These are the notes that I used to make sure I hit each of your sections. Bolded is what you wrote and unbolded is what I got to with where in the text things should be.-Jake

I hate to harp on formatting and saw your note about reformatting for the next revision, but I'll include some comments here on that front nonetheless. The Table of contents should start on a new page.

This was taken care of by moving the document to latex. Microsoft word is hell for making large documents like this and this matches the IEEE format you told us to target exactly, (just a library call).

Based on the introduction, I think you're building the base infrastructure robot for use in control system research. Good. Now, you mention several potential problems this could be used to address. I suggest you pick one of those to focus your efforts around. Then focus your introduction on the specific problem you're solving. This will make the rest of your spec easier to draft (at least to me). Now, that doesn't mean that the use cases that can be addressed are limited by your approach and the prose you have that makes that clear is still important. In other words, your work can still address other problems, but those are not what you're focused on solving. I think for clarity you should focus on one specific problem. For example, your first paragraph is good. I'm onboard. Then you discuss fusing more localization inputs. Which leads me to think what for? It's almost there, but at the end, the spec mentions telerobotics, without telling me what problem is actually being addressed in the project. Simplify this and clarify the problem before moving on to talk about how you're going to do that in subsequent sections.

A paragraph worth of text was removed and a more fine tuned paragraph was added getting more directly to the point of what we're doing. The changes can be found on page 3.

Section 3.2 - what protocol are you using for communication of data between components? Is it a custom protocol? Custom messaging?

This was established on pages 5 and 6 inside R7.

Also, I don't think you need to repeatedly refer to Mike's research throughout the spec. It's good to reference it in the beginning, but by doing this project, you're

contributing to the area as well, so I would focus on the problem you're solving together rather than the fact it's Mike's research. For example, in Section 3, focus on what you're actually validating, rather than validating Mike's research. Focus on the problem being addressed/investigated/solved.

I removed most instances of Mike except for in a small instances where I thought applicable (Human interface and design, very beginning and about funding in ethical considerations). Also ethical considerations received a major revision.

Also in section 3.1, this is hardware architecture, so you don't need the specific references to the Marvelmind beacons or raspberry pi3. Those are implementation choices. Think about if you couldn't get these specific components? An architecture could still be implemented with alternative components in most cases. The choice of components is a design decision. So I would up-level your descriptions within the architecture section and instead focus on what the underlying "requirements" are for the components. Based on these requirements, your component selection as detailed in your design section, should clearly meet those requirements. However, it could be that you might want to choose different components (for whatever reason) but still follow your architecture. Consequently, your architecture should be sufficiently generic as to support that alternative design choice. That's why you keep the architecture section fairly generic and focus on what the underlying requirements are for each component. So in your next revision, please ensure this is updated in term of both your architecture and design sections.

The problem with this above was that all our hardware was decided for us by the manufacturer. We made none of the architecture decisions ourselves so it was hard to talk about but hopefully this is done correctly now. All instances in the architecture section that mentioned specific hardware have been removed from the architecture section and the design section has been fleshed out more. Pages 6-7

The next level of detail in your SW architecture should be definitions of the pipelines necessary for the stacks. These typically take the form of cake diagrams. Again they are architectural, so you don't have call out any implementation specifics. However, it should give design teams or software engineering teams enough information so they can build the sw for your system using design choices they decide. Additional diagrams in this section would be very helpful. Clearly the design section needs more content, but I think you should be able to leverage some of what you have in the architecture section now

as you make that more generic. Good update; looking forward to seeing the next revision.

I don’t know what a cake diagram is and I need to talk to you about this. Everytime I look it up online I get things that are very different. Instead of fleshing out the design section more