Introduction to \LaTeX

ECE 557 — Thursday, 1:30 — T. Pavlic (instructor)

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Introduction

This document has some appendices. For example, Appendix A is a glossary, and Appendix B gives some parts, and Appendix C has some other things.

Some Subsections

We can have lower-level sections and subsections and subsubsections and paragraphs...

Some Math

Some in-line math might like like $x_0 = 5$, while an unnumbered and displayed equation could look like

$$\sin(T) = \int_0^T \cos(t)dt.$$ 

If we want to refer to an equation later, we better number it, like

$$\exp(it) \triangleq e^{it} = \cos(t) + i \sin(t) \tag{1}$$

and

$$\Re(e^{it}) = \cos(t). \tag{2}$$

Of course, giving both Equations (1) and (2) is silly because Equation (2) is obvious from Equation (1).

Some Figures

I might also want to include figures, like Figure 1.

A picture could be here.

Figure 1: Some figure.

More Information

We can refer to Figure 1 from anywhere in the document. In fact, we can still refer to Equation (1), and each of these references is hyperlinked to the appropriate target within the document.

Conclusions

We put some conclusions here.
A  Glossary

PID  Proportional–Integral–Derivative, a control scheme combining aspects of lead–lag compensation in such a way that can be easily tuned in the field

locus  a curve made up of a set of related points (e.g., a set of points that each make a certain polynomial equal to zero for different values of some parameter)
B Data

Check out Table B.1.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Gain</th>
<th>Phase Shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Hz</td>
<td>5</td>
<td>$-10^\circ$</td>
</tr>
<tr>
<td>15 Hz</td>
<td>5</td>
<td>$-15^\circ$</td>
</tr>
<tr>
<td>1 kHz</td>
<td>0.5</td>
<td>$-90^\circ$</td>
</tr>
</tbody>
</table>

Table B.1: Some data

Notice how Table B.1 has a number that includes the appendix. When we turn on numbering this way, the numbers reset to 1 each time we enter a new appendix.

B.1 Section in Appendix

Of course, we can divide up each appendix as well.

B.1.1 And more

We can have deeper divisions too.
C Other Things

We might find extra equations here, like

\[ x_0 = \frac{-b + \sqrt{b^2 - 4ac}}{2a} \quad \text{and} \quad x_1 = \frac{-b - \sqrt{b^2 - 4ac}}{2a}. \]  

(C.1)