

Emerging Technologies and Trends in Electronics

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The Ultimate Opportunity, Minor Crisis or End of Days?

Louis E. Frenzel

Technology Editor

Electronic Design Magazine

The Declining Enrollment Problem

- Gradual but on-going for years.
- Felt by most colleges.
- A few colleges are doing OK due to positive local factors.
- Many department closings.
- Not a temporary downturn.
- No apparent sense of urgency with most.
- Also a problem in engineering at the universities.

Multiple Factors

- Offshoring of manufacturing.
- Outsourcing of some tech work.
- Major changes in technology.
- Less need for techs.
- Changes in what industry wants in a tech.
- Major changes in the way techs work.
- Dated, skewed, or out-of-touch curricula.
- Lack of interest in math, science, technology.
- Image issues.

What is being done?

- Not much on a national basis. Check out: www.ncee-edu.org
- Most have recognized the problem but do not know what to do.
- Informal survey.
- Numerous papers and talks.
- Blog (www.electronictech.blogspot.com)
- NSF grant to research and solve.
- A national problem best solved locally.

What are you doing to help?

If you are not doing something, you are part of the problem.

- If you have been working on the problem, what has worked and what has not?
- Suggestion:
 - Find out where the jobs are.
 - Contact/work with local industry.
 - Change to meet needs. #1 priority.

Options for Faculty and Colleges

- Do nothing. Business as usual.
- Wait and see.
- Study the problem locally. Work with industry.
- Revise curricula and courses.
- Introduce new programs.
- Boost promotion of your programs.

What's Hot, What's Not?

- Process control.
- Automated manufacturing.
- Wireless/communications.
- Consumer electronics.
- PCs and networking.
- Alternative energy.
- Bio-medical.

Let's Be Positive: Change or Die

- This is a wake up call.
- If you keep doing the same old things, you will get the same old result.
- This is not a dooms day scenario. Look at this as an opportunity to build something new, better and more relevant.
- Change is good. Change is interesting, challenging, exciting, even fun with the right attitude.
- View it as an engineering problem to be solved.

Make something happen!

- Don't let this happen to you.
- Take back some ideas from this session to work on.
- Share your thoughts, ideas, plans, successes, failures, experiments with others.
- Contribute to the blog:
www.electronictech.blogspot.com
- Good luck.