Truss Example

CHAPTER 8

I know that you believe you understand what you think I said, but I'm not sure you realize that what you heard is not what I meant.

Robert McCloskey

Coding is tricky, because we take the great ideas, techniques, and trade-offs and actually make decisions. We put fingers to the keyboard, and decisions are made and trade-offs are fixed in code. Furthermore, learning a new technique only makes the coding task more difficult. An example, or several examples, can help put the technique into perspective.

This chapter is the first example of how to use Teal and Truss in a verification system. It's useful to build and run some example code when learning something new. So, install the code on the CD and noodle around with it a bit. You can add printf's and change the code a bit.

If you want, use this chapter as a guide to some of the more interesting parts. This chapter is not quite a map to the "homes of the movie stars." Instead, it is more like a mariner's map. It helps you to navigate in tricky waters.

Overview

This chapter provides a first complete example of using Truss, where you can actually compile and run the code. The code is not as complex as what you would encounter in a fully featured chip. However, all the main parts are here to consider. The source files may seem silly or overly complex for the chip we are trying to test, but we are trying to demonstrate how to structure a verification system for a real project. Your chips will have plenty of complexity to manage.

This chapter does not walk through every code file. We are all capable of reading code. What it does instead is look at some of the more important aspects of the verification system.

Directory Structure

In order to help you navigate the source files, it's good to show the main directories that comprise a Truss-based system (shown below). We've also included only the main files we will be working with.