

AEA FIGHTS ENGINEER SHORTAGE PROPAGANDA By Richard F. Tax

The American Engineering Association (AEA) is making every effort to protect the careers of American Engineers from erosion and destruction by an oversupply of engineers and programmers. To maintain U.S. engineering capabilities, engineers must have the opportunity to enhance their skills through continued in-depth professional practice. An over supply of engineers brought about by false manpower shortage reports and Engineer Shortage Propaganda (ESP) deprives engineers of these opportunities. The destructive force of an over supply has been induced by the activities of academia, government and industry with their fabrication of engineering and programmer shortages. Engineers of all disciplines are invited to support and to join AEA in the fight to protect their careers, the profession, and U.S. engineering capabilities.

History of the Shortage Myth.

History is repeating itself with the shortage shouters once more involved in another engineering manpower shortage scam. Today's shortage shouters, as usual, are industry and academia represented by the Information Technology Association of America (ITAA) and the government by the Department of Commerce (DOC) and the U.S. Department of Education (DOE). This big three combination has been active previously and destroyed many an engineers' career and devastated the hopes of our young engineering graduates who never got the engineering jobs they studied for so diligently.

During the mid 1970's, my first experience with engineer shortage propaganda, the shortage shouters were the Engineering Manpower Commission (EMC) of the Engineers Joint Council (EJC) now known as the Engineering Workforce Commission (EWC) of the American Association of Engineering Societies (AAES) respectively. When the EJC lost their credibility, they changed their name to AAES and passed responsibility for the fabrication of Engineer Shortage Propaganda (ESP) over to the American ELECTRONICS Association, emphasis on the word Electronics and not to be confused with the American Engineering Association. The American Electronics Association is supported by their university and corporate sponsors. On the other hand, the American Engineering Association, Inc. is supported by members of the engineering community and is dedicated to the enhancement of the engineering profession.

The American Electronics Association's, shortage propaganda of 1983 was full of errors and faults and "OOPS" methodology was at fault. It was, however, successful in being cited for legislation (H.R. 1310 OF 1983) that got the NSF \$500,000,000. It served academia, industry and the government's National Science Foundation. When the American Electronics Association lost their credibility they turned the responsibility over to what seemed to be a "credible" government agency - the National Science Foundation (NSF) to continue the effort. This was stated in press releases of the time.

Prior to and during 1989 the government's National Science Foundation disseminated their shortage paper in which the title "Future Scarcities of Scientists and Engineers: Problems and Solutions", predicted a shortage would come. This wasn't a study; it was part of a scam to gain industry support, over supply industry with manpower and get more taxpayers dollars for academia and NSF. NSF got their money, the colleges got their money, immigration doors were opened wider for more cheap foreign engineers for industry, and foreign students to fill the classrooms. **Our kids and families, misled by shortage propaganda and headlines, sent our children off to the engineering colleges.** Our young people studied engineering and chased jobs that never existed.

Yesterday's immigrant became today's victim and was displaced at the same time as the older U.S. engineer. And, today's immigrant will be tomorrow's victim.

Three years later in April 1992, after the damage was done, a House Investigations and Oversight subcommittee, chaired by Representative Howard Wolpe, found the NSF report to be unscientific. Congressman Wolpe conceded that when Democrats and Republicans present data, people recognized the potential of a built-in bias. "No one expects the NSF to play that game." "This was not good science", Wolpe said. Now, we know from experience what we can expect from our government bureaucracy. The National Science Foundation paper was used, as other Engineer Shortage Propaganda (ESP) before to influence legislation to increase funding for NSF and academia and increase immigration quotas for engineers for industry and students to fill engineering classrooms. What were the consequences for the government employees responsible for this scam? NSF got a bigger budget. And, people selling education or shortages were still quoting the discredited NSF study for years to follow.

For more than 30 years both the public and the engineering community have been hurt by reports, papers and propaganda about engineer shortages. As always they use fear that America will fail, business will suffer and opportunities will be lost. Then the shortage shouters impress you with their thoroughness and inundate you with charts, graphs and statistics of such quantity that it takes more time to fully evaluate or understand than most readers can devote. They close without ever mentioning the word "money" but, money and only money is what their paper is really about. They say more workers are better and not enough is a disaster. They argue; they need more U. S. trained and educated, the college degree production is too low, and immigration is too restricted. We must fix this through legislation. Why? Legislation is the mechanism necessary to obtain the money the colleges need to increase production, and legislation removes the immigration barriers for their select group. Congressional representatives have been fooled in the past and will continue to be deceived by the government bureaucracy they created.

Latest Shortage Scam

Well, it's all happening again. The new shortage myth has been kicked off with a report by the Information Technology Association of America (ITAA) entitled: "HELP WANTED: The IT Workforce Gap at the Dawn of a New Century. Its major message is first, the problem and the scare, followed by selected graphs, charts and unsupported biased statements that our representatives cannot analyze, and then their solution by academia, government and industry,

The American Engineering Association has made an effort to get at the truth and performed an analysis of the ITAA paper and prepared a critique. Meanwhile, the government's Department of Commerce involvement includes setting up a "Worker Shortage Convocation" that is scheduled for January with a conclusive "SHORTAGE" title. The DOC's Office of Technology Policy (OOTP) has also released its own paper entitled "America's New Deficit: The Shortage of Information Technology Workers". This new DOC - OOTP shortage paper introduces their shortage myth, instills the fear of America's failure and lost business opportunities, again burdens the reader with charts, figures and innuendo, quotes other reports such as the ITAA paper, and tells you how academia, government and industry people will solve the problem

"SHORTAGE, SHORTAGE, SHORTAGE" are the words they always use in every title and effort. These words ring

(Shortage Propaganda continued)

out in every press release or quote when addressing the issue and their fabrication. It's like a nasty tune you can't turn off. And, although you may not like it, the repetition is so blatant you can't help beginning to hum a few bars. If not careful an uninformed person could almost begin to believe it. Industry people believe it. **This is the third time since 1983 academia has pulled off this shortage scam with industry support. It got billions of dollars for our college empire.** It increases the size of government's bureaucracy. And, it has not solved industries, so called "shortage" problem. Obviously the problem must be elsewhere, and it is.

Senate Bill S.798, dated May 22, 1997, introduced by Senator John Warner of Virginia is cited as the "Information Technology Worker Shortage Commission Act" that establishes an "Information Technology Worker Shortage Commission." This Bill appoints Commission members from Government, Educators and Business and excludes all others. Its Internet loc. is <ftp://ftp.loc.gov/pub/thomas/c105/s798.is.txt> and is too disgusting to mention here. Self-serving Commission Members and their entities will benefit from this at the expense of the public. This is only the beginning legislation to appropriate funding for the colleges to produce more engineers and scientists.

Actually, academia only needs our children and foreign students to act as the catalyst necessary to transfer the dollars from the taxpayer's pocket to the pockets of the universities. **That's where the journey of the dollar ends.** There is only one winner here - academia. Does it really matter if our kids don't get the promised engineering jobs they study for?

The latest information about governments' role is their formation of a "Worker Shortage Convocation" scheduled for January of 1998. Again, note the persuading use of the "S" word in the title. The DOC press release states: "The Department of Commerce, in partnership with the Department of Education, the Information Technology Association of America, and the University of California - Berkeley, has formed six task forces which bring together leaders in industry, government, and academia to address the different issues involved in this worker shortage." These are DOC's words, not mine. Note the conclusion is fixed. If you're an engineer or IT, programmer, etc., your career is placed in jeopardy by your own government.

AEA's Manpower Committee chairman, Bob Rivers, reports the ITAA-DOC convocation task force names and leaders are as follows: 1. Basic Math and Science Competencies, Dr. Shoumen Data Director of Development, San Francisco Unified School District, 2. Image of the IT professional, Paul F. Cole, Vice President, American Federation of Teachers, 3. Quality and Productivity Issues, Dr. Howard Rubin, Hunter College, 4. Recruitment of Underrepresented Groups, Leader: April Young, Ph.D. Executive Director Potomac Knowledge Project, 5. Responsiveness of Industry and Higher Education to Each Others Needs, Dr. Richard Skinner, Pres., Clayton College and State University 6. Skill Upgrading of the Current Workforce, Kathy Walsh, IBM. Latest score is Academia 5, Industry 1, Engineers 0. Representatives from the AEA were blocked from participation in two of the teleconferences (on the basis of content) when they indicated that "There is no IT worker shortage."

Did you ever see such a disgusting and obvious display of arrogance from these self-selected individuals in presuming they can even begin to understand the engineering manpower issue? And, since they are not involved in the industry/manpower issue how can they even pretend to be able to suggest solutions? Their task force topics are even further removed from addressing the shortage myth, yet only people from academia, government and industry have been

selected to serve. But note, mostly from academia. Even the American Federation of Teachers is represented here but not one engineer will be heard. What do these people know about engineering? This is a problem producing group and not a problem solving one. They are problem perpetrators repeating their shortage propagandizing activities of 1983 and 1989.

AEA's Efforts

Rivers and his AEA, Manpower Committee have critiqued the ITAA paper and state: "The report by the ITAA in no way provides any credible evidence that engineers, scientists or information technologists are in short supply or that the Federal government should take any action other than to permit the free market to act. Above all, Congress should not increase immigration or continue funding the universities to increase degree production."

"The ITAA report is so defective in its selection and analysis of survey questions as to make it inconceivable that it can be taken seriously."

"All government and congressional activities such as S798 and the upcoming DOC conference on IT worker issues should be scrapped. All employer efforts to interfere with the IT and Engineer labor markets should cease. Instead, non-manipulated market forces should control IT worker supply and demand."

World War II lasted less than five years. During that period, with hundreds of thousands of men and women in the military, the U.S. faced the greatest manpower shortage ever. Still, with what appeared to be an unskilled work force the American people out produced and out designed all other allies and brought the end to the war in just under five years. And, it didn't take four years of college or the importation of large numbers of foreign engineers to get the job done.

AEA's evaluation of the DOC - OOTP paper states it is similar to the ITAA paper and it should be since much of the DOC material comes from the ITAA paper. AEA's response to the DOC's report, "America's New Deficit: The Shortage of Information Technology Workers," which claims a software labor shortage, said "...and in fact DOC's write-up was for the most part a warmed-over version of ITAA's earlier report."

AEA's critique was approved for release by AEA's president, Bill Reed on November 8, 1997. AEA's Manpower Committee member, Dr. Norm Matlof, who prepared much of the critique and expressed AEA's concern wrote; "I consider it to be highly irresponsible and inaccurate, and sad to say reminiscent of the National Science Foundation report in the late 1980s which forecast a severe shortage of Ph.D.'s in science, only to admit now that there is a glut of such people. The report is a "rush to judgment," published at the demand of an industry trade group with obvious heavy financial interests in having an ever-expanding glut of computer programmers."

In referring to a very serious error of omission regarding a 40% explosion in the enrollment in university computer science majors in 1996, (information given to ITAA by the Computing Research Association), ITAA failed to include this data in their final report, and has not mentioned it in their numerous press interviews. **This is an extremely dishonest, almost criminal, suppression of information on ITAA's part.** Many in the DOC are still supporting this shortage fabrication.

AEA objects to the title of the report, in that it takes for granted the existence of a shortage, based only on misleading information by an industry trade group which has financial interests in having a glut of programmers

AEA objects to the DOC "Worker Shortage Convocation" for the obvious reason that the convocation includes the conclusive "S" word in its title and because it is based on reports by the ITAA and DOC that have very little value and fact. We object to the selection of leaders and task force

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subjects of the convocation. We object to any legislation developed to support the DOC shortage effort, which is based on the distortions, provided by the ITAA and DOC. And, AEA objects to government funding this effort and convocation.

(Shortage Propaganda continued) Our goal is to overcome any problems with industry/engineer relationships and enhance the engineering profession and U.S. engineering capabilities. We do not believe the ITAA, academia, industry or the government are here to help.

According to the Deutsch, Shea & Evans (D,S & E) High Tech Recruiting Index (HTRI) and the analysis by Rivers, the curve shows less than 16% of the 30 year time period from 1960 to 1990 when there was room for new engineers without displacing older engineers. The rest of the 30 years or 84% of the time, there was room for new engineers only if older engineers were displaced. Twenty five percent (25%) of the period there was no room for new engineers and older engineers were still being displaced. See the D, S & E curve at www.aea.org/images/dse.gif with the associated article www.aea.org/News/dse.htm. The D, S & E (HTRI) is a demand study by counting advertisements for 4 year technical degreed personnel. Doesn't this show the shortage farce? How many degrees were produced during the past forty years and where are they now? If we have shortages, where are all of those 50 plus year old engineers with their wealth of knowledge? We know they exist because Human Resource people say they're all over qualified.

Even before the floodgates of scientist and engineer (S&E) immigration were opened with the Immigration Act of 1990 (IMMACT - 90), the educational system was producing huge gluts. Factor in the massive S&E job cuts since 1986, and the career situation for S&Es is extremely precarious. Age discrimination against both U.S. born and foreign national S&E is only one outcome of the academic/employer/government - created situation. We conclude that academia, government and industry management have excessive and detrimental control over the supply of engineers and scientists in the United States. This small minority derives economic benefit at the expense of the taxpayer and our youth and older experienced engineers. Money wasted on this fabrication increases the cost of doing business in the U.S. and hurts our competitive position in the world market. **More important is the young engineering graduate who can't get an engineering job while the parents criticize him or her with a display of phony engineer shortage headlines.**

Engineers, Immigrant, naturalized or native-born American are all members of the same American Engineering Community. Engineering Shortage Propaganda and maintaining an over supply of engineers is detrimental to the profession and all engineers regardless of heritage, sex, race and nationality. A manpower surplus deprives American engineers of the opportunity to practice their profession and enhance their engineering and programming skills and reduces their value to themselves and their employer. A manpower balance will promote better utilization of engineers and will provide opportunities and skill enhancement and improve U.S. engineering capabilities.

Based on one paper and biased information **our government has once more inflated a shortage myth into a national emergency.** Anything based on and supported by fabrications cannot solve problems; in fact it usually produces more problems than it solves. In conclusion, I believe this DOC - DOE convocation and government supported effort is detrimental to the engineering profession, our industries and the general public. Roughly speaking: If we always do what we always did, we will always get what we always got.

The American Engineering Association has no federal funding to help us fight academic and government induced problems. Like David versus Goliath, we have to take on the

Department of Commerce, Department of Education and the National Science Foundation (all three are government agencies funded by tax payer's dollars) with a hand full of volunteers on AEA's Manpower Committee. Thanks to Bob Rivers and his Manpower Committee this is being done.

NOTE: AEA did finally manage to get two representatives on the Convocation panel and get the word "Shortage" removed from the title of the convocation. The issues remain and it is going to be a tough fight to protect our children and profession from these Shortage Shouters.

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It is now 2003. Nothing has changed and the situation is even worse

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