Requirements of requirements (specifications)

- Quantifiable
  - Should involve a number. Remember our discussions on reducing ambiguity? Words like "very", "many", "lots".

- Relevant
  - A specification for a DC motor probably shouldn't include that it must be fuzzy or purple…unless it should.

- Detailed
  - A specification for a part should provide enough detail that anyone can read it and understand it.

Requirements of verifications

- Include measurement.

- Procedure for conducting measurement.

- Evidence that will be provided in report that requirement has been met.

What do you write specifications for?

- The easy rule is that every block from your block diagram will have a SET of specifications associated with it.

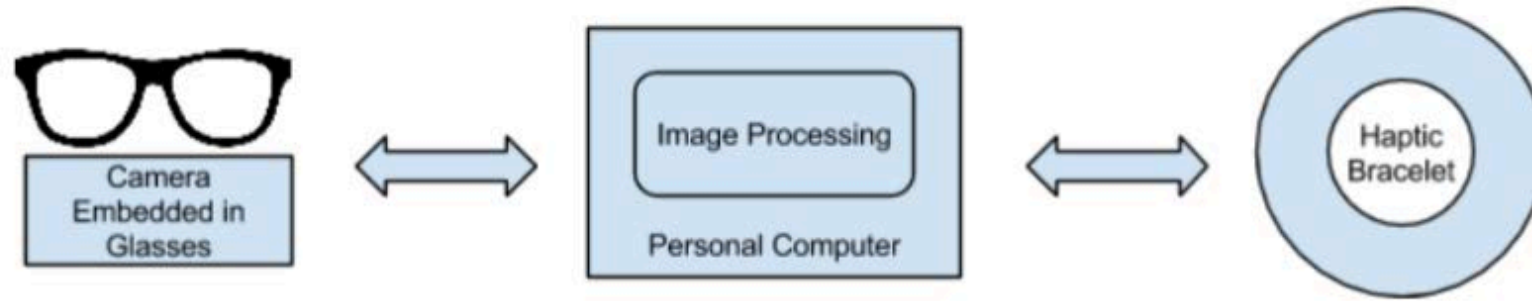- Each specification will have a verification.

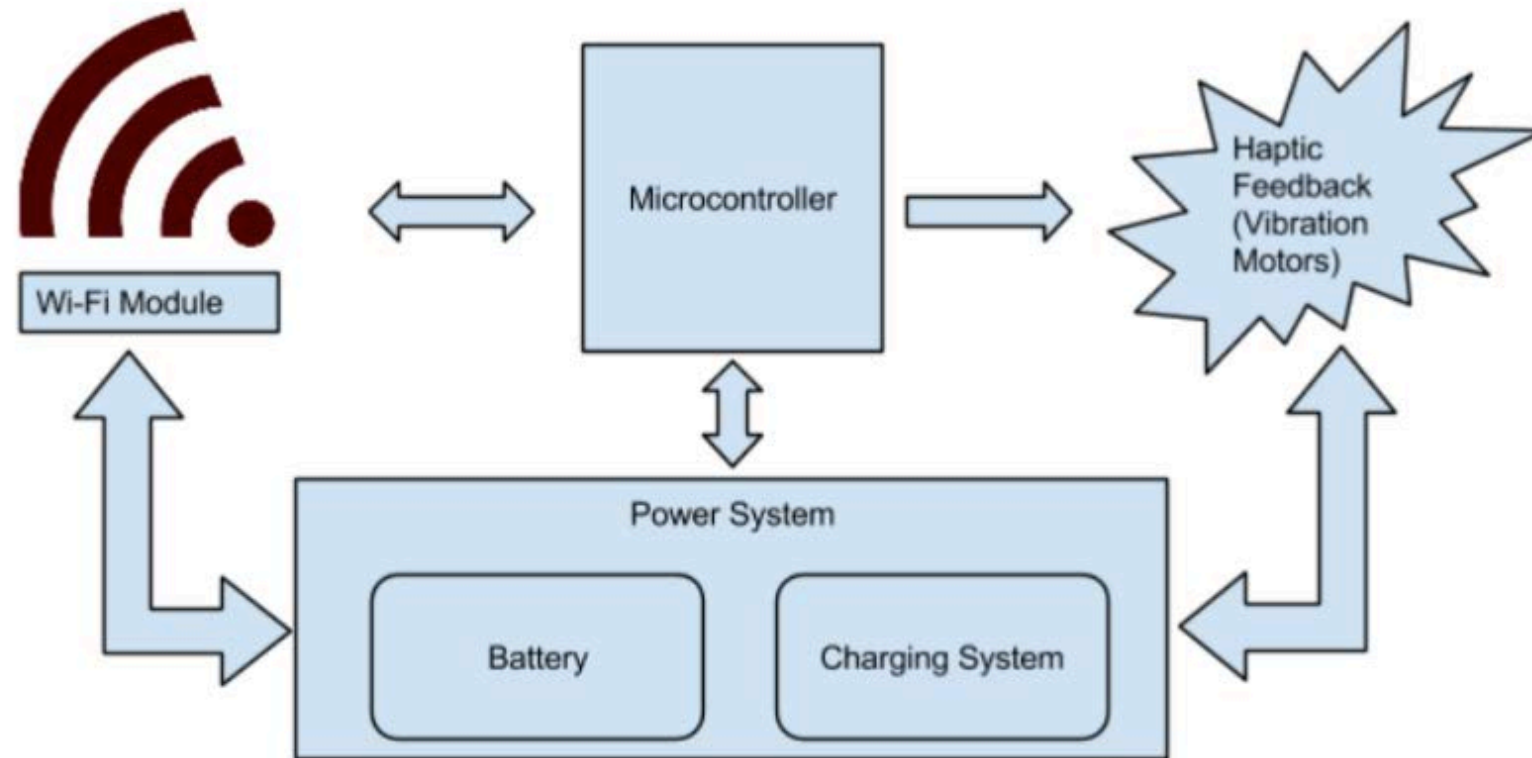Figure 1: High level overview of our modules

Figure 2: Overview of wristband featuring our 4 subsystems

Requirements and Verification: Format
This is what you will produce for your project!

Block	Requirement	Verification	Points
Module 1: Video Recording	Records video at a minimum of 12fps	One minute of video footage will be recorded on the glasses camera and extracted. The video will then be imported into a MATLAB program for analysis. Using the VideoReader() function, the program checks if the number of frames are greater than 720 which means the video is shot with at least 12 fps. The number of frames sent in one minute will be reported.	5 pts
	When a frontal face is within a meter of the Google Glass, a bounding box will be drawn on that face in 70% of the total video frames	Take 10 second video of 4 different people with Module 1. Using MATLABs VideoReader() function, determine the number of frames for which a face is detected for each video. If each video is taken at 12 fps, then if 336 of the total 480 frames have a face detected with a bounding box, 70% face detection is achieved. The proportion of frames when a face is detected will be reported.	10 pts
	Transmits video from Google Glass to PC at greater than 12fps.	Transmits video data to Module 2 over WiFi. Measure the time that it takes for the video to travel from the glass to the PC via MATLAB's timing capability. If 720 frames are sent in a minute or less, then 12 fps transmission is achieved. The number of frames sent in one minute over Wifi will be reported.	5 pts