

The Embedded Muse 24

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Embedded e-Newsletters

I've recently found out about a couple of other E-newsletters on embedded systems.

The Embedded Processor Watch from Microdesign Resources is an independent journal dedicated to reporting and analyzing advances in microprocessors for embedded systems, information appliances, consumer electronics, industrial control, and real-time systems.

The editorial staff specializes in 32-bit & 64-bit microprocessor hardware, and also covers CPU support logic and digital signal processor (DSP) chips. Embedded Processor Watch does not accept advertising and is not affiliated with any microprocessor vendor.

Anyone may subscribe to this newsletter and receive timely news and information on microprocessors. Only the editors of Embedded Processor Watch may post messages. To subscribe, please send email to join-embedded@list.MDRonline.com. You do not need to enter anything into the subject or body of the email.

Another newsletter is Embedded-Info, a free, monthly bulletin from Applied Microsystems Corporation for engineers working on the design, debug and test of embedded systems. Embedded-Info focuses on new technologies and industry trends in embedded systems development.

To subscribe to Embedded-Info: Send E-mail to "majordomo@amc.com" with "subscribe embedded-info" as the entire body of the message (nothing in the subject line).

Decision Making Reviews

Michael Ham, of MetaWare Incorporated (<http://www.metaware.com>), and I have corresponded about issues related to decision making. Engineering is all about inventing solutions to problems, which involves lots and lots of decisions. He wrote a review of several books and products, which follows.

I have to admit being less than sanguine about the software products, though, having had rather poor-to-mixed results with the various packages I've tried over the years. My experience is that we often know what result we want before creating the various

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matrices, and tend to use the tools to justify our wish. Perhaps, emotional beings as we are, we mostly shoot from the hip and then use a perverse sort of logic to rationalize our decision.

So, on with Michael's reviews:

We all make decisions, and we all can recall some spectacularly bad decisions (not necessarily our own, of course): Ford Motor Company's Edsel, the Cuban invasion at the Bay of Pigs, the decision to break into the Democratic headquarters in Watergate, the new Coca-Cola, and so on.

The Logic of Failure: Why Things Go Wrong and What We Can Do to Make Them Right; by Dietrich Dorner; Hardcover; \$22.50.

Dorner's readable and intriguing book describes some examples of how individuals and groups follow what seems like a logical series of simple decisions to arrive ultimately at undesired and sometimes catastrophic results. One major reason for this is that few people are actually trained in decision-making techniques. Most of us, being self-taught, succumb to common errors that produce bad decisions--just as self-taught golfers or swimmers make common mistakes that limit how well they can do in those sports.

Of course, we hope that, over time, experience will improve the quality of our decision-making. Research shows, however, that learning from experience is neither automatic nor easy. To learn from experience requires deliberate effort--for example, implementing the decision in a way that will provide feedback so that the success of the decision can be evaluated.

Decision Traps: Ten Barriers to Brilliant Decision-Making and How to Overcome Them; J. Edward Russo, Paul J.H. Schoemaker; Paperback; \$9.90

Help is available. Decision Traps breaks the decision-making process into four phases--framing the decision, gathering information and estimates, coming to a conclusion, and learning from experience--and for each phase describes the most common errors and how to avoid them. The book also examines how group decision-making works (or fails)--a useful section if you, like most of us, are involved in group decisions.

Because the book specifies a definite process in reaching decisions, it provides a way of evaluating decisions beyond looking at the result: you can look at the process by which the decision was made. This is important because in the real world, results are often skewed by chance factors. For example, consider a hamburger restaurant that becomes a hit because it sells a patron a winning lottery ticket, and another that fails because a big and highly publicized recall of contaminated meat discourages people from eating hamburger--in each case, chance factors greatly influenced the outcome and masked

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whether the decision to open the restaurant was sound or not. Of course, some people operate on the idea that all their successes are due to skill, their failures to bad luck. Someone having this view will learn very little from experience.

"BestChoice 3"; Logic Technologies, 800/776-3818 (Fax: 619/389-1185); DOS, Software Package; \$99.00

Decision-making often involves selecting one of several options, with no one option a clear winner because each involves trade-offs. When there are more than two options, more than one criterion for selection, and more than one person involved in making the decision, the process becomes difficult to manage. An inexpensive software package is available that makes this task easy.

BestChoice 3 takes a list of options (for example, a list of possible product features) and criteria (for example, development cost, customer appeal, competitive necessity) and prepares a decision list for each person who will participate in the decision. Using this list, the decision maker compares only two options at a time, and for only one criterion at a time. The software then combines all the choices for all decision makers and displays the result, with the options ranked by a total "score." You can assign different weights (importance) to each criterion and even to each decision maker. And the structure of the program allows easy "what if?" scenarios: What if development cost were not given so much weight? What would the marketing group decide by itself?

Thought for the Week

```
struct SoftwareProfessional
{
    double    salary;
    long      lunches;
    float     jobs;
    char      unstable;
    void      work;
};
```

About The Embedded Muse

The Embedded Muse is an occasional newsletter sent via email by Jack Ganssle. Send complaints, comments, and contributions to him at jack@ganssle.com.

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