn.edu
Rhetoric and Scientific and Technical Communication
University of Minnesota--Twin Cities

Introduction

 <p>Google Glass: Hardware</p> <p>The diagram shows a red Google Glass headset with various components labeled: Audio Out, Battery, Mini USB, Computer (including Touch Pad), Microphone, Camera, On / Off, and Display. A small black square with a white number '1' is in the top left corner of the diagram area.</p> <p>Figure 1: Google Glass Hardware Overview. Source: http://its.uiowa.edu/support/article/102167</p>	<h3>Quick Overview of Google Glass</h3> <p>Google Glass is a wearable computer with an optical head-mounted display. Google Glass displays information in a smartphone-like hands-free format, that can communicate with the Internet via natural language voice commands. This new technology opens opportunities for reframing instructional and social interventions for composition and communication. Google Glass works via voice command, like, “OK Glass, get directions to...,” “send a message to...,” “record a video...,” etc.</p>
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Glass-supported Peer Review

Glass affords a new dimension to our writing experience by augmenting the writing and revision processes. While a traditional peer review requires students to review the writings of other student writers’ and respond to prompts given by the instructors, such practice is driven mainly by the written texts. Using Glass, students could track comments and editing suggestions through video recording. Reviewers may indicate places in the writing where changes are recommended by snapping a picture or recording the suggestions in video. These images and videos could be sent to the respective writers after the review session. Such affordance adds value to the review process, one that enriches writer-reviewer exchange and collaboration.

Facilitating the Glass-supported Peer Review

Students will be put into groups of two and each be assigned two sets of student writing. Depending on the number of students in the class, each group or student may be loaned a pair of Google Glass. After an initial orientation on Glass’s picture and video capturing functions, students would use Glass for the entire peer review process. The following are sample instructions given to students:

1. Put on Google Glass and start recording a video. Extend the recording by clicking the camera shutter button within the first 10 seconds of recording.
2. Make sure the video recording is captured at the eye/reading level. Adjust lens as necessary.
3. Start by announcing your name and the author's name, something like: "I am Jason, and I am now reviewing Justin's first major writing assignment."
4. Then, continue by "thinking aloud" as you review the paper. You don't have to talk all the way through the paper, but remember to verbalize your thoughts on different parts of the paper as guided by the peer review prompts provided on the reviewer form.
5. Fill out the reviewer form as you go. Don't keep it until you have finished recording to fill them out.
6. Once you are done reviewing a paper, announce that you have completed that review process: "That's all I have for you, Justin. I have finished reviewing your essay."
7. Stop the video recording. Be careful not to delete the recorded video by accident. You may review your recording by using the playback option.

What to do if you don't know if your Glass is working right? Always ask for help from your instructor. Do not try to "force" the Glass to work. The Google Glass is an expensive device thus it should be given utmost care when using it.

After the Peer Review

Ideally, students should be able to share their videos to a shared folder (like Google Drive) after completing their video recording. However, during my pilot deployments, the Glass devices were not able to get connected to the University's wireless network due to authentication issues. Thus, I had to collect the devices from the students and upload the videos manually to Google Drive. Then, I would give all students access to the videos and have them use the videos as part of their revision process.

Sample of Recording during Peer Review

The following clip documents the peer review in-action, as well as an actual first-person point-of-view recording of a student review: <http://youtu.be/-4-QCT8pSMk>

Student Reflections

Students have reported that they found Google Glass and video-based feedback helpful in providing more comments than a written review would. The following narratives showcase some students' reactions with using Google Glass in their peer reviews:

- *I think the activity done in class was successful in the fact that I could see exactly what [the reviewer] was thinking as he went through my paper; I received a lot more feedback than I normally would have through strictly the written form from peer review because of the Google Glass activity. One downfall of the peer review was that I felt that it was difficult to stay concentrated when I was giving my feedback while everyone around me was talking. I feel like I could have given much stronger feedback if I had read the paper where I wasn't distracted by everyone else's thought process.*
- *I thought the exercise was beneficial because it allowed us to recognize when the reader thought or noticed something important. At the same time, it was uncomfortable because I wasn't quite sure if I was doing everything correctly so at times was hesitant. I think this*

will change with more usages and reviews but that was my initial feelings! Overall I like using the Google glass and think they are a slick tool!

- *My thoughts on the exercise were that it was hard to review it and talk at the same time and try to record. Also, my glasses I don't think we're always pointing to the paper so it might be confusing for the person to understand where I was in the paper. But over all I think it will become easier to figure out and do now that we have done it once.*

Evidently, there are mixed emotions in the students. Yet overall, reviewers reported that they liked how articulating their comments helped them stay on task while the authors appreciated the rich comments they received from their peers.

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