

ECE 445
Design Document Corrections

Comment	Response
Some Grammatical Mistakes	Fixed
Missing Equation Numbering	Added
Footnote Formatting issues	Fixed
Intro needs some work... 1) Informal language 2) Restrain from personal experiences 3) Why we referenced Old Town Road and cite it 4) Acronym use	<ol style="list-style-type: none"> 1) Moved away from informal language to more structured concise language 2) Changed personal experiences to tie back to industry professionals, musicians and producers we have interacted with (magnitude of 100s...) 3) Old town road is very controversial when it comes to how it is categorized genre-wise. We are showcasing the modularity of our solution to be applicable to the most extreme of situations. Restructured sentences to highlight this. 4) Used full form
High-Level requirements - Last two seem similar	Restructured sentences to showcase the different goals of each requirement
Power Subsystem R/V - Specify what input is	<ol style="list-style-type: none"> 1) Changed the circuit schematic and some of the design values. 2) Added detail to both the requirements and verification portion as well.
Blurry Schematic	Uploaded a newer bigger photo
Communication Subsystem Requirements <ol style="list-style-type: none"> 1) Vague requirements 2) What is the output? 3) Sampling Frequency Verification <ol style="list-style-type: none"> 4) How to ensure the signal was transferred correctly? 	<ol style="list-style-type: none"> 1) Added detail to requirements with the digital codec used to compress and transfer data 2) Added output + codec 3) The sampling frequency is not relevant... it is a part of the song, not Bluetooth communication in which data packets are being sent.

	<p>4) We want to ensure correct frequency, sampling rate, and duration of song/tone after transfer. Hence we rewrote Verifications accordingly</p>
<p>Figures</p> <ol style="list-style-type: none"> 1) Citing Circuits 2) Dont C/P 	<ol style="list-style-type: none"> 1) They are already cited... 2) They are cited. We are not taking credit for others' work. We are relaying relevant information for another engineering team to recreate our work (as design document prompt suggests)
Music reproduction subsystem	<ol style="list-style-type: none"> 1) Added details to the requirements and verification section.
<p>Control Subsystem</p> <ol style="list-style-type: none"> 1) Add more detail <p>Requirements</p> <ol style="list-style-type: none"> 2) Be more specific with genres 3) Define What accuracy is? How do you quantify? <p>Verification</p> <ol style="list-style-type: none"> 4) Need to be able to replicate 	<ol style="list-style-type: none"> 1) We address details in the next section Tolerance Analysis where we dive into the data aggregation,data analysis, ML,etc.... quote:"We expand on these problems in the next section (Tolerance Analysis). " 2) genre is defined previously in the document as a file embedded genre. 3) Accuracy is defined later in document. Quantified in the statement already. <p>Furthermore, accuracy does not have multiple definitions; this is a paper for an engineering audience so this last comment seems frivolous.</p> <ol style="list-style-type: none"> 4) The Verification steps are designed so that a team building the same project can construct visualizations, checks,etc.
<p>Tolerance Analysis</p> <ol style="list-style-type: none"> 1) Good to move to other parts 2) Wordy; Longer isn't better 	<ol style="list-style-type: none"> 1) Control Subsystem's focus is explaining what it is and purpose. <p>Tolerance Analysis is focus on why Control Subsystem is central and has highest risk of failure.</p> <p>We agree there is overlap hence We tied both together with "We expand on these problems in the next section</p>

	<p>(Tolerance Analysis). ” This allows us to explore the overall methods + accompanying risks together!</p> <p>2) Length of tolerance analysis is a result of numerous “high risk” elements within control subsystem in project and the nature of AI/ML being an “art.” The data viz. and explanations tie back into why this project is difficult and open ended. For any other team to replicate this, they require knowledge of information presented.</p>
<p>Safety</p> <ol style="list-style-type: none"> 1) Should be in paragraph format 2) How to mitigate risks of using 120v in design 3) How to hear clipping... what are appropriate actions 4) Mitigating factor seems impractical 	<ol style="list-style-type: none"> 1) Corrected the formatting issue 2) We stated multiple mitigating procedures for concern of using wall power. This is a risk as a result of our design choice to use wall power. <p>I think you may be considering fuses as a risk mitigating design choice but note fuses protect the electronics, it does not mitigate safety risk of using 120V rms wall power.</p> <ol style="list-style-type: none"> 3) Defined a way to understand how to hear clipping and defined how to act appropriately in that situation. 4) Expounded on that hearing protection is suggested for when we test the circuit, not for casual listening.
<p>Ethics suggested additions:</p> <ol style="list-style-type: none"> 1) Copyright Infringement 2) User Data Risk 	<ol style="list-style-type: none"> 1) We didn’t include copyright as a possible ethical situation due to the fact that our product does not violate copyright law. Using music to train algorithms to learn about traits is not an infringement on copyright. Furthermore, the algorithm is not used to duplicate or create music from learnings for redistribution or sale. 2) As well, we didn’t add user privacy ethics due to the fact that our program does not have access to user data and is limited to one-way communication to other devices.

<p>Citations don't have dates</p>	<p>1) All the citations have dates or (n.d) which stands for no date. This follows proper APA citation guidelines.</p> <p>Typical for websites that are constantly updating and leave no dates for the update.</p>
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