

The Embedded Muse 78

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Editor's Notes

Last issue I referred to a set of RAM testing guidelines. Michael Barr, Embedded Systems Programming's Editor-In-Chief, has an excellent application note about this that includes working C code. It needs but a single minor typedef change to work for 8, 16 or 32 bit wide chips. Check it out at <http://www.netrino.com/Articles/MemoryTesting>. Highly recommended.

Jim Turley, always funny and thoughtful, wrote a fascinating article in this month's Embedded Systems Programming that's a must-read for anyone baffled about the future of ASICs and programmable parts. He contends that ASICs are getting so expensive to design (with mask costs heading north of \$1 million per spin) that except in the very highest-volume products they are too expensive. It's probably a bit tongue-in-cheek, but does make you think. Do read <http://embedded.com/story/OEG20021028S0039>.

A related article in last week's EE Times (<http://www.eedesign.com/story/OEG20021105S0030>) suggests that ASIC/SOC designs are hampered by productivity issues, more or less tossing the gauntlet into the lap of the tool vendors to provide better tools. Apparently designers are now creating designs at something like a 500 gate-per-day rate; by 2005 at least one pundit predicts productivity will have to climb to 2 million gates per day.

Reading all of the recent press hoopla about .13 micron and now 90 nanometer geometries it's easy to forget that a lot of the market runs very happily on much lower-end processes. Microchip's PIC line is still largely .7 micron. 90 nanometer sounds awfully impressive, but life on the bleeding edge is always a trail of tears.

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Finally, I wrote an article about Toxic Bosses (<http://embedded.com/story/OEG20021031S0037>). The accompanying poll was quite instructive. As of this writing, 72% of the 425 respondents are bound to their jobs by fear, money or lack of options. Few expressed delight in their work. That confirms my theory that when the economy improves, when more jobs appear, employers should expect a great migration of their embedded folks. This can't be good for the bottom line.

Embedded Seminars

I'll be presenting my Better Firmware Faster seminar in Irvine, CA on December 4 and Dallas, TX on December 6. See <http://www.ganssle.com/classes.htm> for more information. This is the only non-vendor class around that shows practical, hard-hitting ways to get your products out much faster with fewer bugs. The crummy economy is putting pressure on all developers— come and learn the tricks you need to be more efficient.

I often do this seminar on-site, for companies with ten or more embedded folks who'd like to learn more efficient ways to build firmware. See <http://www.ganssle.com/onsite.htm>

Thought for the Week

Here's a great site: <http://www.intuitor.com/moviephysics/>. It's a review of the physics in many movies. The writing is fun, and they take Hollywood to task for making a mush of physics. I especially like this quote about Titanic:

“We got a bit giddy over the high-tech submarines used in the opening scenes. However, we could have done without the hackneyed portrayal of the sub's technonerd staff. Had they merely been portrayed as crude, insensitive, and slovenly, we would have remained silent, but they were also portrayed as greedy money grubbers.”

“While technonerds may not be in the same category as Mother Teresa, Emily Post, or Little Mary Sunshine, we would like to point out that given the choice between living in luxury and driving high-tech mini-sub's around the ocean bottom, real technonerds will choose the latter. It's a no-brainer. The only point of money for technonerds is that a certain amount of it is needed to support their techno-habits. Unfortunately, *Titanic* failed the reality test in this area.”

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About The Embedded Muse

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