

# AMERICAN ENGINEER<sup>TM</sup>

A PUBLICATION OF THE AMERICAN ENGINEERING ASSOCIATION, INC.

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September, 1997 Volume 7, Number 3

## FACE Intel

We recently became aware of an organization of Intel Corp. employees, both current and former. They do not believe Intel acts with the best interest of their employees in mind. Why am I not surprised? The organization began life in California in 1996 as the "Associated X-Employees of Intel" (AXEI) but changed their name to "Former and Current Employees of Intel" (FACE Intel) which is a more descriptive term of both activities and membership.

To announce the establishment of their web site FACE sent e-mail to approximately 35,000 Intel employees. They believe Intel blocked most of the e-mail with perhaps 10,000 messages actually getting through. Within a few days Intel had blocked access to the FACE web site from all Intel locations.

FACE states "The purpose of the Web Site is to identify, alert and rally Intel (and other electronic industry) employees so as to educate them as to the unsavory and discriminatory practices described above that have been perpetrated on us and may be perpetrated on them in the days, months and years to come. We also want to educate these individuals on how to survive downsizing and redeployment."

Part of the testimony from the American Engineering Association to the House of Representatives in 1990 included the following excerpt: (Note that the American Electronics Association

is a trade organization that serves the interests of employers of engineering talent.)

"Spokesman for the American Electronics Association at the March 1983 immigration hearings held by this committee was Mr. John Calhoun, Director of Business Development for Intel Corporation. Mr. Calhoun stated 'The shortage (of engineers) is so severe that Intel has been forced to open design facilities in Israel, France and Japan simply due to the availability of highly skilled technical talent.' He continues 'Shortages of electrical, electronic and computer engineers are caused by high rates of company growth and an inability of universities to increase U.S. graduates due to a lack of faculty.' "

Despite the 'high rates of company growth,' in less than two years Intel began to lay off workers. By the first quarter of 1986 Intel had laid off nearly 5,000 workers most of which were in the United States. Shouldn't a "Director of Business Development" have some inkling of business trends two years out? It seems as if nothing changes.

FACE has one of the great Web pages on the Internet, and I would encourage any of you with access to take a peek. Their address is <<http://www.igc.apc.org/faceintel>>. I would also encourage employees of any company with similar problems to take similar action. A word of caution - If you decide to establish a similar web site, do it like FACE; do it with class, and maintain data integrity. Good luck!

*Bill E. Reed, AEA President*

## Editor's Column

### ILLUSORY JOB ADS

*You think 1997 is a boom year for engineers? Well maybe it is. BUT there are still these annoying 'Illusory Job Ads' (my nomenclature). Below are two job ads that fit this category. Both are by a state employment service, thereby concealing the identity of the employer. Both ads comprise a biography of the intended applicant who is probably already on the payroll of the employer, is also likely to be an alien, and for whom the employer hopes to obtain a 'green card,' so the alien engineer can stay on the payroll. Some readers have pointed out to me that this is not merely a strategy by the employer. It is also a strategy by the alien, since this is a way to circumvent the waiting period for legal immigration.*

Consultant needed for manufacturer and seller of utility equipment located in Fort Wayne, Indiana. Job duties include: Develop and implement business plans and market strategies. Determine new business and sales vol-

umes for products. Implement training programs on new products, specialty products and business plans. Debug and troubleshoot. Use distribution and transmission electrical insulated equipment. Consult with users on construction and maintenance of overhead electrical systems. Applicant must have 4 yrs. exp. in the job duties described above or as a Sales Engineer, Marketing Associate, or related occupation. 4 yrs. exp. must include 4 yrs. developing business plans and market strategies using distribution and transmission electrical insulated equipment and constructing and maintaining overhead electrical systems. 40hrs/wk., 8:00 am - 5:00 pm, Mon-Fri, \$38,000/yr. Send resumes w/social security number to: Indiana Department of Workforce Development, ID#3450415, 10 N. Senate Ave., Indianapolis, IN 46204-2277, Attn: Sean Blancaneaux.

Design Engineer: Evaluate and interpret customer needs. Based on evaluation, use time studies, structural, mechanical and price analysis to optimize designs for safe, low-maintenance, high productivity equipment and parts

for the food processing industry. Utilize knowledge of USDA regulations to ensure that designs meet USDA regulations. Use computer to produce computer generated drawings for the fabrication and installation of equipment and parts and design processing procedure. Work in production environment. Manage multiple projects. Equipment designs include spiral freezers, dumpers, conveying systems and other custom stainless steel products used in the food processing industry. Utilize CAD R12, spreadsheet applications and work processing applications. 45hrs/wk, 9am-5pm, \$33,592/yr. Requires a M.S. in Manufacturing Technology, 1 yr. exp. in the job offered & 3 yrs. exp. in Industrial Engineering. Must have proof of legal authority to work permanently in the U.S. Applicants should send 2 copies of both resume & cover letter to the Illinois Dept. of Employment Security, 401 South State St., -3 South, Chicago, IL 60605; Attn: Leila Jackson, reference #V-IL 15854-J. An employer paid ad. No calls please.

### LOOK OUT FOR NEW 'SHORTAGE SHOUTING'

There are two recent studies culminating in nationally-circulated reports, that have the result of: 1. Inducing Congress to write legislation to cure an alleged shortage of information technology (IT) workers by further expanding immigration, and 2. Luring innocent but technically-competent high school graduates into IT college programs. The two reports benefit the IT industry and technology colleges, but work to the detriment of IT workers. All such 'shortage shouting' that I have ever seen has similar beneficiaries and the same victims.

The first report is from the Information Technology Association of America (ITAA), a trade association of employers of IT workers. It is about 75 pages long and is entitled "Help Wanted: The IT Workforce Gap at the Dawn of a New Century." Readers can obtain copies of the report in digital format by sending an e-mail to <acallahan@itaa.org>. Be sure to indicate the subject area ("IT Workforce Study"). If lots of persons send for copies, that might keep ITAA busy, so they'll have less time to lobby for open immigration.

The second report is from the Stanford Computer Industry Project (SCIP). Both reports allege drastic shortages (where have I heard those words before) of IT workers, including programmers, systems analysts, software engineers, etc. ITAA called a press conference at the National Press Club to publicize their report. Comments about one report will suffice for both.

First recognize that in a free economy, there is no such thing as a shortage. A shortage of any commodity (like technical help) is alleviated if you raise the price. But there would be a shortage, if those offering jobs, place extensive restrictions on applicants that they accept, like: no applicants over a certain age, no applicants with over a certain length of experience, no applicants of a certain salary, no applicants with similar but not identical qualifications (where retraining would take a month or less).

The employer will certainly not state overtly that age is a factor, but astute interpretation of incoming resumes can identify undesired applicants without risking charges of age discrimination. Enlightened applicants use counter measures by purging their resumes of age-indicative factors. But the IT worker who gets an interview has an age-indicative face. If

this does not ruin his/her chances of employment, then there's an employment application that contains age-indicative questions: counter-countermeasures. The applicant tries to circumvent these questions. He/she can also obtain cosmetic surgery: counter-counter-countermeasures. I hear that many software companies offer interviews to a very low percentage of respondents (like 2%, for example). So where's the shortage? But they announce a 'shortage' of that type of talent. What does that mean?

ITAA has even persuaded Senator John Warner (R-VA) to draft legislation to 'cure' the alleged shortage—legislation that would further open the doors to immigration of technical specialists. What should a diligent and enlightened IT worker do to protect his/her own interests? First of all, whenever you see a published article about the 'shortage' of IT workers or any other technical specialty, write the publication that there is no shortage. The ITAA and SCIP are using anecdotal data, in an attempt to prove a shortage, which is really created by the unreasonable restrictions that employers place on applicants. ITAA obtained data by surveying its own member companies, the employers of IT workers. If you ask an employer if he needs more workers, will he ever say he doesn't? What will that do to the value of his stock?

I found articles about ITAA in *EE Times* and in *Long Island Business News*. I wrote rebuttals, which were published. I've written my Senators, to tell them the truth about the 'shortage' and ask them to vote no, if Senator Warner's bill ever reaches the floor of the Senate. Would you protect your career by doing the same?

AEA has created a Manpower Committee within AEA, to respond to 'shortage' articles, to send releases to the media, to contact Congressmen, etc. If you'd like to volunteer to work for the Manpower Committee, contact AEA president Bill E. Reed, or VP Richard Tax, or Manpower Consultant Robert Rivers, or me. Our addresses are in the "Reach Out" column. This issue of AE contains other articles on this same topic. I hope to convince you of the gravity of the situation new facing IT workers.

### PATENT 'REFORM'

You may have heard about HR400, the "21st Century Patent System Improvement Act," which passed in the House. The National Patent Association, a friend of the individual inventor, called HR400 the "Steal American Technology Act" aka "Give Away American Technology Act." This legislation, as originally written, would have:

1. Made the Patent Office a private enterprise that is permitted to accept gifts of money, facilities, or real estate.
2. Made the content of a patent application public 18 months after application, regardless of whether the patent had been granted. Applications for high tech patents often take 2 years or more for patent to be issued.
3. Offered little protection for the inventor from infringement on patents disclosed after application but before patent grant.
4. Widened the re-examination rules on patents granted, which would invite challenges and delay for an indefinite

(Editor's Column continued)

period real patent protection.

5. Given patented inventions free to anyone (in the world) who knew the patent contents 1 year before filing, but did not file.

6. Invited challenges (for the purpose of invalidating the patent) from anywhere in the world, to any patent already issued.

Happily, the version of HR400 that passed was much diluted from what was originally written. This was the result of a diligent phone and letter-writing campaign by the National Patent Association, 216 Hulls Hill Rd., Southbury, CT 06488 (Internet <http://www.nationalpatent.com>). But S507, the Senate version of HR400, contains all the pernicious provisions of HR400. Thus it is important to write your Senators to tell them to defeat S507. I've done this also. Constituents of Senator Hatch are especially urged to do the same; he is pushing S507.

## TRUDEL to form

By John D. Trudel

We have been discussing the consequences of two disparate business strategies. Most of the world is into "faster, cheaper." I called this group "The Dilbert firms." These are doomed. They decline into the "nerd-in-Hell" behavior that Jim Adams pokes fun at in his popular comic strip.

The leaders reject that approach. They prefer strategies that "add value and expand the market." This group includes names like Intel, Microsoft, and Hewlett-Packard.

Remember rule #1: The only factor that adds value is knowledge. Peter Drucker said it well: "Knowledge has become the key economic resource and the dominant, if not the only, source of competitive advantage."

Unfortunately, the Western concept of knowledge is very shallow. "I took a class, therefore I know the subject." What nonsense! Our educational system is a national disgrace.

About half of our workforce is illiterate. Our high-school graduates have test scores below those from countries like Spain and Ireland. Even graduate school students are sometimes pushed through with automatic Bs. Unfortunately, neither political party is apparently up to the challenge or pain of fixing these problems.

The knowledge that Drucker and I speak of is deeper. It comes from classes, books, experience, soft science, technology, relationships, and intuition. The Japanese aggressively move their promising people across functional roles. They don't do this because it is fun or cheap; they do it to build mastery.

Masters learn to perceive things that can't be seen, and to quickly grasp and intuitively react to complex changing environments in real time. Few Western MBAs—under-sciented,

and trained in financial abstractions—learn true mastery of technology based business.

"How should we compete with those that pay third-world wages?" My core answer is, "Don't compete where you can't win." I recommend reading Stephen Covey's book, "7 Habits of Highly Effective People," and I endorse his concept of "win/win or no deal."

Did I hear, "Easy for you to say, Trudel?" No, it isn't easy. But it is worthwhile, and it has integrity.

A large firm needed to sort out an emerging market based on new technology. Instead of retaining me, they paid someone who "knew the market" (which had not happened yet, I note) to fill out a form with the numbers that corporate wanted, to do the project that engineering wanted. It "saved" them \$30,000 but launched a misguided project that cost over \$2 million before it was shut down.

For a product example, consider the garment industry. How can Western firms win in markets where children sew garments for pennies a day? They use knowledge. In this case they use HDTV, CAD systems, and automatic laser cutters to get new fashions on the rack in a week. By the time the sweatshops have copied these, they are on to the next fashion.

Cost matters, of course. If you cannot eventually become the low cost, high quality supplier, your entire market is at risk. Still, the core job of management, marketing, and design teams should be to get out of the zone of commodity competition. If you cannot add some unique value for your customers, you should seriously question why you are in business.

Most important, capitalism can't work without property ownership. You can't make money if other firms are free to steal your knowledge, designs, and intellectual property. That is why the patent wars should matter to you.

*John D. Trudel, CMC, provides business development consulting and is the author of the book "High Tech with Low Risk." He is founder and director of The Trudel Group, 33470 Chinook Pl., Scappoose, OR 97056; phone (503) 640-5599; fax (503) 543-6361; e-mail [john\\_trudel@aol.com](mailto:john_trudel@aol.com); Internet: <http://members.aol.com/johntrudel/index.htm>.*

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## **In New Study, Hudson Institute Tones Down "White-Male Shortage" Alarm, But May Be Over-Optimistic About Job Prospects For Older Workers**

Many of us bitterly remember a Hudson Institute report called *Workforce 2000*, which spread the misleading statistic that white males would be only 15% of "net new workers" in the period 1988-2000. What this statistic really means is that the growth—that is, the numerical difference between workforce entrants and workforce leavers—of the white male workforce was expected to be equal to 15% of the growth of the entire workforce. However, a more significant statistic, from the U.S. Dept. of Labor, was that non-Hispanic white males (using a different group classification than was used in *Workforce 2000*) would be a whopping 32% of new workers in the period 1990-2005. This report had many unfortunate repercussions, such as the creation of what one sociologist called a "minor industry for diversity consultants—social workers paid fancy fees for what borders on quackery." One of the most unfortunate side effects of the white-male shortage myth was reinforcement of the engineering-shortage myth, since white males are often called the "traditional" source of new engineers.

There was a lot of criticism of the fallaciousness of the 15% statistic and the notion of a "white-male shortage," but such criticism was only moderately effective. Many years after *Workforce 2000* appeared, articles in magazines and newspapers were still citing the report in white-male shortage-shouting. Similarly, the National Science Foundation's infamous 1987 report which forecast a huge shortage of engineers and scientists was also heavily criticized, but nonetheless remained very influential.

Fortunately, it appears that the criticism of *Workforce 2000* has had some effect on the Hudson Institute itself: a new workforce study by this organization greatly tones down the "white-male shortage" alarm of the *Workforce 2000* study. A headline article on the first page of the Business Section of the April 26, 1997 *Los Angeles Times*, titled, "Job Prospects Look Hot for 'Geezer Boomers' in 2020," says of the new study,

"The 158-page study by Hudson, a conservative non-profit group based in Indianapolis, is expected to carry substantial weight among big employers and public policymakers. It is a follow-up to Hudson's ballyhooed 1987 study, *Workforce 2000*, which predicted a substantial influx of women, minorities, and immigrants into the labor force and helped galvanize workplace diversity programs across the country to deal with the demographic changes.

"On that score, the new Hudson report forecasts a continuing, albeit gradual, increase in women and minorities in the workplace. It predicts that the portion of the work force consisting of minorities will edge up 23% in 1994 to 26% in the year 2005. Likewise, the per-

centage of women is expected to inch up from 46% to 48% in the same period."

It is apparent that the new study's projection of demographic changes uses a much more meaningful statistic than the "net new worker" statistic of *Workforce 2000*. However, the *Los Angeles Times* article made no mention of the widespread criticism that *Workforce 2000*'s prediction of a white-male shortage was greatly exaggerated, even though the new report's prediction of moderate change appears somewhat inconsistent with *Workforce 2000*'s prediction of drastic change because the period of the new prediction, 1994-2005, significantly overlaps the period of *Workforce 2000*'s prediction, 1988-2000.

Also, the *Los Angeles Times* article noted that the new study predicted a growing demand for older workers:

"Older workers, often pushed out the door amid the corporate layoffs of the 1980's and 1990's, are likely to emerge in coming years as hot prospects in the job market. That's one of the main conclusions of a new study by the Hudson Institute."

However, even a co-author of the new study, Richard W. Judy, admitted that so far there has been no evidence of a growing demand for older workers, and some other experts agree. The *Los Angeles Times* article says,

"So far, however, Judy acknowledged that most big companies haven't recognized the assets that older workers provide.

'Not one HR (Human Resources) department in 500 has begun to think along these lines yet,' he said.

That point was seconded by J. Burke Sabel, president of 40 Plus of Southern California, Inc., a non-profit group that helps laid-off managers and executives find new jobs.

'Employers have accommodated young mothers and families, but I've seen nothing yet legislatively, or in informal things that companies do, to try to attract or retain older people,' Sabel said."

The last statement reminds us that it is not just the older workers who may need special workplace accommodations (e.g., older workers tend to need more medical leave); younger workers may also need special accommodations, such as more time off for family matters.

The *L.A. Times* article added,

"Sally E. James, executive director of Career Encores, a Los Angeles nonprofit group that helps older workers find jobs, said she hasn't seen 'any real pickup in demand' for her clients. She said age discrimination 'still is an issue' but \*\*\*\* added that prospects are better for older workers with up-to-date skills."

## HARD DATA DISCREDITS SHORTAGE PROMOTERS

Hard information is lacking in most discussions of supply and demand involving technical professionals in the Information Technology Industry. Biased studies replete with selected anecdotal information and misdirected surveys are being produced and promoted to the press with the apparent goal of getting someone other than the IT industry to solve problems associated with high demand. This report is aimed at putting a realistic face on the state of supply and demand in the IT industry. The data will show that the demand for Computer Science and System Analysts (CS&SA) is growing at a healthy pace, but not as great as some have indicated anecdotally. It will be shown that the median weekly salaries are increasing at a pace consistent with the general inflation and are not escalating at an abnormal rate even in the year 1996 over 1995, as indicated in some anecdotal information.

Those organizations attempting to show a shortage avoid the data on another segment of the Information Technology technical employment, namely the Programmers, another of the BLS subsets of technical employment. That employment has been declining rather than expanding since 1990. Rather than getting involved with arguments about what technologist fits in what BLS defined technical specialty, the data sets on the two specialties are combined in addition to being treated separately.

Data on the unemployment in the two specialties is shown from 1983 to 1996 on an annual basis. Data on the CS&SA specialty unemployment will be shown to be low which is consistent with the relatively high expansion rate for the technical specialty. Contrasted is the higher level of unemployment associated with the Programmer specialty and its declining employment.

More hard data is presented in the form of median weekly salaries showing modestly rising salaries consistent with technical salaries in general in the lower single digit range up to and including the 1995-1996 years. That evidence is contrary to anecdotal data showing high percentage increases. Such stability in median wages denies the existence of shortages. This is a study of the facts, not a discussion of the myriad reasons why an employer cannot instantly fill a vacancy at the salary the employer wants to pay, with the exact skills needed for instant problem solving, in an area of

exorbitant housing costs, of a desired age, color, ethnicity and without tenure guarantees.

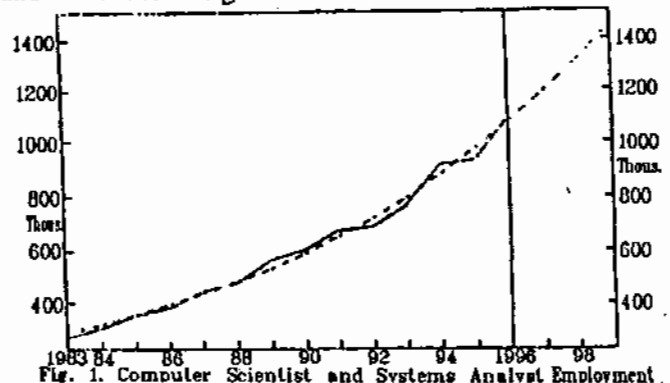


Fig. 1. Computer Scientist and Systems Analyst Employment.

Figure 1 shows Annual average CS&SA employment from 1983 through 1996. It has expanded over 4 fold since 1983. Plotted with it is an exponential curve which is the best fit of 8 curves. The exponential is extended for three years as the forecast for the CS&SA employment. The trend is so consistent for the 14 years that the forecast is highly reliable. The forecast is for an exponential increase in employment at a 10% annual rate for 3 years. There are some departures from the trend line from time to time but they do average out.

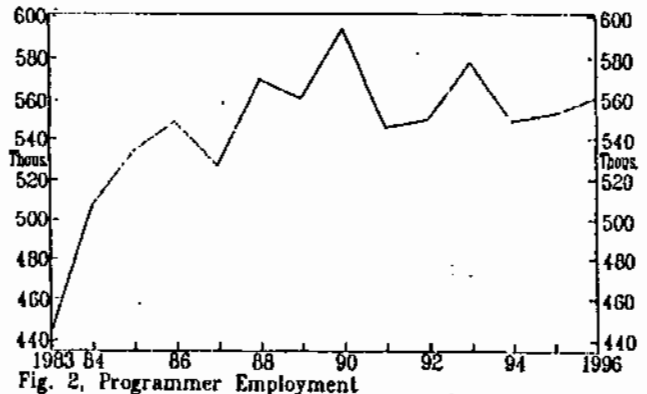


Fig. 2. Programmer Employment

Figure 2, shows data for the annual average of Programmer employment from 1983 through 1996. It shows a significant change from a rapidly expanding employment sector in the early eighties, to a much slower growth in the later eighties. It reached a peak in 1990 and has been declining on average since then. No forecast has been made because of the widely gyrating employment levels. If a forecast were to be made from the last 7 years of data, it would be for a gradually declining employment level. It is not associated with high levels of vacancies, rapidly rising wages and low unemployment.

(Continued)

### Sample Copies Available

Members of the American Engineering Association are encouraged to submit names and addresses of friends and associates who they think would be interested in receiving a sample issue of the "American Engineer."

Names should be sent to: AEA, P.O. Box 820473, Fort Worth, TX 76182-0473.

### 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!

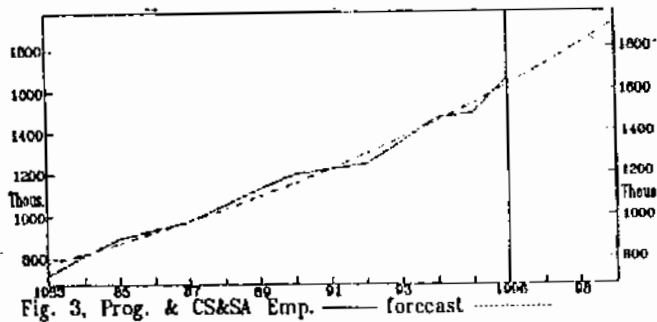


Figure 3. is a plot of the combined Programmer and CS&SA employment and with it the best fit exponential curve. The expansion rate is 5.8% per year on the combined populations that are representative of the Information Technology majority technical workforce. A forecast is shown to the year 2000 based on the trend line. The expected level of employment in that year is 1,900,000, a growth of 300,000 from the 1,600,000 level of 1996.

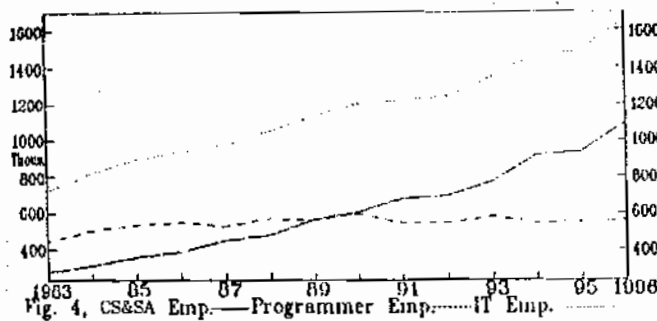


Figure 4 shows the Computer Programmer, CS&SA, and the total of the two on the same graph. The disparity in growth rates is readily apparent as well as the level of employment. The levels crossed over in 1990 when the CS&SA became the dominant employment specialty.

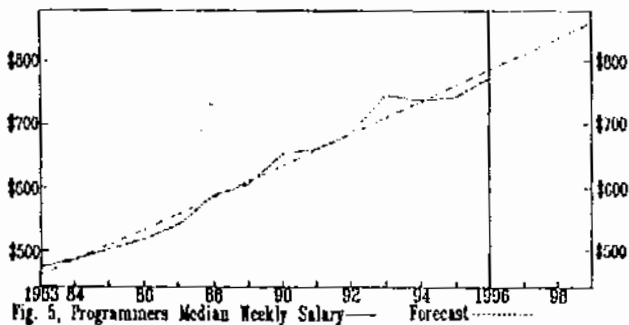


Figure 5 shows the median weekly salary of Programmers from 1983 through 1996 on an annual average basis. The best fit curve is a straight line increasing at an annual rate of \$25.00 per week per year. There has been no marked deviation from the trend line over the 14 year period. No evidence of a shortage is exhibited. Such a situation would normally cause wages to rise rapidly. The trend line is used to forecast to the year 2000. A weekly salary of slightly less than \$900.00 per week is forecast.

Information Technology Association of America is the publisher of a biased Report "HELP WANTED" "THE IT WORKFORCE GAP AT THE BIRTH OF A NEW CENTURY" Read it with a jaundiced eye. It consists of survey data from a biased sample and other selected data to create the illusion of a shortage.

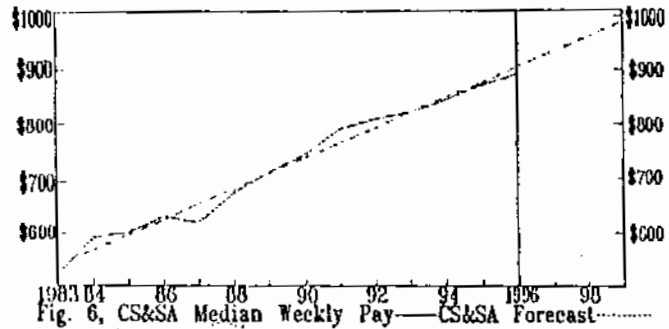


Figure 6 shows CS&SA median weekly pay on an annual average basis for the years 1983 through 1996. Again, the optimum curve is a straight line expanding at a rate of \$28.00 per week per year. In no sense can such a rate of increase be characterized as an explosive wage situation. In fact, the 1996 data shows an increase below the trend line. The trend forecast is for weekly wages to rise from the \$900 level of 1996 to the \$1000 level in the year 2000.

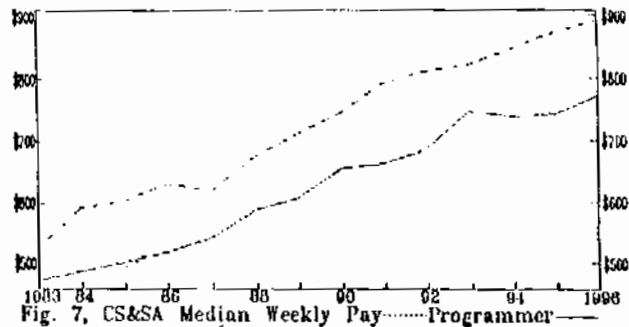


Figure 7 shows both Programmer and CS&SA Median weekly pay on an annual average basis. It shows the parallel tracking of the two specialties. The spread is widening slightly with time with the CS&SA specialty leading Programmers by slightly over \$100 per week.

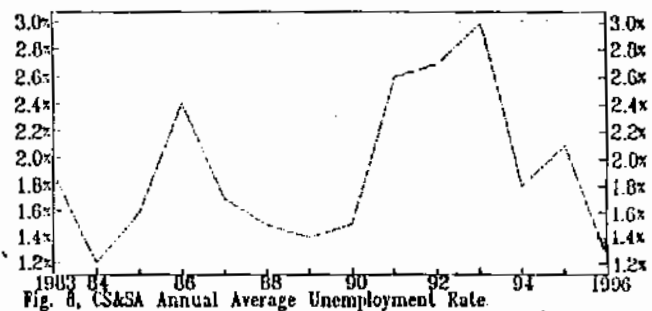


Figure 8 is a graph of annual average unemployment rate from 1983 to the present. It shows a starting higher unemployment level due to a 1983 recession. It also shows a higher unemployment rate in 1986. A much higher and persistently higher unemployment rate is shown from 1991 to 1993 corresponding to a FRB generated recession followed by an inadequate recovery until 1994. The continuing recovery has brought the annual average rate to one tenth of a percentage point above the 1984 rate. It represents a high level of demand but not crisis level as suggested by some anecdotal information. The growth in employment in the CS&SA specialty indicates the system is supplying the necessary talent for the expansion needs.

e-mail at: [engineermanpowernews@webtv.net](mailto:engineermanpowernews@webtv.net)

## 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 C. Richardson of Huntington Station, NY:** - I take exception to the "Dissident Engineer" column of June '97 AE. It says an article titled "The Hollow Ring of Productivity" from the Nov/Dec issue of *Harvard Business Review*, 'fails to note that a major cause of the decline in students' SAT scores ... has been the increase in the proportion of lower-achieving students taking the SAT.' I say the decline in SAT scores represents a true decline in language development, and thus the thinking abilities of the rising generation. The excuse that it's caused by an 'increase in the proportion of lower-achieving students' is a myth spread by the education bureaucracy, which does not survive close scrutiny. If it WERE the cause, there would be just as many high scores as ever. BUT—in 1972 the number of students scoring above 750 on the verbal section (of the SAT) was 2,817; by 1990 it was 1,226, down 56% amongst our best and brightest!

A principal cause IS the change in the reading and language curriculum from 50 years ago, which the education bureaucracy doesn't wish to admit. From my research, I say the children who are taught whole-word-whole-language memorization strategies run out of memory when trying to accommodate the vocabulary of the SAT's. They can't develop their vocabularies or read math problems or science material worth a d - - m! Low SAT scores, rather than from poor innate ability, can definitely be linked to defective reading curricula (lack of phonics) in our schools.

**From J.T. on the Internet:** - When I worked at GTE in Phoenix, it was laying off engineers. Imagine my surprise, when I

saw a want ad in the Sunday paper for an engineer. After investigation, I found the ad exactly matched the qualifications of a Turkish engineer, sitting in the booth next to me, whose green card was about to expire. Since no other applicant's background EXACTLY matched the ad, no engineer was hired, and the green card was renewed. I have no documentation to prove this, but I saw what happened at the company. In a subsequent job, I was involved in hiring new engineers for several years. When I started hiring, I wanted them to have the exact telecomm experience we utilized in our group. I soon found out that was ridiculous. I then tried to hire a certain skill set that could be easily trained to our tool and equipment set. Some applicants had come from management ranks, but my boss was averse to hire them. I suspect he was afraid of the challenge to his position. In my quest to get a new job in the Southwest, I've found the same tunnel vision.

Prospective employers gave reasons for not hiring me as: "You have been in 'management' and have not written a program over 10,000 lines in 5 years." Thus it seems I have a problem going back into the engineering ranks. This is despite the fact that I've continued to take technical courses and was involved in most technical decisions made at prior employers.

One final story should emphasize your point of view. About two years ago, I saw an ad in the local paper for a CEO. One of the qualifications was "MUST know Microsoft Project." It must have been a small company to advertise in a local paper. If I were looking for a CEO, Microsoft Project would not be one of the qualifications. If a person was CEO material, I'm sure he/she could learn it.

**From L.F. of L.A.:** - A recent *Machine Design* magazine editorial by Ronald Kohl, titled "The Man with the Extraordinary Wine Cellar," on page 6 of the 4-17-97 issue, helped explain the large size of the estimated \$1000 that medical expenses for auto workers and retirees adds to the price of each new motor vehicle. The editorial stated,

### MEMBERSHIP APPLICATION

I am concerned about my career and U.S. Engineering Capabilities.

New Member

Please Renew My Membership

Please enroll me as a member of AEA at the following level:

SPONSORING MEMBER: \$100

SUPPORTING MEMBER: \$50

MEMBER: \$30

Please make checks payable to "AEA" and mail to: PO Box 820473, Ft. Worth, TX 76182-0473

All members receive a subscription to the AEA publication "American Engineer"

(Difference in membership level reflects the individual commitment to the issues only.)

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"According to a newspaper article, dozens of the world's most notable wine collectors slipped into Cleveland last November for a weekend of festivities. They came to a party hosted by a connoisseur of food and drink, celebrating his 50th birthday. And the event involved the uncorking of \$250,000 worth of rare wines from his private collection. Accompanying the wine was the finest food. This included foie gras, beluga caviar, wild Scottish pheasant, and truffles flown in from Italy. The host brought in a renowned chef to prepare the seven-course meal and a nine-course meal the following day. The chef, in turn brought additional staff from three of his restaurants. And two well-known sommeliers helped run the affair. The event was no big deal for the host. The cellar in his home is stocked with 14,000 wines ... They (the guests) were bussed nightly from a Ritz-Carlton Hotel to a restaurant for dinner. The host picked up the entire tab for everyone. Several guests insisted on paying their own way, and in these cases the host donated the money to charity ... What employment gives a man the means to host a party of this magnitude?: Well he happens to be an obstetrician-gynecologist. In my mind, this fact goes a long way toward explaining why you pay that additional \$1000 for your car."

The above story brings to mind the recent movie, "Falling Down" (starring Michael Douglas), in which the main character, an unemployed defense-industry engineer known only as "DEFENS" (the name on his personalized auto license plate), finding himself in the palatial home of some medical practitioner, marvels that a medical practice could pay for such wealth and adds that he himself has been in the wrong business.

**From N.M. in Davis, CA:** - As most of you know, academic journals are very august publications, which take the utmost care—some would say "which go overboard in being picky"—to make sure everything including English and writing style, is held to the highest standard. But there are examples that disclose how immigration is changing that, especially immigration of East Asians, whose English is sometimes weaker than that of European, Israeli and Indian immigrants. This is from the prestigious IEEE Transactions on Parallel and Dis-

tributed Systems. The authors are in Taiwan, and thus not immigrants, but the Journal's editor and associate editors are Taiwanese immigrants.

In the computer world, acronyms are ubiquitous, so the authors wanted to use an acronym for a computer-to-computer interconnect. "...save silicon areas by increasing the bus capacity rather than the processor complexity ... A cross-bridge reconfigurable array of processors (abbreviated to CRAP) is defined to be an array of processors connected to a reconfigurable bus ... " The title of the paper is "Designing Efficient Parallel Algorithms on CRAP," and its section titles include "Parallel Selection Algorithm on CRAP," "Sorting data items on CRAP," and so on. QED.

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PO Box 2012, River Vale, NJ 07675  
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"American Engineer" publication and related issues  
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