

# AMERICAN ENGINEER<sup>TM</sup>

A PUBLICATION OF THE AMERICAN ENGINEERING ASSOCIATION

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December, 1995 Volume 5, Number 6

## Dissident Engineer

### U.S. Government's Unemployment Figures For Technical Professionals Are Too Rosy

Dissident engineers have long complained that the U.S. government's comparatively rosy unemployment figures for technical professionals have been grossly understating true levels of unemployment and covering up high levels of underemployment. These complaints were supported by a recent *Physics Today* (October 1995, page 56) article titled, "Latest AIP Survey Confirm Physicists' Job Fears." This article stated, "At July's Congressional hearing on the National Academy of Sciences' report on graduate education, Representative Sherwood Boehlert (R-N.Y.) expressed amazement at employment concerns in light of the supposed 1.6-percent unemployment rate for PhDs. 'Hell, that's not unemployment,' he said, 'that's full employment.' But the "1994 Initial Employment Followup of 1993 Physics Degree Recipients," a new report from the education and employment statistics division of the American Institute of Physics (AIP), shows that about 6% of new physics PhDs remain unemployed in the winter following their graduation, more than six months after receiving their degree ..... among those taking postdocs, more than half want academic positions. The authors (of the report) note that other AIP data suggest 'that the fraction of new physics PhDs who will finally get permanent academic positions in the US is closer to one-fifth than one-half.'" The article also notes, "The AIP survey detects evidence of unemployment and underutilization for bachelor's and master's degree recipients too ..... In the end, 57% said they had accepted a position 'where they would use little or none of their physics background.'"

The report may be obtained from: AIP, Education and Employment Statistics Division, One Physics Ellipse, College Park, MD 20740-3843. Single copies are free, and multiple copies may be ordered.

## Editor's Column

### NEW KIND OF ILLUSORY JOB AD

For over a year, I've been running verbatim the full texts of what I call 'Illusory Job Ads.' These were ads that concealed the identity of the employer, since they were run by state employment services. The published job requirements were so extensive that they constituted a biography of the (intended) applicant, who was often an alien temp engineer already on the staff of the hiring company. Sometimes, the job ad listed the college courses that the intended applicant took. Chances are that no other applicant took exactly the same courses. Since no one else fit the exact description, the employer was free to 'hire' the

temp as a permanent employee, for which he/she received a 'green card.'

Oh by the way, the salaries listed in these job ads were so low, as to be a giveaway that an alien was the intended hire. Now there's a new twist. Some recent ads of this type no longer list salary at all. In a way that's bad. The citizen-applicant doesn't know what salary range is appropriate, so he/she is competing with an alien 'in the dark.' On the other hand, that's good. Employers don't want complaints that the salary is below prevailing wage, so they omit it. I'd like to think that AEA has had something to do with that. We've been publicizing low-paying, alien-directed job ads for a long time. Our efforts seem to have had some results. What should we do next?

Here's a blind ad from a state employment service, without salary and with ridiculous requirements. Does anyone know all that? Or is this to eliminate all applicants except the alien, who doesn't know it all either? I note that the applicant must have familiarity with 'EE voltage and currents,' something that every EE in the world learned in high-school physics. So I conclude that a lawyer wrote this ad, not an engineer or even an engineering personnel manager. Write complaints about this ad to the Utah Employment Service or to Secretary of Labor Robert Reich, whose address is Labor Department, 200 Constitution Ave., Washington, DC 20010. I also encourage any qualified applicants (other than the pre-selected candidate) to apply for the job. This might embarrass or otherwise slow down the Utah State Employment Service.

FIRMWARE ENGINEER for disk development team to design, implement, and test. Require either Master's degree in Electrical Engineering or B.S. degree in Electrical Engineering with one year microcontroller system design and real-time programming experience. Must have (1) ability to work with: 68HC16 embedded microcontroller, SCSI interface, Servo, DSP, C and Assembly Programming, real-time programming methodologies, Logic Analyzer, Digital Oscilloscope, and emulators; and (2) knowledge of Logical Design, State Machine, EE voltage and currents. Job Order No. 3060127. Contact Utah Department of Employment Security, Attn: Pat Redington, 5th Floor, 140 East 300 South, Salt Lake City, Utah 84111.

### STILL MORE ON U.S. JOBS TO FOREIGNERS

The Nov. 6, '95 issue of *Business Week* carried an article entitled "Give Me Your Huddled ... High-Tech PhDs" and was subtitled 'Are high skilled foreigners displacing U.S. workers?' It begins, "Overall James L. Schneider has seen his business which contracts out computer engineers to design and develop software systems, explode since it was founded in 1988. But for the past five years, his San Francisco-based company, Professional Consulting Network, has been battling brokers who bring foreign soft-

(Continued)

*(Editor's Column Continued)*

ware engineers into the U.S. for as little as one third of the \$65-an-hour fee he charges. As a result, 'American citizens are out on the street,' he says." This is aside from the damage to a U.S. business named Professional Consulting Network.

The article goes on to mention that complaints like Mr. Schneider's are fueling an increasingly heated debate over whether the many foreigners who come to work in America's high tech sector are in fact displacing U.S. workers. I think the debate has to get even more heated, in order to prod Congress to amend the overly-accommodating immigration 'reform' acts of 1965 and 1990. Who contributes to the debate? You and I do.

It mentions that the explosion of foreign high-tech talent should not, in theory, be a threat to Americans. By law, employers can't petition for either temp or permanent immigration visas if they can find a qualified U.S. citizen for the job. But in practice, they hire an immigration attorney to tailor a job description to a particular foreign applicant. When no other applicant fits the description, they hire the foreigner. Neither the Department of Labor nor INS can see through this ploy. Why not? It's been pointed out to them numerous times. Here I quote again. "Bill E. Reed, president of the American Engineering Assn., cites a 'help wanted' ad for someone with both a civil, and an agricultural engineering degree, an unusual combination, 'which only one person in the universe can fill,' he says." It looks like the efforts of AEA are getting into the media. Back us up with your efforts.

#### **MY TENURE AS EDITOR**

I'm looking through the back issues of "American Engineer" that I stored in my filing cabinet, since I took over as editor in March '91. The pile is over a foot high, although I admit there are duplicates of many issues. My start as editor was six months after my 9/90 retirement date. I continued as editor and stayed retired for five years.

This past September some employer in New York saw fit to make me a full-time job offer as an engineering consultant, which offer I accepted. The job is as permanent as any other consulting job, which means it might last a year or more. I now dedicate 40 hours per week to the job, aside from after-hours technical reading. This makes it very difficult to find approximately 20 free hours to assemble one issue of "American Engineer," even though we publish semi-monthly. I have insufficient free time to sort through the piles of correspondence and article clippings. These are the clippings I used to pore over, distill, and write about in the Editor's Column. Future Editor's Columns might be shorter.

Nevertheless I'll try to continue as editor, partly because I don't see any other person rushing to take my place. If AEA ever ascends to the financial stature of the other AEA (American Electronics Association), we can then afford to pay an editor to do a professional job of editing. If you want us to ascend, then tell your colleagues about the benefits of AEA membership and what we're trying to do, which is to make engineering into a true profession.

Until then, write me words of encouragement. Or else just write me articles, or letters I can publish in the Reader's Voice. Thanks for your past letters and contributions. I wish for you, the readers, what I wish for myself: a happy, healthy and professionally-successful 1996.

*Robert Bruce, AE Editor*

## **Editorial**

### **Open The Gates**

*By Robert Bellinger*

*Business Week* has joined the chorus of seven electronics CEOs who have bewailed efforts to "choke off" the immigration flow of engineering and science professionals into the country.

We quite agree. There's obviously a shortage of effective, trained professionals in our work force, and we need to fix it now. Indeed, in the spirit of maintaining our national interest, we shouldn't stop with engineers and scientists.

Open the floodgates, we appeal. Start by letting in those well-educated, well-trained human-resource people from across the seas. Tap the thousands of unemployed HR specialists in Russia, Iraq and Cuba, all of them well-trained in reading between the lines, who can ferret out and banish 50-year-old applicants in the blink of an eye.

Let in the youthful, aggressive editorial writers, champing at the bit in Beijing, to reinvigorate the newsrooms of McGraw-Hill (home of *Business Week*), *The New York Times* and other tired publications bloated with pompous, overpaid, archaic editors—the guys who can remember typewriters and can never be retrained to serve up today's MacNews. With fewer journalism grads these days from our American universities, thanks to all those papers going out of business, we must hire from outside our borders to maintain our tabloid competitiveness.

American CEOs and presidents warn of market slippage and delays because they can't get qualified engineers fast enough. In that spirit, we suggest going one step further: It's been obvious for years that a shortage of capable CEOs has existed. We should rectify that by importing more executives. Immigrant CEOs, anxious to get a green card, would take less money (about \$500,000 less), make fewer demands (no golden-parachute deals that cost stockholders millions) and toss darts at the strategic-decision board with equal facility.

And let us not forget our elected officials in Congress. Waiting in the wings of Third World autocracies, Bosnian war councils and the Boxing Federation of Taiwanese Parliament are worthy, university-trained lawyers itching to represent us. Familiarity with the English language is not necessary. Bureaucratese, however, is mandatory.

If anyone protests, just threaten to send their jobs overseas. That'll get 'em.

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## Reader's Voice

*This column in the "American Engineer" is for readers to voice an opinion about issues that affect the professional life of an engineer or other technical professional. Readers are encouraged to write AEA with their professional concerns. Each submission should include the name, address and phone number of the writer. Except for short excerpts, we'll publish the writer's name, city and state (unless the writer requests anonymity). In that case, we'll publish initials, city and state. Let's hear from you.*

**From Joan Campbell of Houston:** - I wish to announce the birth of The Online Publication for Contract Professionals: CamTeck. The intent of CamTeck is to provide the print media publication type of service via the internet. CamTeck has long published the CyberTeck Directory of Professional Contractors. This directory has developed into an indexed listing of Mini-Resumes that is distributed by subscription as well as published on the internet. CamTeck is also a long-time member of BJ Wootan Associates, working with the Yearly Salary Survey. Thank you for your mention of this new Publication. [camteck@ix.netcom.com](mailto:camteck@ix.netcom.com). URL:<http://www.master.net>; [greenspot/joan.html](http://www.greenspot/joan.html) FAX 713/270-2056.

**From PJC of Bayside, NY:** - I would like to take exception to the attitude of the "American Engineer" that there is no engineering shortage. There very definitely is a shortage. There's a shortage of engineers who'll work for \$10/ hour. There's a shortage of engineers who'll work 20 hours of UDOT (unpaid overtime) every week. There's a shortage of American Engineers who will study 4 to 5 years at an expensive school for a profession that may require a Masters Degree and many years of continuing education for a job outlook that becomes very bleak after 45 years of age.

*Editor: I thank PJC for calling my attention to the shortage of this category of engineering talent. Would you say that most U.S. employed engineers fit into this shortage category?*

**From L.F. of L.A.:** - The cover story on page 54 of the July 16, 1995 issue of *Business Week* magazine, titled "The Wage Squeeze," says "Four years into a recovery, profits are at a 45-year high, unemployment remains relatively low and the weak dollar has put foreign rivals on the defensive. Yet U.S. companies continue to drive down costs as if the economy still were in a tailspin. Many are tearing up pay systems and job structures, replacing them with new ones that slice wage rates, slash raises, and subcontract work to lower-paying suppliers ... Employers are squeezing contract workers as well. Because they're self-employed or work for subcontractors, these employees have even less leverage than regular staffers. Just ask Robert Heath, a programmer with 17 years experience who held two- to six-month contract jobs with IBM in Boca Raton, FL from 1988 to 1994. Initially, Heath earned \$43 an hour, plus time-and-a-half for overtime. In 1992, IBM subcontractors began offering as little as \$30 an hour. Heath often refused contracts, working only 18 months from 1992 to mid-1994. When Big Blue's contractors offered him \$28 an hour, Heath gave up and moved to Houston. 'IBM hired programmers from India on special visas who will work for less,' says Heath. 'My guess is that they're up to one half of the

500 or so contract programmers in Boca facility.' IBM says it doesn't tell its contractors how much to pay. The so-called recovery is as payless as it is jobless.

**Also from L.F. of L.A.:** - By coincidence, the paper I am enclosing ("Choosing A Civil Engineering Career: Some Market Research Findings," by Bronzini et al, from the July '95 issue of *Journal of Professional Issues in Engineering Education and Practice*) promotes the same white-male-shortage myth that I refute in the very same *Journal*. My refutation is in a published article entitled, "Human Resource Management for Twenty-First Century: Managing Diversity." My article begins, "(The writer) ... feels that the authors' paper promotes the myth that the United States is faced with a dire 'shortage' of new white male workers, which will lead to shortages of engineers—or at least shortages of 'good' engineers—unless large numbers of white females and minorities are lured into the profession." I feel like I am being buried in s\_\_t faster than I can shovel it away. The enclosed paper also makes some very disturbing suggestions on how to "improve" civil engineering curricula, by requiring fewer credit hours. See the article in October '95 "American Engineer," entitled "Curricular Reform Threatens Integrity of Profession." It applies to comments from educators who'd like to water down the engineering curriculum in order to attract more students.

Robert Bruce, AE Editor  
Box 620726, Little Neck, NY 11362

## It's Too Late To Cry About Labor Shortage

*By Steve Soar, Vancouver, Wash.*

I have only one word for the semiconductor manufacturers that are petitioning to increase immigration quotas of engineers to ease spot labor shortages: Tough.

If they hadn't laid off so many employees during the 1988-92 downturn, they wouldn't now be so understaffed.

If they hadn't spent the last five years telling all engineers that there was no such thing as job security, that we all were independent contractors, then the hiring process wouldn't now resemble that of star athletes. And as for immigration rules, I have seen far too many ads typically reading, "PhD computer science, must speak fluent Polish, salary \$27K," not to understand how this game is played. The only result of easing these regulations will be to create a more multicultural milieu in the unemployment lines come the next recession.

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### 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.

# Say What?

By Bruce A. Bennett,  
Editor-in-Chief

To paraphrase comedian Rodney Dangerfield, "We don't get no respect."

I'm speaking, of course, about the noble profession of engineering. Where once we were revered by the people whose lives we made better with our innovations, we are now largely shunned by society, at least in a social context. Let's face it, the only time we head up a guest list these days is when some company is announcing a layoff. On the cocktail party circuit, we rank somewhere between accountants and lawyers in terms of popularity and I think I've figured out why. It's because nobody knows what the hell we're talking about!

Like most professions, engineering has always had its own jargon. But lately, thanks to the onslaught of the computer age, two things have happened. First, "technospeak" has proliferated like a pack of rabbits on steroids. Even engineers have to keep a technical dictionary handy to occasionally figure out what they're talking about! Pity the poor layman.

Second, whether due to laziness or some misguided attempt to sound "totally cool," every word longer than two syllables seems to get its own acronym. At one time, acronyms were the sole domain of the defense industry. Unfortunately, when the defense industry died, acronyms lived on like verbal vampires, sucking the lifeblood out of the English language.

Think I'm exaggerating? A secretary in our office recently asked me to explain the difference between bits and bytes to her. Simple, right? After all, we use these words every day. But the engineer in me, wishing to be completely accurate, decided to refer to McGraw Hill's comprehensive *Dictionary Of Scientific And Technical Terms* which defines

a bit as: "1. A unit of information content equal to one binary decision or the designation of one of two possible and equally likely values or states of anything used to store or convey information. 2. A dimensionless unit of storage capacity specifying that the capacity of a storage device is expressed by the logarithm to the base 2 of the number of possible states of the device."

Say what?! From the "deer in the headlights" look on her face, I don't think I'll be getting an invitation to her next Christmas party.

Need more evidence? I recently received an elaborate press kit from a Korean electronics company which included a list of the acronyms used and their definitions. I don't know who prepared the list but from the look of it either the Koreans have taken to our techospeak fad with unbridled enthusiasm, or they're having a bit of fun at our expense.

Included among the thirty-five acronyms listed are such dubious entries as WW (world wide), HH (house holds), H/W (hardware) and my personal favorite, SAVi (system, audio, video).

I ask you, is all of this techno-babble really necessary? The cornerstone of human advancement has always been communication and the primary goal of communication is to make oneself understood, clearly and concisely. I don't think we're doing that very well these days. Perhaps engineers should go back to doing what engineers do best—inventing new technology—and stop trying to invent a new language.

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## EUROwatch

By Alfred Vollmer

Do you have a credit card? Are you aware of credit card fraud? In order to help prevent fraud, your next credit card may look different from the one you already have. It might contain a chip. Visa International and MasterCard, including its European equivalent, Eurocard, are currently placing chips in their credit cards.

Chipcards are virtually unknown in the U.S., but almost everyone in Germany, France, Great Britain, and the Netherlands carries one, allowing users to make phone calls from any public chipcard phone. The phonecard's benefits are fairly obvious. You no longer need to carry change or have to remember the complex phonecard number for the user of the phone.

Prepaid phonecards are sold almost everywhere, including post offices, gas stations, and kiosks. Users of an account phonecard (where the communications costs at public phones are automatically added to the monthly home phone bill) only have to memorize a personal four-digit code which can be changed at any time by the authorized user at any cardphone booth.

The market for phonecards is exploding. In 1987, the world market stood at approximately \$11 million. Peter Bauer, head of the business unit chipcard and system ICs of the semiconductor group of Siemens AG, Munich, Germany, estimates that the total volume for 1995 will reach \$321 million. This means that the market has grown by almost 50% every year for the past eight years.

Even though the preliminary phase has been over for several years now, chipcards are said to be growing faster than the rest of the semiconductor market. Bauer estimates that the average annual growth rate will be about 37%, which will result in a total world market volume of \$1.14 billion by 1999. Maurizio Felici, General Manager of SGS-Thomson Microelectronics' Smartcard Products Division, predicts "a tremendous growth of around 35% to 40% per year to a total volume of around \$1 billion by the end of the century."

Both market leaders, Siemens and SGS-Thomson Microelectronics, believe that the major growth of the chipcard market will derive from globalization. Currently, Germany and France claim more than 90% of the world market. But the "invasion" of Europe with chipcards is now starting, with the rest of the world soon to follow.

Another major application for chipcards are the so-called "healthcards." Nearly 75 million Germans have health insurance cards, which all are intelligent memory cards, and more than 15 million cards will be replaced each year. "The healthcard is an element which is booming worldwide," says Bauer.

Right now, there is a field trial of chipcards going on in the U.S. Due to the chipcard's advantages (security, handling, etc.) over cards with magnetic stripes, chipcards should win out. The question is how to distribute them to the public if President Clinton's health reform package is passed.

While phonecards and healthcards have been responsible for the majority of the market's growth, other applications with a higher demand of security are now gaining attention. I will describe some of the more interesting applications, as well as their technical background in my next column.

*Alfred Vollmer is an "Electronic Design" correspondent based in Munich, Germany. His CompuServe address is 75162,1246.*

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## Immigration And Its Impact On Engineers

By Alan G. Blood

Under the guise of such convenient terms as world class and competitiveness, nano-bean-counting corporate America wishes us all to believe that the United States needs to keep immigration quotas high to remove any wisp of competition for engineering talent. After all, without competition, it can exponentiate the direction of leanness and meanness, achieving new plateaus of downsizing. The short-term bottom line, and its subsequent bonuses, will be vindicated by the stockholders, and all will be bliss.

The same visionary thinking that created the volatile employment condition of today also gave away most of the technological manufacturing base of this country. How many competent and capable engineers have been displaced in the past four or five years? This resource has not been exhausted to the knowledge of anyone I know. While executive compensation has been running open loop, there is a notion that engineering compensation has lagged for the past couple of decades. Now there's a news flash! From economics, isn't compensation a function of supply and demand? Don't blame the inability to entice someone to take a job in one of the most-expensive geographical locations in the world if you aren't prepared to compensate everyone across the board equitably.

I have absolutely no prejudice against anyone who is capable of performing their assignment regardless of their origin. In a truly free market, the most qualified prevail for any given task; be they human, bovine or invertebrate. Shortages, though, are a result of either poor planning or scarcity of resources. Highly skilled, current productive engineers are available, as is any service or product, when a fair market price is offered by the consumer (employer). Attempts to rig the marketplace has historically led to a worsening of the (perceived/contrived) condition. Analysis of compensation by job classification, from a pure economic viewpoint, would prove that the only shortage that exists is in the category of corporate executive.

*Alan G. Blood is an EPL Engineering Technician and third-year EE student, Electronics and Missiles Division, Lockheed Martin, Orlando, Fla.*

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??????

By John D. Trudel, CMC

Life has irony, dear readers. In my wanderings I stumbled upon a hidden, serious, and very frightening issue. This may be the most important column I'll ever write.

As easy as it is to loathe lawyers, not all are bad. I hope some good ones will want to take up a difficult challenge, and take on a superior adversary—our own government.

At its core, high technology business needs legal protection. Since 1790, innovators have depended on the U.S. patent system to protect the unique value they created. This protection is now absolutely essential. "Knowledge has become the key economic resource and the dominant, if not the only, source of competitive advantage" (Peter Drucker, *Atlantic Monthly*, November 1994). Firms like Microsoft, Intel, and Motorola derive most of their market value from intellectual property. Without patent protection, Silicon Valley and the Venture Capital community could not exist.

I recently learned something astonishing. The Clinton administration has made promises to Japan that will end life as we know it for knowledge-based business in the U.S. An official from the U.S. patent office told me some startling things. The administration promised the Japanese that we will make U.S. patent filings public information after 18 months. If that sticks, effective January 1, 1996, all your competitors can get them.

The worst news is hidden. Embedded in the middle of the official's talk was the phrase "reexamination rights." Alarm bells went off in my mind, though he brushed by that topic. Did that mean that any U.S. firm fortunate enough to have patents will be subject to endlessly defending them against reexamination by the Japanese *Keiretsus*?

Guarded in public, the official admitted that my worst fears were valid when we spoke privately. He likened the event to Japan's World War II surrender on the U.S.S. Missouri. Some were gleefully calling Tokyo on their cellular phones to report, "The U.S. has given us its patent system."

How could I find proof that this happened? Why hasn't someone blown the whistle? Why didn't the press report this? It took months and many details are still unclear, but I got most of the squalid tale. It will take several columns to tell this story, so please have patience.

The proof is contained in one paragraph (on page 26) of the voluminous 1994 Commissioner's Report to Congress, "Working for our Customers." Free copies can be obtained by calling the patent office at (703) 305-8600. The sell-out occurred in letters of agreement between Secretary of Commerce Ron H. Brown and Japanese Ambassador Takahazu Kuriyana dated August 16, 1994.

I urge you to get a copy of this document while it is still available. I think that Brown has sold out the U.S. patent system, and it's almost too late to stop it. My next column will discuss how Brown and his pet Patent Commissioner, Bruce A. Lehman, pulled this off, and why this is not yet front page news.

Lehman is now giving road shows telling patent lawyers that his is a minor change in the U.S. system to harmonize it with international practices. The official story is that we have put one over on those stupid Japanese, who gave us concessions in exchange for nothing.

Lehman lies. The unholy combination of NAFTA, GATT, first-to-invent, opening files after 18 months, and the new meaning of reexamination is poisonous. If Brown's plan succeeds, patent protection in the U.S. will be exorbitantly expensive and much less meaningful.

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Reach Out to the following:

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# Big Import: Cheap Foreign Labor

By Lars-Erik Nelson

Washington—Larry Richards, a contract software programmer in Austin, Texas, has all the advanced skills a fellow needs to compete in this high-tech world. Still, he has been watching his hourly freelance rate drop from \$45 an hour to \$30.

Richards knew that IBM, his main client, has been subcontracting to a firm that imports low-paid programmers from India on temporary work permits.

So he decided to find out what he was up against. Posing as a businessman, he wrote to the Labor Department requesting permission to import 20 computer programmers from India with a proposed pay rate of \$5 an hour.

"The Labor Department approved my plan in six days," Richards said.

Deep thinkers from Labor Secretary Robert Reich to House Speaker Newt Gingrich keep telling us that in a global economy, education is the key to the high-wage jobs of the future.

It's a wonderful theory, but in the real world, the Indians, the Chinese, the Poles, the South Koreans and the Russians have excellent educations and are more than willing to come to America, live in dormitories and work for whatever they can get. This is still the land of opportunity.

How much do they earn? Nobody is quite sure. But a frightened friend tells me that one telecommunications company vice president recently threatened his employees that if they didn't shape up, he could bring in programmers from India for \$8,000 a year.

In theory, such guest workers are supposed to be scientists of extraordinary skills who are urgently needed by U.S. employers because no Americans are capable of performing their work. In theory, too, the guest workers are supposed to be paid the prevailing U.S. wage so that they do not undercut the wage scales of American workers.

In reality, Richards' plight is not an isolated case. CBS News reported a couple of months ago about American International Group, a Livingston, N.J., insurance company, which laid off 250 workers and replaced them with "temps" from India. In California, Hewlett-Packard has been sued for employing a contractor, Tata Consultancy Services, that has been accused in court of importing Indian Programmers and treating them like indentured servants.

And even the White House has turned to cheap foreign labor. *The Kansas City Star* reported last week that the U.S. government has been using Mastech Corp., which has brought in 850 of its 1,200 computer specialists as guest workers, to upgrade the correspondence tracking system. Mastech, which is owned by two immigrants from India, qualifies for government preference as an economically disadvantaged minority contractor.

These low-wage technicians are being imported, mind you, at the same time that a downsized U.S. defense budget is throwing hundreds of thousands of highly skilled American workers onto the job market.

How does this abuse occur? Richards does not blame Labor Secretary Reich. The law requires Reich to grant approvals for guest workers within seven days. Employers looking for cheap labor don't like to wait.

Under the law, nearly 200,000 foreign workers can be brought into the U.S. each year. The first preference is for extraordinary talent in science, the arts or education. Then come executives of multinational corporations, skilled workers, athletic stars, workers in short supply (pizza bakers, believe it or not), religious workers and foreigners who propose to invest here.

To obtain a permanent work permit, the employer must pay the prevailing wage and prove that no qualified Americans are available. To get temporary permits, the employers need not look for qualified Americans first.

The requirement that guest workers be paid "the prevailing wage" has a glaring loophole. The prevailing wage is not what American programmers actually earn; it is what the subcontractor, like Tata Consultancy Services, pays the rest of its foreign workers. IBM can rightly say, as it has, that it does not know what Tata pays; it simply gives Tata the contract and the job gets done.

Under a revised immigration law wending its way through Congress, some of these abuses might be cut back. One proposal would require that a company bringing in foreign workers would not be allowed to lay off an American employee between six months before and three months after the foreigner is hired.

Another proposal would redefine "prevailing wage" to bring the subcontractor wages up to industrial standards. Also, an employer who did lay off Americans to make way for foreign replacements would have to pay the foreigner 110 percent of the laid-off worker's salary.

But the reality is that in a global economy and with free trade firmly ensconced as our political religion, the prevailing wage is increasingly going to be the global wage—the wage of India, China or Vietnam—no matter how much education you get.

(A "Newsday" article reprinted by permission, Newsday, Inc., Copyright, 1995 from the July 25 edition.)

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# Do We Need An American Engineering Association?

During this past year I have been trying to raise money for AEA to cover the cost of advertising in the engineering trade publications. My goal is to determine whether members of the engineering community believe they need AEA to enhance their profession. During the effort, to obtain a grant, the following question and statements were offered by members of the organization that provides funding. Since conventional wisdom seems to indicate the typical engineering societies are doing such a good job, I decided to provide you, our readers, with the opportunity to respond. Below, I have listed their questions and my response to those questions. I think you could supplement my efforts and probably add some new ideas. Please send your responses to my address at the end of this article.

**QUESTION.** ...Does the world need another association of engineers?...

**AEA.** The purpose of this effort is to determine the need for another or a better engineering association by seeking the answer from members of the American engineering community. If they do not need another association of engineers, I am sure they will let us know. More specifically, the U.S. needs at least one engineering association that can faithfully represent the needs of the American Engineering community. Speaking from experience, the present engineering societies do not fulfill this need.

**QUESTION.** ...I could not understand what they think is the point of this organization that distinguishes it from others. Perhaps it is the multidisciplinary nature and the political activism?...

**AEA.** The multidisciplinary nature provides us with the advantage of having the greatest number of members, with a potential of 2 million members. AEA's efforts are of a professional nature rather than in the technical area which seem to reflect the interests of the other societies such as ASME, ASCE, ASCE, AIAA, etc. IEEE is the only professional society that I know of that has developed an arm to venture into the professional arena. They have approximately 210,000 U.S. members supporting their IEEE-USA

professional activities. IEEE has about 80,000 off-shore members and therefore their global interests complicate and weaken their U.S. efforts to enhance the U.S. position.

**QUESTION.** ...competes with many existing groups. What is comparative advantage?...

**AEA.** Although it is not our intent to compete in the technical area, the current engineering groups are not competing in the professional area. The Institute of Electrical and Electronics (IEEE), of which I have been a very active member, is the only one active in the professional arena. They have an office in Washington known as IEEE-USA with a staff of about 25 and a \$4,000,000 annual budget. This supports five (5) councils with approximately 50 committees and more than 500 volunteers. They have been active since 1973 and have failed to improve conditions for members of the American Engineering community. We can't wait for or depend on their help. If progress by the American Engineering community was this poor in the development of technology, we would all be speaking Russian.

**QUESTION.** ...Aren't there other organizations that fulfill these functions already? Might it not be easier to work with them on improving any perceived weaknesses?...

**AEA.** We have long passed the point of depending on others to enhance our profession and U.S. Engineering capabilities and I don't know of any existing organization capable of helping. The organizations that come to mind are the American Medical Association (AMA), American Dental Association (ADA) and the Aircraft Owners and Pilots Association (AOPA) to list a few. None of these have anything to do with the solution of our professional problems, but they get results in their respective fields and their function is worth emulating.

Please send your response to: Richard F. Tax, PO Box 2012, River Vale, NJ 07675-2012

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