

# AMERICAN ENGINEER<sup>TM</sup>

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## AEA Opposes NAFTA

The American Engineering Association will oppose the North American Free Trade Agreement (NAFTA) and urges engineers everywhere to rise in opposition to this agreement. AEA is not opposed to trade per se, but believes this is a bad agreement.

AEA opposes NAFTA on the following grounds:

- NAFTA will mean a loss of our national, state and local sovereignty.
- NAFTA will increase importing of foreign engineers and scientists.
- NAFTA will mean increased exporting of our manufacturing jobs.
- NAFTA side agreements are without teeth and are unenforceable
- NAFTA will not stop illegal immigration.
- NAFTA will not improve the Mexican standard of living measurably.
- NAFTA will cause a deterioration of the U.S. standard of living.
- NAFTA will cause a deterioration in our health, food and safety standards.

The North American Free Trade Agreement is based on the Canadian Free Trade Agreement which contains provisions that are detrimental, not only to engineers but to the nation as a whole.

NAFTA will bargain away our national, state and local sovereignty bit by bit, law by law. NAFTA contains the same dispute mechanism as the Canadian agreement which has the capacity to usurp our nation's laws. (More in a future issue.)

Representative Helen Delich Bentley (R.-Md) stated "No longer will our laws or our people have the protection of the American Constitution...Nor will the people of Mexico or Canada have the protection of their Constitution. We will all be at the mercy of supranational panels of international lawyers, meeting in secret, having the power to overturn the actions of this body (Congress), and the decisions of our courts all the way to the supreme court.

"We have already given this power away to the Canadian Free Trade Agreement!...Of the fourteen or so challenges to laws, both of Canada and the U.S., the panel has overturned the laws of our sovereign nations in 2/3rd's of the cases."

Ivan L. Bagett, President of Bagoironix states in his analysis of NAFTA "Article 1603 of NAFTA states that each country shall grant temporary entry to a business person of another country, without requiring that person to obtain an employment authorization. No limit may be imposed on the number of non-degreed business persons granted temporary entry. For degreed (professional) Mexican business persons, up to 5,500 annually will be granted temporary entry into the U.S. This annual limit is guaranteed for at least 10 years and may increase at any time. There is no guarantee of temporary entry of U.S. professionals into Mexico." It should also be noted there is no upper limit to the Mexican professionals allowed entry. The guarantee is for 5,500. Above that number there is no guarantee."

Appendix 1603.D.4 to NAFTA states: "2. For purposes of paragraph 1, the United States shall not take into account:

- (a) the renewal of a period of temporary entry;
- (b) the entry of a spouse or children accompanying or following to join the principal business person;
- (c) an admission under section 101(a)(15)(H)(i)(b) of the Immigra-

tion and Nationality Act, 1952, as may be amended, including the worldwide numerical limit established by section 214(g)(1)(A) of that Act; or

(d) an admission under any other provision of section 101(a)(15) of that Act relating to the entry of professionals."

This means these 5,500 or more professionals per year plus their spouses and children are to be allowed entry without consideration of previously established numerical limits and without limits how long they may stay. Could the numerical limits in our immigration law be considered an impediment to free trade to a foreign company supplying engineers or other professionals to industry in this country?

David North, an independent immigration researcher indicates roughly 2,000 engineers per year are imported through the Canadian Free Trade agreement. His estimates indicate some 500 were imported in FY 1989 and increased to just over 2,000 in 1992 but are expected to drop off to about 1,900 for FY 1993. The reduction for 1993 probably is due to our economic condition. Are there numerical limits in the Canadian Agreement? We don't know. How many other agreements contain these provisions? We don't know.

We do know these agreements usurp our immigration laws. We do know these agreements are in addition to the numerical limitations established in our immigration laws. We do know once these treaties are approved, there is nothing we can do to reduce these numbers.

Herman E. Daly, an economist with the World Bank in Washington, D.C. states "Nowadays technology and managerial skills move with capital. Capital mobility means wages will tend to equality worldwide in the interest of efficiency and growth. Wages in the U.S. will decline.

"Each recovery is shallower than the one before because the true value-added manufacturing base is getting smaller and smaller....If every family bought a new car, on average, 29 percent of that money would go to Japan, and the 57 automobile plants in the Mexican maquiladora program might be stressed, but in all truth, how many new jobs would be created in America?....we might gain a little, but every one of our trading partners would gain much more." (Kevin L. Kearns - *America Asleep*.)

Should we enter an economic crisis similar to the Great Depression of the 1930's we would not be able to recover. At that time we had our value-added manufacturing to fall back on. Services add little true value to our nation's wealth. NAFTA will only exacerbate this situation.

John G. Swartout writing in the June 1993 *Social Contract Press* states "In our government's passion for free trade, we are pursuing a strategy that will transform the United States into a Third World country in our own time.

"NAFTA is the blueprint for a monstrous swindle of the American people which will make the savings and loan fiasco look like a case of purse snatching. It is an attempt by private interests to use the power of government to guarantee the success of an enormous foreign investment program which will lay waste to the American job market and imperil the economic survival of the country. NAFTA will bring to the United States a declining standard of living, rampant unemployment, higher taxes, deeper debt, and a government even

(Continued on page 2)

("Opposes NAFTA" cont. from pg 1)

less responsive, less accountable, and less able to influence our nation's own destiny."

Mr. Swartout continues "The U.S. has lost the consumer electronics industry, nearly all of the commercial shipbuilding industry, a third of the automobile industry, large sectors of the machine tool, semiconductor, textile, apparel, shoes, steel, and farm machinery industries, and even a substantial share of the world market for agricultural products. And in the process, we have gone from first in the world to tenth in wages."

We have few laws which could not conceivably be brought before an international trade panel made up of foreign lawyers and U.S. representatives of foreign companies which could not be considered an impediment to free trade. Remember, there is no recourse to a bad decision made by these international panels.

John Maynard Keynes stated "I sympathize, therefore with those who would minimize, rather than those who would maximize, economic entanglements between nations, ideas, knowledge, art, hospitality, travel—those are the things which should of their nature be international. But let goods be homespun whenever it is reasonably and conveniently possible; and above all, let finance be primarily national."

Bill E. Reed

## We Need Your Help Now!

I refer to a front-page article in the May '93 issue of AE: "AEA Comments on DOL Regs." It told how AEA offered comments to the Labor Department on the Labor Market Information (LMI) program of the 1990 Immigration Act. The LMI Program listed certain categories of technical professionals as in short supply. This would result in relaxed immigration limits on these skill categories, at the very time when an estimated 50K engineers are out of work. As a result of our comments and those of other interested organizations, Labor Secretary Robert Reich asked Congress to change the law or eliminate LMI from the law.

Another front-page article in the July '93 issue of AE, entitled "Engineers Win One — or did we?" asked AEA members to write their Congressmen, urging them to follow Mr. Reich's advice and eliminate LMI. I have since obtained more up-to-date information from our immigration expert, Dr. David Lewis, who spoke to an interested member of a Congressman's staff.

Apparently the Senate took some action, partly as a result of our comments. They changed the words, 'shall act' to 'may act.' This could allow the Labor Department to use its discretion in enforcing LMI. Since Mr. Reich was convinced LMI is bad, he would not implement it. BUT the house has not acted, and it looks like they may never. So the 1990 Immigration Bill is worded as before.

We need AEA members to urge the House to take similar action. Below is a list of Representatives on the House Subcommittee on International Law, Immigration and Refugees, reprinted from our July '93 issue. ACT NOW by phoning, writing or FAXing a statement to some or all of them. The statement should simply ask them to follow the lead of the Senate, and make implementation of LMI as an option of the Labor Department, instead of its being mandatory. Back Secretary Reich; he deserves no less. Back your fellow engineers; they deserve no less. Mail a Xerox copy of any correspondence to Dr. David Lewis, 609 Sideling Court, Vienna, VA 22180.

REPRESENTATIVE	STATE	PHONE	FAX
Romano L. Mazzoli, Chairman	KY	(202) 225-5401	Not Public
Bill McCullom Ranking Minority	FL	(202) 225-2176	(202) 225-0999
Charles T. Canady	FL	(202) 225-2152	(202) 225-2279
Charles E. Schumer	NY	(202) 225-6616	(202) 225-4183
Jerrold Nadler	NY	(202) 225-5635	(202) 225-6923
John Bryant	TX	(202) 225-2231	(202) 225-9721
Lamar Smith	TX	(202) 225-4236	(202) 225-8628
George E. Sangmeister	IL	(202) 225-3635	(202) 225-4447
Xavier Becerra	CA	(202) 225-6235	(202) 225-2202
Elton Gallegly	CA	(202) 225-5811	(202) 225-0713

Robert Bruce, AE Editor

## Editorial

## Opportunity

Read any of the engineering publications that cover professional issues and you will be well versed in the frailties of our profession. Day after day, year after year, one can always find letters from concerned engineers discussing our problems in great length and detail. The stories never end: Age-discrimination, layoffs, poor pensions, displacement of U.S. engineers by importation of foreign engineers, poor benefits, salary compression, unpaid overtime, under-utilization of engineers, etc., etc., etc.

Engineers from every discipline: chemical, civil, computer, electrical, electronics, industrial, mechanical, programmers, male and female, all continue to bemoan the profession they chose for their career. And, don't forget the engineering students who never had the opportunity to enter the profession. These same engineers all have their own separate society or special interest group dedicated to their discipline: ASCHE, ASCE, IEEE, ASIE, ASME and more, with all either working for them or against them. Beside the technical, we now have the Society of Women Engineers (SWE) to further divide the engineering community by sex.

The affect has been to divide the two million members of the engineering community into many groups with the largest, IEEE, representing only a fraction of the two million or about 10 percent of the U.S. engineering population. IEEE's academic majority Board of Directors is so far out of step with its engineering membership that it cannot help the engineering community. This really leaves only one solution; unite the engineering community with one professional association.

As engineers we spend our time solving problems while some bureaucrat in Washington, on a government payroll, fabricates engineer shortage reports, depriving you, while creating opportunities for the members of his bureaucracy. The loss of a job is severe enough, but losing the opportunity to practice your profession, the opportunity to enhance your skill level, lost hope and the opportunity to earn a living is far more significant. Budget cuts, shifts in government spending, lack of industry incentives and waste represent more opportunities lost. Fight these problems as an individual. Take on that bureaucrat, and the bureaucracy by yourself and see how far you get.

By comparison look at members of a *non-engineering* community. They can rob you blind, pick your pocket, steal by arbitration, get paid more to do less, threaten to strike in September, cannot compute their hourly wage and freak out when you publicize their salary. The National Science Foundation members fabricate stories, lie to Congress, deceive the public, are on a government payroll, can't get fired and they received 500 megabucks to promote pre-college math and science education to seduce naive students to the engineering colleges. Now, that's creativity. It creates opportunities, but not for engineers or engineering students.

I don't believe we should emulate NSF, but those that have opportunity, have the representation and strength to make their own opportunities. Engineers can still write to their favorite technical publications, but do not have to remain divided. Through AEA, engineers have the means to gain strength and united representation in the professional arena. We may fund some opportunities by aggressively cutting into the bureaucratic waste in Washington. When we succeed we shall be able to pass along opportunities to other productive Americans.

Richard F. Tax

## Membership Renewal

Time to renew—The date on your mailing label is the date to renew your subscription, membership and support for the American Engineering Association. Get your renewal in early and save us the time and expense of sending you a reminder. Thank you.

## Reader's Voice

This column in the "American Engineer" is for readers to voice an opinion relevant to any issues that affect the professional life of an engineer. Articles or letters should be in good taste and not slanderous. Each submission should include the name, address, home and business phone of the writer. Except for short excerpts, we will include the writer's name, city and state (unless the writer requests anonymity). We reserve the right to edit each submission, as long as we don't change the gist of it. We assume that authors who send us material have accepted these conditions, unless they instruct us otherwise in writing.

From C. Walsh of Midvale, UT: - "Re: Dr. Nelson's letter (Reader's Voice column, July '93 issue of AE), I disagree with your comment that older scientists and engineers (S/Es) have a more serious unemployment crisis than younger ones. It has been my direct experience that all S/Es are in an unemployment crisis. I hope the S/E community does not divide itself on this issue. The group comprising all S/Es is small enough, and even smaller are the numbers of professionals willing to DO something. United we stand; divided we fall."

Editor: The point is well taken. Being an older, retired-early engineer, I know more about rampant age discrimination in the technology professions, and I hear more from older S/Es. However I was happy to publish the letter of Dr. Nelson, a young physics PhD who's had a difficult time finding professional-level work, through no fault of his own. The important point is that AEA works for enhancement of the careers of ALL technical professionals, regardless of age.

From John Vinson of Monterey, VA: - "Not long ago I was debating an immigration lawyer from Seattle. He said that immigrants absolutely were not taking jobs from Americans. I disagreed, citing the statements of your organization. He still insisted it wasn't true. Therefore, I'm sure you'll be happy to know that the job losses of U.S. engineers are just a figment of the imagination."

### Change Of Address

Please let us know if you change your address. We have no way of keeping up with you unless you let us know. The Post Office will not let us know. Just send the address label from the most recent issue of the "American Engineer" along with your new address to: AEA, P.O. Box 820473, Ft. Worth, Texas, 76182-0473. You are very important to AEA—WE DON'T WANT TO LOSE YOU!

Editor: Mr. Vinson is the President of the American Immigration Control Foundation (AICF) whose material we have reprinted from time to time, including a cartoon in this issue. I agree with him that there's a crisis in immigration. Mr. Vinson has far more material than AEA, about abuses of immigration law. I think he's being modest, when he says he made his case using AEA material.

From W.E. of San Jose: - "At this time there are thousands of engineers out of work, and every couple of weeks, yet another company announces even more 'workforce reductions.' Yet we still see supposedly learned people claiming the old propaganda that there's a SHORTAGE of engineers! See enclosed article ('Training Programs Alone Can't produce \$20-An-Hour Workers' from Page 16 of the March 8, 1993 issue of *Business Week*). Colleges and universities have sure been effective in their self-serving dissemination of this big lie. Obviously *Business Week* likes this kind of talk, since it serves companies well."

From L.F. of L.A.: - "Thank you for the good work you are doing on the newsletter. However I have one big complaint: the overdependence on reprints of articles from other publications. I am not against a modest amount of reprints, but they often comprise about one half of the newsletter. I feel this excessive use of reprints reduces interest and hurts the image of AEA by implying that it lacks originality. I suggest, as an alternative, that the Reader's Voice column be expanded. If this cannot be done, because readers are not sending in enough material, then I feel that they should be urged to send in more. Readers could be encouraged to send in the following, for example: (1) general discussions of professional issues (e.g. the shortage myth, age discrimination); (2) summaries or discussions of magazine or newspaper articles; (3) book reviews of books relevant to engineering careers or to factors that impact engineering careers."

Editor: I feel there are writers in the U.S. who write about topics that interest our readers and are better writers than I. I feel it does not disparage AEA to reprint their material. However, AEA tries to be responsive to its members, and I'd like to have more original material in this newsletter. Note that L.F. sends us lots of material suitable for publication, and has a right to comment. Readers, what do you say? Should AEA reduce the number of reprints? If that results in too little material for a forthcoming issue of "American Engineer", should we skip that issue? As I said in the Editor's Column, "Talk to me, so I can talk to you."

Robert Bruce, AE Editor  
P.O. Box 4493, Great Neck, NY 11023

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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## When Downsizing Becomes Dumbsizing

*The pink slips are still flying. But with the fat long gone, business is now cutting dangerously into muscle*

Rightsizing, Restructuring, Downsizing. The terms are cold and unemotional. Yet the euphemisms of the early 1990s all mean the same thing: layoffs. Over the past five years, corporate America has been driven by a single-minded mission to gut itself of "excess workers." It was supposed to be the fastest and easiest way to cut business costs, be more competitive and raise profits—or at least that's what many top executives thought.

But there is mounting evidence that this slash-and-burn policy is backfiring. Studies now show that a number of companies that trimmed their work forces not only failed to see a rebound in earnings but found their ability to compete eroded even further. "What's happened shouldn't be called downsizing. It's dumbsizing," says Gerald Celente, director of the Trends Research Institute in Rhinebeck, New York. "All these firings are going to end up hurting our international competitiveness, not helping it."

Whatever it is called, its effect on the American economy has been painful and profound. More than 6 million permanent pink slips have been handed out since 1987, and layoffs are occurring at an even faster pace this year than in 1992. Despite signs of a brisker economy, at least 87 large firms announced major job cuts in the first two months of 1993 alone.

What is so troubling is that while companies do trim a bloated work force from time to time, many of the recent layoffs may not have been necessary. According to a new study by Wayne Cascio, a business professor at the University of Colorado, companies have too often

assumed that if the competition was cutting costs by firing workers, then they had to follow suit. Compaq Computer, for example, announced last October that it was laying off 1,000 workers. Yet two weeks later, the company admitted that profits would double in 1992. Firms like General Electric and Campbell Soup continued to slash personnel even though they both just had highly profitable years. "There is tremendous peer pressure to get rid of workers," says A. Gary Shilling, an economic consultant. "Everybody's doing it because they think they have to."

But the deeper problem facing some companies was an inability to respond adroitly to changing markets, and decimating their work forces may have made that task even tougher when the recovery finally rolled around. "Just look at what they've done to IBM and Sears," says Celente. "They've cut the heart out of these companies. They are blaming an over-staffed work force for bringing down profits. But that's not the real problem. These companies lost out competitively because they didn't change their products."

One of the most obvious effects of downsizing is that the employees who survive are forced to work longer and harder. In February the manufacturing workweek stretched to 41.5 hours, the longest in 27 years. The resulting increase in stress leads to discontent, lowers creativity and undermines corporate loyalty. A study by the American Management Association last year showed that of more than 500 firms surveyed that had cut jobs since 1987, more than 75% reported that employee morale had collapsed. Indeed, two-thirds of the companies showed no increase in efficiency at all and less than half saw any improvement in profits.

*(Continued next page)*

## Immigration Keeps Engineering Unemployment High

by **Frank E. Lord**, Editor  
Career Activities Council

This forecast is the eleventh in a series of quarterly engineering forecasts produced by Robert A. Rivers. Each quarter he refigures projections for the next seven quarters.

The latest figures from Rivers show actual unemployment for electrical engineers in the first quarter of 1993 to be 3.5 percent, approximately 20,000 unemployed out of a population of 572,000. For all engineers the unemployment figure was 70,000 out of a population of 1,788,000, or 3.9 percent.

Occupational population numbers can be derived in various ways. In recent years the Bureau of Labor Statistics (BLS) has shown a decreasing engineering population, because engineers obtaining employment in other fields and those no longer collecting unemployment benefits are not counted. This procedure keeps both the population and unemployment numbers from increasing.

Additionally, large numbers of immigrant engineers initially are not counted at all; neither are illegal engineering workers, mostly those engaging in software design activities. The result is that large numbers of U.S. engineers are being displaced from the work force, and opportunities for new U.S. engineering graduates are dwindling. Further, if BLS's unemployment measurement included displaced engineers who were willing and able to reenter the work force, if opportunities existed, the unemployment rate would be at least double the level shown.

*(Reprinted with permission from  
June 1993 issue of IEEE "Impact")*

Newspapers and trade magazines have covered the problem of illegal engineering workers in the past year. These workers deposit their compensation in their own banks and pay no U.S. taxes. Illegal workers apparently number in the tens of thousands, and so far the authorities have been unable to stem the tide.

Immigration of engineers must be severely restricted, if not halted, until all-inclusive engineering unemployment figures are considerably lower than at present. A figure of two percent would not be unreasonable, given that the rate in times of full engineering employment has been 0.3 to 0.4 percent. ♦

### Rivers' Engineering Unemployment Forecast

Year	Quarter	Engineering Unemployment Percent	
		Forecast	Actual*
1991	1	2.22	2.6
	2	2.23	2.4
	3	2.20	2.1
	4	2.08	2.5
1992	1	2.21	4.2
	2	2.12	3.9
	3	2.06	3.6
	4	1.67	3.9
1993	1	1.51	3.9
	2	1.45	
	3	1.26	

\*from Bureau of Labor Statistics (BLS) data

NOTE: Transition engineering unemployment rate at times of full engineering employment = 0.3 to 0.4 percent

("Dumbsizing" cont. from pg 4)

Not only was there often no payoff on the bottom line, but corporate chiefs who expected at least some applause from Wall Street for reducing labor costs also got a nasty shock. "Senior executives may think that a press release announcing lay-offs sends a signal like, 'Look, I'm cutting costs, therefore reward me,'" says Carol Coles, president of Mitchell & Co., a management consulting firm in Waltham, Massachusetts. "But investors are a lot savvier than that. They know that firms that had major layoffs often have more significant problems. Streamlining a company does not push stock prices higher."

Coles studied 14 firms that announced major staff cuts during the 1980s and found that the rise in their stock prices lagged the overall market by 70% in the past three years. For example, Bethlehem Steel began laying off workers in 1986. Yet its stock has fallen 50%, in contrast to a rise of 48% by the S&P 500. Monsanto started cutting its work force in 1985, but its stock rose a slim 30%. Clearly these were troubled companies that would probably have suffered sluggish stock prices in any event, but the study indicates that cutting labor costs did not make Wall Street forgive their more deep-seated problems.

"There is a reverential belief that during hard times, you can turn a company around, resuscitate its profitability and raise shareholder value by laying off workers," says Alexander Hiam, author of *Closing the Quality Gap*. "But that's a huge myth." For both individual companies and the economy as a whole, a true recovery may require dispelling that myth and focusing once again on real ways to increase performance and creativity.

Bernard Baumohl

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## Editor's Column

### AEA AND THE IEEE

Several readers have mentioned that the Institute of Electrical and Electronics Engineers (IEEE) receives more mention in these pages than all the rest of the old-line engineering societies combined. They're right. We do mention IEEE and its activities a lot. Here's why. The AEA Vice President and myself are Senior Members of IEEE. So is Richard Plummer, our anti-discrimination expert. Robert Rivers, our manpower expert, is an IEEE Life Fellow. We're all on the AEA Publications Committee, and we have more information about IEEE than about the other societies. Couple that with the fact that IEEE is the world's largest professional technical society and has the most clout of all the societies.

The IEEE is a force vector; pointed in the right direction, it can produce professional improvement for America's 1.7M engineers. The silent battle within IEEE is to point the vector in the right direction. Back around 1973, IEEE changed its constitution to permit lobbying and other activities that would benefit engineering careers. But because this organization is dominated by academics and corporate executives, its efforts have been dilatory, and funds for professional activities are diverted to technological and educational activities. AEA would like those funds spent for their original purpose—career improvement for practicing engineers.

If our readers can inform us about professional activities of the other societies or their failure to pursue such activities we can publish that information. Would any of our readers from other societies like to volunteer to work on our Publications Committee? Our goal is to enhance the careers of U.S. engineers, and if we can motivate the main-line societies into helping out, so much the better. The goal is more important than who gets us there.

### NINO ONCE AGAIN

No Input No Output is a principle I stated in past issues of AE. When I receive little mail, I have less original copy, so I include more reprints or skip an issue altogether. One of our readers chided us about this. (See the last entry in the Reader's Voice column.) A few readers send us most of the correspondence we receive. I'd like to hear from more of you. Let me know about any letters you sent to Congress or the Executive branch of government. Did you write Congress to have the Labor Market Information program removed from immigration law? That's what we recommended in our July

issue. Let me know what problems afflict your sector of the profession. Talk to me, so I can talk to you.

### LAUNCHING LEADERS

The American Society of Engineering Education (ASEE) publishes a periodical called "ASEE Prism." It contains articles of interest to their profession, which is educating engineers—lots of engineers. The March 1993 issue contains an article with the above title, by a Drexel ME Professor named Shlomo Carmi. It states an idea I've heard before. In Japan and Germany, a majority of top-level executives in industry have technical backgrounds. In Taiwan and South Korea, many cabinet ministers have such backgrounds. In the U.S. engineers are in few drivers' seats. So far so good, but the author concludes that we should induce high school students and members of 'under-represented' groups (I read that to mean women and minorities) to enter engineering college. Why?

Somehow the author thinks that will result in more engineers being included among the nation's decision makers. I suspect the principle benefit will be to U.S. engineering colleges whose income depends on the number of students enrolled. If few students register for engineering, it's because they're well informed. They know about the difficulty of the curriculum, the surplus of engineers, the high unemployment, the poor job prospects when they graduate, the even poorer job prospects after they've completed fifteen or twenty years in the profession, the relatively poor salaries, the salary compression and the built-in obsolescence, resulting in unemployment for many older engineers.

The author mentions that we should address the problem of 40% of engineering college freshmen not advancing to their sophomore year. The reason they don't advance is the difficulty of the curriculum. When I was in engineering college, 66% of the freshmen never graduated, and we accepted that as a fact of life. I wonder if the author would like to soften the curriculum, so that more entrants graduate. But the curriculum has already been softened. When I attended engineering college, the BSEE was about 144 credits. Now I understand it's about 128 credits, the same as a BA in Social Studies.

I think it would benefit the U.S. to have more engineers in positions of political decision-making, because they practice less self-delusion. But this will not be achieved simply by having more students in engineering college. Persons presently occupying U.S. political posts will not resign and offer their jobs to engineers. Furthermore the path to political or economic power is more easily pursued by persons schooled in working with the public—like lawyers. It behooves engineers to learn how to enter the political arena, *despite the resistance of entrenched groups*. Engineers would benefit, and so would the nation. Take it from there.

### STATE ROUNDS UP DEADBEAT PARENTS THROUGH LICENSES

That's the title of an article in the June 8 issue of *West County Times*, a Richmond, CA newspaper. The article tells how a new state law gives beefed-up authority to get at child-support scofflaws who hold state licenses. It goes like this. Persons applying for renewal of their professional or commercial license are facing the possibility of non-renewal, if they owe substantial child support. District attorneys forward the names of these individuals to the licensing authority, which has the right to issue warnings and temporary licenses that may not be renewed. Those affected are attorneys, PEs, commercial drivers and other licensed persons. A California AEA member wrote to protest the intrusiveness of this law on income-earning ability. Some divorced spouses are assessed for support payments that exceed their ability to pay, but their licenses are in jeopardy by their non-payment. Loss of their license impoverishes them and further degrades their ability to pay. I don't know what I think, since I sympathize with mothers who have to go on welfare, due to lack of child support. What do you think?

### WRITE CONGRESS

This issue contains the article, "We Need Your Help Now," which asks readers to write Congress about LMI. Here's another issue on which you can write Congress, perhaps less urgent than immigration, but nevertheless worth your action. Write your Representative,





(Reprinted with permission from the June 1993 issue of "Border Watch," a publication of the American Immigration Control Foundation.)

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and ask him/her to back the Pension Portability Improvement Act (HR1874) introduced by Sam Gibbons of Florida. Engineers need pension portability now more than ever, because engineering jobs can now be expected to last fewer than five years, which is the present pension vesting time. So if you want any pension, you need the law to make it vest even faster. Industry will not offer this voluntarily.

Write: Honorable \_\_\_\_\_  
U.S. House of Representatives  
Washington, DC 20515

Ask him/her to back HR1874, because the devastated science and engineering work force at least needs a pension to look forward to. This bill has been backed by the American Engineering Association, American Association of Engineering Societies, American Nurses Association, Council of Engineers and Scientists Organizations and American Society of Engineering Technicians. Together they number over 1 and 1/4 million members. Their backing simply means they favor it. It doesn't necessarily mean that Congress will act without your letters of support.

Robert Bruce

## Australia Tightens Immigration

Australian authorities are reconsidering policies on immigration in light of their economic problems. Immigration had reached 140,000 in 1989-1990 with recommendations to increase it to 150,000.

The Labor Government has reduced the numbers during the last two years to 110,000 in 1991/1992 and to eighty thousand for the 1992/1993 time frame. The independent or skilled category has been cut from 42,500 to 28,500 during the same two year period.

Dr. John Hewson, the Liberal party leader stated "In Australia's current economic circumstances, an immediate and substantial

reduction of migration coming to Australia is the only responsible course of action.

"The recession beginning in 1990 was undoubtedly the trigger for the Australian developments. The government found itself under pressure on two accounts.

"The first was the alleged cost of providing social welfare, English-Language training and other state benefits....

"The second source of pressure came from complaints that migrants were flooding already overcrowded job markets to the detriment of Australians, especially recent graduates. For the most part these complaints came from professional associations rather than trade unions. The Institution of Engineers has been particularly concerned. In 1990/1991 engineers constituted the largest single category of professional migrants.

"There is no parallel in Australia to the American ideal of welcoming the downtrodden of the world to share in the American Dream, nor of the typically breezy optimism accompanying such advocacy that America will be invigorated by such an infusion."

We see two distinct concerns of the Australian government which we do not find in the United States. First is the concern over the cost of immigration to the taxpayer/citizens of Australia and a concern over the unemployment of the Australian citizens due to immigration.

Another comparison of particular interest to engineers is the leadership of the Australian professional associations over the unemployment problems of their members. Have we seen a single U.S. technical society offer more than a token resistance to ever increasing immigration in this country? With many of our technical societies becoming more and more international in nature, we are more likely to see a waning of their "concerns" for their U.S. members. (Statistics and quotes are from an article by Robert Birrell in "The Social Contract" - Spring 1993.)

Bill E. Reed



*Daddy, if you helped design that stuff,  
why did they lay you off?*

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## The Value Of (Engineering) College

A *Newsweek* magazine article, entitled "The Value of College," by Robert J. Samuelson (Aug. 31, 1992, p.75) debunks the widely-held myth that any college degree is a ticket to a good job. Too bad that he did not also debunk the even more widely-held myth that a college degree in a technical major is a ticket to a good job; indeed, he seems to believe this myth also.

In 1980, among full-time male workers 25 years of age or older, median earnings for those with 4 years of college was 33% higher than those with just high school diplomas. By 1990, this differential had increased to 60%. This led some analysts to the conclusion that the demand for college graduates had greatly increased in relation to the supply. However, Samuelson debunked this conclusion by citing a U.S. Dept. of Labor study by economist Daniel Hecker, which showed that the main reason for this increased earnings gap was a large fall in inflation-adjusted median earnings of high school grads, rather than an increase in earnings of college grads, whose income rose by only 4% during this period.

Samuelson also discussed a study of college course grading at nine top schools. The study, prepared by economists Richard Sabot and John Wakeman-Linn of Williams College, not surprisingly found that a large amount of grade inflation had occurred over the years. Samuelson also noted, "There's another twist in the Sabot and Wakeman-Linn study. They argue that exceptionally easy grading in social sciences and humanities probably lures students away from science and engineering, where grading is tougher. Just possibly, we have a surplus of college degrees and a scarcity of skills." What a non-sequitor.

Samuelson asserts that there may be a shortage of science and engineering grads simply because tougher grading "probably" discourages students from majoring in these fields! It never occurred to him that if a genuine shortage of science and engineering talent really existed, long-term earnings in those fields would be better, and students might therefore be more willing to put up with the tougher grading. In the comparison of the earnings of college grads and high school grads, he accepted the idea that earnings are an indication of the relationship between supply and demand. If there is supposed to be a shortage, then how does he explain the fact that the median earnings of scientists and engineers with 4-year degrees is not significantly different from the figure for all 4-year grads (\$42,524 for full-time male workers in 1990, according to his article)?

*The Phantom Engineer*

## AEA Submits Proposal

The American Engineering Association has (finally) submitted our proposal to the Department of Labor to provide CAD training to out-of-work defense engineers. (See AE March 1993.) The proposal was submitted under the Defense Conversion Act to provide services to people who have lost defense-related jobs.

The proposal seeks to provide training for 96 individuals who feel this training would help in their efforts to gain employment. Our survey in the March AE brought over three hundred responses from people in thirty states and one U.S. possession (Puerto Rico) who were, or expected to be ex-defense engineers.

We initially thought we could qualify for a much more ambitious project but it did not work out. While this project is smaller than it was originally conceived, we believe it may be expanded as we begin to prove the concept.

These programs are normally funded through Private Industry Councils (PIC's) who in turn work through the state Job Service. These are normally local efforts confined to a relatively small geographic area.

AEA's proposal contains what we believe are several innovations. First our program will be national in scope and is aimed at people with a specific set of skills. This is one of the first if not the first training programs initiated by an employees' organization. Third, this will be one of the first DOL-funded programs involving training in advanced CAD; the use of a relatively high-unit cost which we believe will provide large returns for both the individual and the government, and last but not least we have developed a new method of measuring the cost effectiveness of such programs.

The top ten CAD programs in the order of interest from the respondents of our March survey are as follows: CATIA, Autocad, Pro-Engineer, Unigraphics II, CADAM, Computer Vision 4, Mentor Graphics, Allegro, Integraph and CADD5.

I want to thank the New TransCentury Foundation and especially Mr. David North for their contributions and expertise in putting together our budget and proposal for this program. Without their efforts, we could have never pulled this program together.

I also want to offer my special thanks to Jerry and Janice Erickson and *CE Weekly* for their invaluable help in publicizing our efforts and in gathering the information necessary to make the proposal in the first place.

We will keep you informed as soon as we receive any word...good or bad. We understand it normally takes sixty to ninety days from the date of the submittal to get a decision.

*Bill E. Reed*

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