Introduction to ${\rm I\!AT}_{\!E\!} \! X$

ECE 209 — Thursday, 4:30 — 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

operational amplifier differential amplifier with practically infinite gain, which makes it fodder for feedback applications

impedance the frequency-dependent relationship between the voltage and current on a one-port electronic device

B Data

Check out Table B.1.

| Frequency | Gain | Phase Shift |
|-------------------|------|---------------|
| 5 Hz | 5 | -10° |
| $15 \mathrm{~Hz}$ | 5 | -15° |
| $1 \mathrm{~kHz}$ | 0.5 | -90° |

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

$$x_0 = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$
 and $x_1 = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$. (C.1)