

# Preface

**H**ow do you work thirty years doing process control for a big corporation, spending most of the time on the road, and maintain your sanity? Well, don't ask me. As you'll see, I lost mine a long time ago. So the technical content of the craziness that follows is well camouflaged and can easily be ignored.

Which means this book goes well with beer. In fact, the stronger the beer (Duvall's is recommended) and the more consumed, the more you will appreciate the features of this book. Just sober up before driving or trying to apply any of the insights gained. If you can remember them the next day, that is.

Over the years, I have been fortunate enough to find some similarly crazed individuals who have agreed to contribute to this book. Along with our contributions, you will also find actual documented quotations from control room operators, which were collected during journeys to the outer reaches of Iowa as well as various lists that we've compiled from our vast experience in the world of process control.

Bottoms up!

- Gregory McMillan

# 1

## Itsy-Bitsy Teeny-Weenie ...

**T**hink of the smallest thing you encounter in your job. No, not your last raise, your next raise, or for that matter, all of your future raises put together. And, no, not the size of your stock options compared to upper management's, or upper management's contribution to revenue, or their appreciation of your value. (What if upper management were made up entirely of stock analysts? Instead of salaries, would employees be told to "go public" with itsy-bitsy teeny-weenie stock offerings to represent their individual value? Would press releases about their individual goals help drive up the price of their stock so much that it would split? Would the number of shares become just itsy-bitsy teeny—with no "weenie"? Would this lead to an itsy-bitsy teeny career—with the weenie gone?)

Anyway, back to itsy-bitsy teeny-weenie—and we haven't even mentioned yellow polka-dot bikinis. (That would mean giving equal space to Speedos. As a discussion of teeny-weenie Speedos could be misconstrued, let's move on to the technical issue: the smallest thing you encounter in your job.) It's critical to ensure that sensitivity and resolution limits and the noise in your loop are itsy-bitsy teeny-weenie. (See, this *is* technical, after all.)

It turns out that noise and resolution and sensitivity limits are the largest unrecognized source of dead time in your control system. You won't find this in the literature. It isn't because engineers have an itsy-bitsy teeny-weenie

... WHY ARE WE WEARING THIS STUFF?

THIS MUST BE THE DREAM OF A PROCESS CONTROL ENGINEER!

