Statement for Inclusion in the
Record of a Hearing Entitled

STEM the Tide:
Should America Try to Prevent an Exodus of Foreign Graduates of U.S. Universities with Advanced Science Degrees?

Before the House Judiciary Subcommittee on Immigration Policy and Enforcement

5 October 2011
To answer the question asked by this hearing: Yes, America should try to prevent an exodus of foreign graduates of U.S. universities with advanced science (and engineering, math and technology degrees). Doing so would strengthen the American economy, create jobs and improve our country’s global competitiveness.

The best and simplest way to do this would be for Congress to accelerate the green card process for graduates of American colleges. International students who earn a Masters or PhD from an American university in a STEM field and who have an offer for a job appropriate for their degree ought to be able to secure an EB visa (green card) within a year of graduating.

IEEE-USA is the American component of the IEEE (Institute of Electrical and Electronics Engineers), the world’s largest technical professional society. IEEE-USA represents 210,000 technology engineers across the United States. Our members are electrical engineers, computer scientists, aerospace engineers and other professionals involved with the creation and use of cutting edge technology.

Our members are also the Americans who will be most directly impacted by any increase in high-skill immigration. For over a decade, IEEE-USA has supported making it easier for highly-skilled international students to become American citizens because technology is the engine of our economy and engineers are among our nation’s best job creators. This is also why IEEE members support programs to promote STEM education within the United States, including teacher training program, science fairs, robotics leagues and other programs designed to expose America’s students to engineering.

Under current law, it is possible for many international students who earn Masters or PhD degrees in STEM fields to stay in the United States after graduating if they want to, but not under reasonable terms. Because EB visas are so scarce, graduates must spend years on a temporary work visa before getting their green card. While waiting on a temporary visa, workers may not switch jobs without losing their place in the green card line. They may not accept promotions or change their job responsibilities. Their spouses, many of whom have professional credentials, may not work at all. Nor are the workers or their spouses allowed to start new businesses, an unfortunate condition placed on some of the world’s most entrepreneurial people.

These conditions directly harm the American economy. By locking new graduates into their first jobs, we force some of our economy’s best workers to be much less productive than they could be. By not letting them change jobs we make the economy less flexible and adaptable than it should be and, in the process, effectively lock small companies out of the market for international students’ skills.

Even more perversely, our current high-skill immigration system prevents these graduates from striking out on their own by founding new businesses. Most graduates cannot even begin organizing a new business by lining up financing or attracting business partners until after they have their green cards. Who would invest in a person who has no legal right to stay in the country?
The most damaging consequence of current policy is that, faced with these restrictions, an increasing number of graduates from American’s best universities are deciding not to navigate the labyrinth that is the American immigration system. Instead they move to other countries, taking their specialized knowledge, skills and talents with them to one of our rivals. Students are actively encouraged to do so by representatives from many of our overseas competitors, including China and India, who openly recruit international students on our college campuses. Their sales pitch: “America doesn’t really want you. We do.” It is a regrettably persuasive argument.

The solution to this problem does not require a sweeping transformation of the American immigration system. All that is needed are targeted measures to allow international students who earn Masters or PhD degrees in a STEM field from an American university and a valid job to get a green card within a year of graduating. These students would be awarded a green card eventually, if they are patient enough. Accelerating the process will remove the market distortions created by our current system and allow the American economy to fully utilize their talents.

It will also allow our top international graduates to start their own businesses at the point in their lives when they will be most likely to do so – before they have houses, children and other commitments that discourage taking risks.

High-tech companies and high-tech engineers agree on the basic approach Congress should take: enacting a STEM exemption from the EB visa cap for international graduate students. IEEE-USA and the Semiconductor Industry Association, in particular, have been working closely on this issue for several years now.

Concerns have been raised by some that a STEM exemption could lead to the creation of diploma mills. Clearly, an American green card has considerable value, creating the potential for abuse. IEEE-USA believes that a few simple safeguards will greatly mitigate this concern.

First, in order to qualify for an EB visa, graduates would have to have an offer for a job in a field related to their degree. American businesses are capable of determining if a recent college graduate has the skills and education needed to contribute to their workforce. Diploma mills do not provide the skills necessary to land a high-tech job, and therefore their graduates would not qualify for the exemption.

We do hope that this job requirement will be defined broadly. Engineers, scientists and mathematicians are in high demand all across our economy. Congress should not prevent, for example, a mathematician from accepting a job with a railroad or shipping company, so long as the particular job requires the mathematician’s skills. Common-sense regulations built around pay-levels should allow the government to quickly determine which jobs are appropriate, and which are not, for someone with an advanced degree in a STEM field.
Second, there are a number of criteria that could be easily adopted to differentiate between legitimate and illegitimate schools. For example, schools that receive NSF funding or which have accredited undergraduate programs can safely be assumed to be legitimate schools. Undergraduate accreditation could prove to be especially useful, since it would force diploma mills to create both an undergraduate and a Master’s degree program before qualifying for the visa exemption, a daunting and expensive undertaking.

Adding the STEM exemption with qualification criteria to the EB program will actually make it easier to identify abusive schools, since right now there is little oversight of the schools whose students use the H-1B program. Such criteria will serve as an important check to ensure that the best students are allowed to become citizens quickly, while excluding those seeking a short-cut.

Rep. Griffin and Rep. Labrador will soon be introducing STEM graduate exemption legislation that include these safeguards. IEEE-USA appreciates the leadership the Congressmen have shown on this issue and strongly endorse their bills.

As a representative of the men and women who will be competing against the STEM graduates using the new EB exemption, IEEE-USA supports the STEM exemption because of our members’ unique understanding of America’s high-tech workforce. Almost all of our American members have a colleague, employee, coworker or friend who was born outside of the United States. Our members have seen first-hand the role skilled immigrants play in our economy, in our members’ businesses and in America’s engineering community.

Our members have also seen the economic waste inherent in our current H-1B based system. They have seen colleagues with brilliant ideas for new products sit on their innovations for years, waiting for a green card. They have seen classmates with stellar academic records forced out of the workforce because their spouse got an H-1B job first. And they have seen talented coworkers forced to turn down promotions because they didn’t want to lose their place in the green card line.

The technology business is an extraordinary meritocracy. Good ideas are always in short supply, as are good people. For America’s high-tech engineers and entrepreneurs, it is a tragedy that America has burdened itself with an immigration system that seems at times to be designed to squander our economic competitiveness.

The most important raw material in most modern technology is ideas, which must come from well-trained and talented people. American universities already attract a huge percentage of the world’s most talented people and do an astounding job preparing them to develop the ideas that will drive, and revive, our economy. All Congress needs to do is allow these talented people to become Americans in a reasonable amount of time by passing a STEM exemption to the EB visa program to unlock their full potential.