

**Project Technical Specification for a Geek Goggles - Team Echo**  
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1. The device will reflect a micro display through a collimating lens and prism onto a combiner <sup>optical mounted</sup> located on safety glasses so the user can see an augmented reality image displayed roughly 1 meter in front of them.   
 *I think you might mean "Overlay" here. Actual AR is more of a stretch goal.*
2. The device will display various information like the time, environment information, pdf documents (such as a pin-out or datasheet), images and information from electrical measurement tools to the user via a heads up display on the ~~goggles~~ <sup>device</sup>. *(Not, technically, goggles).*
3. The user will be able to document their project using picture <sup>photographically</sup> via camera and take notes using voice <sup>voice</sup> commands.
4. The geek goggles will allow the user to receive various alerts via LED's and the hud. A safety alert will set off when the noise quality exceeds 85dBA or when the air quality exceeds a general ppm of 35  $\mu\text{g}/\text{m}^3$ .
5. The device will allow the user to connect to the user's phone or a peripheral via bluetooth with a transfer delay of at most 50ms between the device and the peripheral. ✓
6. A user interface on a phone in the form of a web application where the user can upload documents, set timers and switch between display modes on the goggles. The goggles will also have a simple ~~two~~ <sup>button</sup> UI to switch modes.   
 *Leave room for a collar or other mount.*
7. The glasses will be strapped onto the users head to comfortably hold the weight.
8. Optionally, depending on available time and project resources we would like to allow the user to use voice commands to change display modes and perform other operations on the device.

9. Optionally, Augmented Reality . . .

\* Give me a partial list of some of the modes and use-cases that you intend.

i.e.

- Voltage testing
- Schematic display
- pinout display
- etc.