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— *By Engineers and For Engineers* —

AEA's RIVERS' ANALYSIS OF MAY 31, 2002 ITAA "REPORT"

The Information Technology Association of America (ITAA) is a trade association of about 500 member firms. Their recently released survey report, "Bouncing Back: Jobs, Skills and the Continuing Demand for IT Workers," was supported by Microsoft, Cisco Systems, Intel Corporation, ITT Technical Institute, American Association of Community Colleges, Brainbench, The Chubb Institute, Dice Inc., Prosoft Training and SRA International. Project advisor was the National Workforce Center for Emerging Technologies (NWCET) (1) which has developed IT skill standards with funding from the National Science Foundation, and has devised the eight IT job categories used to classify responses.

When evaluating a report based on a survey it is important to know why it was done and who financed it. In this case, ITAA is doing a service for its members by supporting and lobbying for increased availability of temporary foreign workers through the H-1B visa program. In order for ITAA to support and publish survey results, the survey must "prove" the need for increased temporary worker admissions. By selective survey techniques and non-disclosure of the weakness of the connection between the sample and the total population, the survey has delivered the desired conclusions for ITAA. What has happened is that ITAA has issued yet another misleading "survey" whose conclusions are predetermined (and favorable to their large corporate members, who pay for the surveys).

One of the techniques employed in the latest of a long string of "surveys" that attempt to justify an expansion of the controversial H-1B visa program is to "stuff the ballot box" by choosing a survey technique that exaggerates the demand for information technology workers. By surveying hiring managers, they collect exaggerated data because each hiring manager optimistically believes that his or her company will take more of the available business. Their own data will show that the demand is exaggerated. The survey data shows that their own forecast is optimistic by 9.64%.

Regardless of claims of random sampling that would permit the conclusions of their sample to be extended to the universe of IT workers, their own data showing composition of the surveyed hiring managers discloses that the sample is highly biased toward surveying of IT firms.

In an attempt to justify the continuation and expansion of the H-1B temporary worker permit, ITAA bases its conclusion on a survey of 532 hiring managers in IT and non-IT companies conducted by a market research firm of Market Decisions Corporation of Portland Oregon. While there is a mountain of detail in the report consisting of cross-sectional analysis of the data, the fundamental finding was a number called the GAP. The GAP is the "shortfall" -- the difference between the number of IT personnel they say they would like to hire and the number they say they expect to hire. Both numbers are opinions of the surveyed hiring managers.

The report extrapolates the 532 hiring manager surveys to the universe of IT and non-IT companies based on what is claimed to be a chain of random sampling. Because the report itself shows the inability of the opinion of hiring managers to forecast next years' conditions, the GAP cannot be used to make any policy decision. In addition, the composition of the sample as shown in the report does not support the contention of random selection that would be necessary to extrapolate to the universe.

A proportional random sample (532) of the universe would produce 27.6 hiring managers to survey at IT firms. In fact, they surveyed 155, almost 6 times the number they should have interviewed.

Market Decisions Corporation (MDC) states in the report that it used a basic organizational population of 19,443 IT organizations and 354,686 Non-IT Companies. In statements to this author, a random sample of 22,626 were

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What in the Hell are you doing Martha?

We have all heard of Martha Stewarts financial problems which are ongoing as of this writing. Most of us who have seen her show on television have wondered how she is able to do all of those things and do them so perfectly.

What we have not heard is her propensity for hiring H-1b aliens. Well, here is the report courtesy of H-1b Hall of Shame. <http://www.zazona.com/ShameH1B/>

Martha's list is not so impressive as say Boeing or Microsoft might have, but it is interesting. She had LCA's for 144 people in the following categories.

The list includes Garden Designers, Associate Editors, Deputy Art Directors, the normal IT people you would expect as well as Editors for Publications, Broadcasts and Scripts, Commercial Artists, Designers and Illustrators, Environmental Product and Related Designers and Furniture Designers.

The start dates ranged from early 1999 to mid 2000 with the salaries from \$33,000 to \$75,000 per year.

For those of us who are now totally disillusioned we must wonder whether she even cooks.

NumbersUSA - A Tremendous Resource!

Those of us who have been involved in the immigration issue over the years have a great respect for Roy Beck and his staff at NumbersUSA.

They have a great website with volumes of information available to anyone who wants to research a certain aspect of immigration. The website is www.numbersusa.com.

If you are interested in how your Representative and Senators voted on a certain immigration issue, it is available there. If you do not know who represents you in Washington, you can find that on the Numbers website. Just key in your zip code and walla.

Numbers will keep you up to date on all of the latest legislation and shenanigans of our elected representatives. They do require a careful eye on them.

See Numbers cont. on page 4

Rivers Cont from page 1

drawn from the universe by Survey Sampling Inc. and supplied to MDC. A sample selection program was then run on the 22,626 by MDC until they had what they considered to be a sufficient size sample to produce a +/- 3.6% sampling variability at the 90% level. If the process truly produced a random sample, one would expect 19,443/374,129*532=27.6 to appear in the IT sample and 354,686/374,129*532=504.4 to appear in the Non-IT sample more or less. **There were 155 hiring managers selected in the IT companies, not 27.6.** There were 377 selected in the Non-IT organizations, not 504.4 as would be expected from random selection. IT companies were grossly over-represented in the surveyed sample and Non-IT companies were significantly under-represented. The conclusion must be reached that the sample selection was not random. Further, dividing the sample into smaller subcategories negates the confidence level claimed for the overall sample, in providing separate analyses for IT firms and for non-IT firms, for four geographic regions of the United States, and for eight IT job categories (plus "other"). In addition, a claim of stratified samples is not supported by any data other than what is presumed to be the +/- 3.6% maximum sampling variability at the 90% confidence level of the whole sample. The data supplied is insufficient to independently verify validity of the survey. Extrapolation of the survey findings to the universe is unacceptable.

The data for the year 2001 in the report indicates a surveyed demand of 901,589 positions and a so called gap of 425,358 anticipated unfilled openings. The difference of 476,231 is the net number of new positions expected to be filled for a total employment of 10,900,644. The 2002 Survey shows starting employment of 9,895,916. Those surveyed indicated there would be a 4.57% increase in the workforce while the **actual surveyed employment in the beginning 2002 indicated a 5.07% decrease in employment.** The spread between what was forecast and what actually happened was 9.64%.

This is what is characterized as the optimistic bias of the technique of surveying hiring managers. For the year 2002, the expected expansion of the work force according to the survey is 5.76% (569,928). Applying the correction factor derived from the 2001 data to 2002 would lead to the conclusion that employment will decline by 438,979. The raw numbers produced by the employer hiring manager survey technique cannot be used without adjustment for bias inherent in the technique.

Any attempt to use the GAP numbers as a proxy for shortages cannot be accepted. The GAP is completely under the control of the employer having the ability to adjust wages, working conditions, benefits, training and skills needs to name a few. Increasing the offers will increase the supply, as in any free market.

Summarizing, the survey data cannot be extrapolated to the universe of IT employees for failing a test of random selection. The survey technique yields a positive bias of overall demand and if used at all should be corrected to eliminate the bias. The use of the GAP as an indication of shortages should be rejected.

Year	Starting IT Employment	Surveyed Demand Increase	Forecast Jobs Filled	Gap Base	Net% Hired/Riffed	Yr-nd Forecast IT Employment
2000	10,771,364	1,608,499	765,171	843,328	3.30	11,536,535
2001	10,424,413	901,589	476,231	425,358	4.57	10,900,644
2002	9,895,916	1,148,639	569,928	578,711	4.44	10,465,844
2003	9,456,937					

* Adjusting for the cumulative error in 2000 and 2001 forecasts when compared to actual employment, by reducing the forecast year-end employment by 9.64%.

This suggests that 2002 year-end employment will be lower by 438,979 for the year.

Both the 2000 and 2003 Starting IT Employment are estimates.

Robert A. Rivers, Life Fellow IEEE, American Engineering Association Manpower Chair
Orange, MA 07/23/02

1) Access the annual report for NWCET at www.nwcet.org

My thanks go out to many that assisted, contributed to and reviewed this report but particularly to George McClure and Dr. Gene Nelson who repeatedly reviewed and offered inputs as the report evolved.

Numbers cont from page 2

In addition to the immigration issues, Numbers has tied both population issues and environmental issues into the immigration issues.

They have been a consistent and vigilant source of information on the H-1b issue as well as other worker related immigration issues.

Perhaps the most valuable asset Numbers brings to the fight is their ability to send free faxes to our Senators and Representatives. They have "canned" faxes on various issues and you may modify them to suit your mood and style.

We strongly urge AEA members to take advantage of this service as often as you can. The situation changes daily and so does numbers information and faxes.

You will have to register and fill out a rather long, though quickly filled out survey by simply checking a box for each category that applies to you.

Once the survey is completed, you will have access to faxes tailored to your interest to send as is or modify to your liking.

NumbersUSA describes themselves this way:

"NumbersUSA Action is a non-profit, non-partisan, public policy organization that favors an environmentally sustainable and economically just America. It opposes efforts to use federal immigration policies to force mass U.S. population growth and to depress wages of vulnerable workers. NumbersUSA Action is pro-environment, pro-worker, pro-liberty and pro-immigrant. Activists in the NumbersUSA Action network are Americans of all races and include many immigrants and the spouses, children and parents of immigrants." Those who need to refer to NumbersUSA Action with a short, descriptive modifier should call it an "immigration-reduction organization."

The Push Has Started!

The pro H-1b forces have started their campaign to increase the number of visas and/or make the current number of 195,000 plus permanent.

The 2000 immigration increase will sunset in October of 2003 which means the visas will drop back to the 65,000 level unless Congress acts to extend, or increase the numbers again.

Cont in RH column

Your membership card has your expiration date on it. Please stay current in your dues. On the back of the card, you will find our mailing address and phone number. Please give us your e-mail address if you have one, it will be extremely important in the coming H-1b fight.

ITAA's Immigration Policy Committee will meet October 10, 2002 at their Washington area offices. The Committee will meet with senior Department of Labor, the Immigration and Naturalization Service and the Department of State officials.

Each member can contact their Representative and Senator's local offices let them know you will vote the immigration issue regardless of party. Urge them to stand up for American jobs by eliminating the H-1b or reducing the numbers to the pre 2000 level.

You might remind them while industry may have the money you have the vote. You might also remind them Senator Abraham was voted out on the immigration issue.

Cost of a Very Modest Washington Office

	Reasonable Cost	Minimum Cost
2 Person Office	\$ 15,000.00	\$ 12,000.00
One Lobbyist	\$125,000.00	\$ 60,000.00
One Staff Person	\$ 30,000.00	\$ 25,000.00
Phones, etc.	\$ 6,000.00	\$ 6,000.00
Total	\$176,000.00	\$ 103,000.00

Members @ \$30.00 5900 3500

The estimated costs are to run the office only, they do not include any of the other costs of running AEA. We want to have a permanent presence in Washington, in fact, we need to have a presence in Washington to become as effective as we should be.

AEA has struggled for years with an all volunteer staff, very little money to operate with on your behalf. Now we need your help in recruiting new members and getting the word out to the world that we are tired of simply being commodities to the companies.

The following is from a letter from Roy Beck of NumbersUSA and he expresses the view that **"I really believe that AEA could have a powerful extra impact on the Hill if you had but one full-time lobbyist and a support person. That certainly has put NumbersUSA totally on the map in just one year."**

He goes on to say **"One lobbyist can do you a tremendous amount of good or be worth very little based on the quality of your lobbyist and on a clear plan of action and good management."**

There is no doubt that we can do a whole lot better, but we, myself and the Directors, cannot do it alone. We need your help in gaining membership and your financial support.

Barrons Bares the Truth!

A recent article in Barrons by Gene Epstein laid bare the facts with the H-1b and work visas in general with some remarkable statements not heard in business publications before.

From Barrons **"Business will also lobby government more aggressively than ever to open the door to foreign labor."**

"Foreign-born workers have been gaining ground for two timeworn reasons, the second one with a modern twist. **First, immigrant workers are cheaper than natives.** And second, immigrants are willing to do jobs the natives spurn. What's different now is that so many of these jobs bring high status and good pay."

"...the labor mix is also likely to shift in favor of the skilled trades that the foreign-born are already beginning to fill in large numbers: **engineering, science, math, medicine and virtually all aspects of computer-systems work.**"

"The movement of foreign-born workers into academia has virtually nothing to do with underselling the natives; it's all about taking jobs the natives spurn." This statement is pure B.S..

"One way to alleviate the serious shortage of nurses over the long run is to pay nurses more. At some higher wage level, supply would eventually meet demand. But what hospitals are doing instead of raising wages is recruiting women from abroad who are willing to do the job at the existing wage-rates." Sounds familiar doesn't it?

"A manager at a staffing firm who hires H-1B workers remarks, **"The H-1B guy is ready to put in a lot of hours, up to 14 hours a day, and they don't charge for the extra work."** That's one way to define experience and qualifications."

"As noted, over the past year there has been a decline in the volume of applications for H-1B visas. But otherwise, **the remarkable fact is that in the weaker labor markets of 2002, the share of foreign-born workers rose."**

"...while the total number of employed declined by 700,000 from February '00 to February '02, the number of employed foreign-born increased by 1.3 million."

The following is from the INS website at: <http://www.ins.usdoj.gov/graphics/aboutins/statistics/Yearbook2000.pdf>

Table 37

Year	L1 Visa	H-1B Visa
1985	65,349	47,322
1990	63,180	100,446
1995	112,124	117,574
1996	140,457	144,458
1998	203,255	240,947
1999	234,443	302,326
2000	294,658	355,605

Thanks for the tip Rob!

There are some 90 very broad occupations listed as being H-1b eligible. See <http://www.aea.org/occupations.htm> on the AEA website for a list of H-1b occupations.

Is your occupation on the list? If you are, you should be supporting AEA in our efforts to reduce the numbers of H-1b visas.

We need your help to get a Washington office with a full time AEA lobbyist. See the article on page 4 **"Cost of a Very Modest Washington Office"**.

Use this issue of the American Engineer to pass around to you friends, co-workers and family. All we ask is that you use any article published here as a complete article. Please do not excerpt it. Feel free to copy the entire newsletter if you want to post it or send it to others. Just give AEA credit for the publication.

ATTN: Members from California, Texas, New Mexico and Hawaii!

AEA and AAA have teamed up to bring you all of the AAA benefits at a greatly reduce price.

The benefits and savings vary from state to state, but they will save you a significant amount of money after covering the cost of AEA and AAA membership.

We have been told the savings on automobile insurance can amount to as much as 14% with similar savings on your homeowners insurance.

The automobile insurance savings alone can amount to hundreds of dollars per year. Couple that with homeowners coverage and it becomes a very significant savings.

In addition, you will receive all of the travel, trip planning, roadside assistance etc. normally associated with AAA membership.

In order to receive the benefit, you must first join AEA at the minimum \$30.00 per year level and maintain you membership to continue receiving the discounts.

Check it out with your nearest AAA office, it costs nothing to get the quotes and could help pay for that Caribbean cruise you have always wanted.

For Those Who Missed This The First Time Around.

EDITORIAL

MANY PEOPLE DON'T FEEL LIKE CELEBRATING ENGINEERS'WEEK

Two recent pieces of mail have made a strong impression on me. Both concern engineering, but their tone and tenor are almost diametrically opposed. One is a press release about National Engineers Week, to be held February 14 to 20. It comes from the public relations department of the Institute of Electrical and Electronic Engineers, the "lead sponsor" of the event. There are numerous other organizations involved, and they form a long list of prestigious technical societies, influential government organizations, and large corporations. The group represents the closest thing we have to an engineering establishment.

The other piece of mail is the most recent copy of a newsletter called *American Engineer*, published by a nonprofit group called The American Engineering Association. The guiding lights of this organization are a small group of engineers, some working and some unemployed, whose names and affiliations do not exactly place them at the epicenter of industrial, governmental, or academic power.

The IEEE press release tells how National Engineers Week will celebrate the contributions engineering makes to American life. "Our future depends upon the minds and hands of engineers," it proclaims. The pronouncement then goes on to describe "a series of major events designed both to highlight the achievements of engineers' minds and hands, and to enlist them in furthering the education of tomorrow's technological pioneers."

The message continues in this vein, sounding rather bombastic and out of touch with the real world, especially the one portrayed by articles in *American Engineer*. Reading that publication on a regular basis suggests that a lot of engineers, rather than "celebrating their contributions" to national well-being, are more inclined to be thinking of immediate and less lofty wolf-at-the-door concerns.

The dose of reality in issue after issue of the newsletter makes it clear that many engineers represent a beleaguered force suffering from any number of adversities. These include the collapse of formerly blue-chip corporations, bone-and-muscle cuts in defense spending, all topped off by what looks like subtle or even blatant age discrimination.

Maybe National Engineers Week is fundamentally a good thing. But somewhere in the celebration there should be room to talk about engineering as well as manufacturing jobs being sent offshore. And it should at least mention what hollow victories automotive transplants represent because they don't do much to help engineering employment.

Sponsors might even ponder whether or not youngsters should be encouraged to seek technical careers. Perhaps a shortage of engineers would be good for the profession overall.

Instead of conducting a Pollyanna-type event, the establishment ought to consider taking a cold look at what has happened to engineering as a career in the past 20 years. The sense of travail portrayed in *American Engineer* seems to reflect reality more accurately than the call for celebration from the IEEE public relations department.

Ronald Khol, Editor-

FEBRUARY 12, 1993 MACHINE DESIGN 3

American Engineering Association

Membership Application

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The American Engineering Association is a National, non-profit corporation dedicated to the enhancement of the engineering and scientific professions and our nation's continued technical leadership. Our members are from virtually all disciplines of the nation's technical community.

If you are concerned with the direction of the technical professions, we urge you to join with us in working to improve the professional lives of the nation's technical professionals.

You must be a citizen or permanent resident alien to qualify for membership in the American Engineering Association.

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Please check our website often for issue updates and action required. www.aea.org

Thank you for your desire to leave a better profession for our children and grandchildren than you came into.

Unemployment Numbers

Unemployment Rate:	5.7%	Aug 2002
Consumer Price Index	+0.1%	July 2002
Payroll Employment	+39,000	Aug 2002
Unemployment Initial Claims:	445,000	Apr 13, 2002
Federal Minimum Wage	\$5.15	

Source U.S. Department of Labor

For those of us who have been eternally confused by the annual layoff numbers (1,461,456 for 2001) vs. the weekly initial claims numbers (445,000 for week of April 13, 2002) the answer is this.

The annual number is for extended massive layoffs in companies who have laid off 50 or more workers at one time for a period of 30 days or more.

The initial claims numbers are pretty straightforward. For the week of April 13th of this year there 445,000 people who filed initial claims for unemployment benefits. If the 445,000 number was an average (it isn't) that would have amounted to some 23,140,000 layoffs for the year. Note: **The 445,000 is not current!**

This explanation courtesy of Lois Orr, Acting Commissioner, U.S. Bureau of Labor Statistics. Ms. Orr, why can't we have numbers that relate to each other so us less sophisticated can understand too?

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