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Letters

Programmed for failure?

It is dismaying to read that evidently many software engineers still regard testing to be a search for and removal of stochastically occurring phenomena ("Software failure: Counting up the risks," SN: 12/14/91, p.388). Quite the contrary. When a program fails, it does so for reasons that are well understood *ex post*. Furthermore, the program will fail in the bad code every time the conditions of failure are created again. The only excuse for regarding a bug as mysterious *ex ante* is that it is as yet undiscovered.

There are, however, systematic methods of specification, design, testing and project management that can be used to build quality into the software and put it through exhaustive validation. We have used such techniques successfully on projects of all sizes. Having done so, we regard software performance to be unpredictable only to the extent that the activity that constituted its development was

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Cover: Who could ask for a sweeter cover? To honor February's day for sweethearts, SCIENCE NEWS takes a look at how and why the sweet tooth often wins out over sensible, healthful eating. (Photo: Chocolate Manufacturers Assoc.)



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needlessly stochastic.

William Thiers
Rochester, N.Y.

I have heard that the software code for the Strategic Defense Initiative will probably exceed by severalfold the length and complexity of almost any existing program.

Is it possible that those espousing SDI, at least as originally conceived, will read and understand the implications of your article?

Phillip M. Allen
Wichita, Kan.

Keep it up

In your well-written piece about all the elevated artifacts excavated at Ceren ("High-level utensils," SN: 12/14/91, p.398), you state that the "reasons for the emphasis on elevated stashing of commonly used objects . . . remain unclear."

Actually, we do know why they put them in elevated contexts in many instances — as in the

case of the five miniature pottery vessels that were stored high in the rafters in the back of Structure 7, a storehouse. The pigment is all cinnabar, in various hues, and cinnabar (HgS) is one of the most toxic substances around. Many of the elevated artifacts were valuable, small or both. And often the seed grains (corn, beans, cacao, tobacco, chiles) were kept high to make it harder for ants and rodents to get at them.

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