The Non-Technical Professional

One thing that has always amazed me, as an engineer working in a technical field, is the large number of people who label themselves as “non-technical”. Few things stop a conversation quicker than this announcement, even though there is no universal definition of what a non-technical person is. Probably the most common definition is someone who never studied engineering or science in college. Embedded within the definition is the secondary concept that being non-technical is a permanent condition, not subject to change. Of course, it isn’t true, but people believe it just the same.

In some ways it reminds me of a strategy I used in college. In my fraternity, there always seemed to be three people walking around looking for a fourth person to play bridge. The only acceptable excuse was to say “I don’t know how to play bridge.” Otherwise you would be pressured to join them and miss an opportunity to study physics. As a result I never learned how to play bridge.

I wonder how many non-technical people use the same strategy to avoid something they would prefer not to do, or believe is beyond their capabilities. Certainly it is easier to say I cannot do it, rather than, this seems too difficult and I don’t want to do it. It is easy to remain in one’s own comfort zone and not take the first step toward trying to learn something new or different. As a part-time teacher, I meet many people who claim they cannot do math. Many have had some traumatic experiences, to be sure, so overcoming this phobia is extremely difficult for both teacher and student. But it can be done; all it takes a little time, skill and patience.

While one can live a fulfilling life without learning how to play bridge, it seems peculiar to me that someone could work in an industry for years or even decades, without even trying to learn the fundamental science and technology at the heart of their business. Yet we encounter such people every day. In essence these people have bet their career and financial future on something they don’t understand, leaving the understanding to others and hoping they will find technical help when needed. This seems like a very strange wager to make with one’s career because it carries an unnecessary risk. If one owned the proverbial goose that laid the golden eggs, wouldn’t it be wise to know something about geese?

The first benefit that one receives in becoming technically savvy is being able to distinguish between what is unknown and what is unknowable. Most non-technical people have a great deal of trouble making the distinction. They wrongly reason that because something is unknown to them, it is unknown to everyone and unknowable. The second benefit is gaining a rough idea of the degree of difficulty involved in various questions and projects. Being non-technical puts you at the mercy of the opinions of other people, which may be inaccurate and/or biased, but that won’t be clear to you at all.

Some of us become technically trained out of interest; we have an obligation to help those who seek knowledge out of necessity. Anyone working in a technical field has a responsibility to learn the basics concepts of the technology used in their business.

Anyone who runs a technical business has a duty to see that all their employees receive the training they need to do their job and to understand the basics of their business. It just makes good business sense because it pays for itself over the tenure of an employee.

In an area like magnetics, people claim that opportunities to learn the technology are limited and perhaps even non-existent. While I will agree that there is not an overabundance of good training classes in magnetics, good ones do exist. There are a few of us doing it professionally. And for me, it is an important and satisfying part of my consulting business. I have taught at least one training class a year for the last six years. Most of my students are already technically trained. They want to gain a better understanding of the technology of permanent magnets, which they may not have seen in their undergraduate experience. But I have trained many non-technical people in magnetics, too, using a slightly different approach. It can be done, but requires the commitment of all concerned.

One opportunity to learn about magnetics is the Magnetics Bootcamp, being offered as a one-day pre-conference seminar before the Magnetics 2007 Conference in April. If you would like to understand and be a part of the conversation, rather than trying to get someone to explain it to you, this is an excellent place to learn the basic technology of magnetics. If you would like more information, just drop me an e-mail or visit the conference web site, www.magneticsmagazine.com/mag_conf_workshops.htm

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