Measurement Is Nothing New

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Most people use measurements and metrics every day. They are so ingrained in our normal way of doing things that we often do not realize we are using them. When we drive our car, we watch the gauges, especially the gas, to make sure everything is all right. When we prepare for a vacation and a long drive, we may check the oil and tire pressure to make sure we are not going to have any problems.

While following a recipe, we measure the ingredients and make sure the temperature of the oven is within the correct thresholds.

Women expecting babies go to their doctor on a regular basis to monitor how things are progressing. My doctor performs an ultrasound on me every month. During the ultrasound, he measures the length of the femur, the diameter of the head, and the diameter of the belly. He uses all of these measurements to ensure the baby is progressing as expected. The medical staff also checks my weight each visit to determine if I am gaining the right amount of weight. There are also blood tests taken at periodic intervals to check for other problems (Downs syndrome, diabetes, etc.) and prepare for them.

We even measure how the day is progressing. How many of you are wearing a watch right now? We measure how the day is progressing and plan our actions accordingly. Have you called your spouse to say that you will be later than usual?

Do you make a list of necessities before going to the store so you don't spend more money than you wanted? Have you set a budget?

In the long run, software measurements will make our lives easier. Monitoring our progress on a project lets us know when we need to begin corrective action. It also lets us know if things are progressing better than expected, so there is room for experimenting with potential improvements. We set thresholds in advance to aid with determining when those actions should be taken. Measurements are not a cure-all. We may still find problems that cannot be fixed with advance warning, but knowing about these problems before delivery will help the developer and the customer decide together how to best deal with them.

I was wondering why so many software measurement efforts fail when measurement is so much a part of our everyday life. As I was trying to tie the two concepts together and determine why there would be a difference, it occurred to me that there is no difference. How many times do people get stranded along the road because they did not check their gas gauge? Maybe they were checking it but failed to heed its warning. Have you ever seen signs that your project was in trouble but just held onto the belief that you would remedy things down the road? How many people do not follow a recipe, and it turns out awful? How many people are afraid to go to the doctor because they think there might be something wrong and do not want to know? How many people set budgets and overspend anyway? Are you consistently $50 over budget every month but continue to believe you will spend less next month?

Perhaps the most frustrating situations are those in which people believe they will get different results without changing what they do. Deciding to implement and then institutionalize a measurement system seems essential to improvement. All of the old clichés apply. That is how they got to be old clichés. "If you do not know where you are, a map will not help" or "That which you cannot measure you cannot manage." Every organization, and perhaps every person, needs to begin to measure and then pay attention to what the data is telling them. I, for one, have never enjoyed the highway in the desert on foot. ◆

Free Pizza for Ada Bugs

In the May 1998 issue of *CROSSTALK*, there is a reprint of an Executive Order titled, "Year 2000 Conversion." I am writing to ask *CROSSTALK* readers if any of you have found an Ada Year 2000 bug, and if so, how much effort did it take to correct? I offer free pizza to the first three bug finders responding to this request who show up for a San Diego SigAda meeting prior to the year 2000.

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We enjoy your magazine. It is handed out as a resource to every Systems Automation Course student in the software engineering block of instruction, and many of them research further topics they find in your articles.

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