Outline

• ECE 416 Schedule

• Comments on SDP Report
  • Figures and Tables
  • References
  • Equations
  • Table 1 (Specifications)

• Volunteer Teams for Open House Demos
29 days to CDR
Spring Break
70 days to FPR
90 days to Demo Day
Benchside Meetings
(one pager)

- Problem Statement
- Requirements/Specs
- Block Diagram
- CDR deliverables
- Demo(s)
Outline

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  • Table 1 (Specifications)

• Volunteer Teams for Open House Demos
Style

- Use correct person
- Use the active voice
- Put statements in positive form
- Use definite, specific concrete language
- Omit needless words
### Use Correct Person/pronouns

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
<th>Possessive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st Person</strong></td>
<td>I ☠️</td>
<td>we ✅</td>
<td>☠️ mine/ours ☑️</td>
</tr>
<tr>
<td><strong>2nd Person</strong></td>
<td>you ☠️</td>
<td>you ☠️</td>
<td>yours ☠️</td>
</tr>
<tr>
<td><strong>3rd Person</strong></td>
<td>he/she/it ✅</td>
<td>they ✅</td>
<td>his/hers/its/their ✅</td>
</tr>
</tbody>
</table>
Use Active Voice

The active voice is usually more direct and vigorous than the passive.

*I shall always remember my first visit to Boston.* ✔

This is much better than

*My first visit to Boston will always be remembered by me.* ✗
Put statements in positive form

He was not very often on time.

He usually came late.

They did not think that studying electronics was a sensible way to use one’s time.

They thought the study of electronics a waste of time.
Use definite, specific concrete language

- A period of unfavorable weather set it.
- They showed satisfaction as they took possession of their well-earned reward.

- It was frigid every day for a week.
- They grinned as they pocketed first place in SDP19’s faculty vote.
Omit needless words

× the question as to whether
× there is no doubt that
× used for fuel purposes
× she is a woman who
× this is a course that
× the reason why is that
√ whether
√ no doubt
√ used for fuel
√ she
√ this course
√ because
Writing Style

• Use correct person
• Use the active voice
• Put statements in positive form
• Use definite, specific concrete language
• Omit needless words
Practice in composing emails!
• Figures and tables are integral to a report

• Introduce and discuss all figures and tables in the text.

“In Figure 1, we show the magnetization curve for the solenoid coil. It shows that saturation occurs for an applied field above 5 A/m.”

• All figures and tables are numbered and have captions.
References

- Substantiate claims; e.g., those made in introduction.
- Reference alternative solutions/designs.
- Reference data sheets and technical specifications.

“We achieve wireless connectivity between the bot and smartphone using the Adafruit Bluefruit LE Shield [4].”

- Empathize with future SDP teams, as they use SDP reports.

Consider Newton's laws for rotational motion

\[ T = J \alpha \]  \hspace{1cm} (1)

where \( T \) is torque, \( J \) is moment of inertia and \( \alpha \) is angular acceleration. In (1) ...
### Table 1 (List of requirements and Specifications)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide real-time feedback</td>
<td>Feedback given in less than 100ms</td>
</tr>
<tr>
<td>Provide accurate metric measurements</td>
<td>Within 10% error of Qualisys Oqus Motion Capture System measurements (in UMass Human Motion Lab)</td>
</tr>
<tr>
<td>Lightweight product</td>
<td>Sensor systems (sensors, PCB, and power supply) less than 1 pound</td>
</tr>
<tr>
<td></td>
<td>Waist Clip (Raspberry Pi and power supply) less than 1 pound</td>
</tr>
<tr>
<td>Sufficient battery life</td>
<td>Battery life greater than 2 hours</td>
</tr>
<tr>
<td>User friendly mechanical design</td>
<td>User should be able to put on product easily with little to no added effort</td>
</tr>
</tbody>
</table>

Table 1: List of system requirements and specifications.

Courtesy of Team “Stride,” J. Higgins, J. Menzie, J. Penney and R. Hartnett
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• Volunteer Teams for Open House
  Demos, 11am-1pm, Sunday, 17th Feb’19
What does your project do?