

Geek is Chic

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Let's talk about education: yours, your family's and society at large. The world is changing fast and we have to keep current with those changes to stay relevant. It seems that we must constantly learn new things or fall behind, in a sense this is the age of the eternal student. As engineers and other technical professionals we must keep up with the latest developments in our area of specialization and likely at least once during our career we will have to change our areas of specialization and knowledge in some fundamental way.

While we must continually refresh and expand our knowledge to remain valuable in today's economy, as parents and citizens we must also be concerned with the attitudes that our society has about technical professions and with the level of education that our children can look forward to. The sad truth is that technical education, often referred to by educators and policy makers at Science, Technology, Engineering and Mathematics (STEM) is the US ranks far behind many other countries.

According to the World Economic Forum the US is ranked 52nd in the quality of mathematics and science education. The US ranks 27th in developed nations in the proportion of college students receiving undergraduate degrees in science and engineering. There are more foreign students studying in US graduate schools than the number of US students and over 2/3 of the engineers who receive Ph.D's from US universities are not US citizens [these figures are from:
<http://www.lpfi.org/how-does-us-compare-other-countries-stem-education>].

Let's face it, US society in general doesn't value technical education and doesn't give much attention to those in technical fields although much of the total wealth created in the US (as well as other countries) is due to the creation and manufacturing of devices and services that are only possible using many of the technical professions that fall within the field of interest of the IEEE. If we are to keep up with the changing technology around us, make sure that our children have a chance to be valuable technical contributors and generate needed goods and services to support our way of life, and discover and develop new ways to use and work with limited resources in a crowded world we need to change this attitude towards technology and technologists.

As region 6 IEEE director elect I want to work on helping our members remain current in developing technologies as well as try to change society attitudes towards technology, engineers and technologists in general. I think we can do that by finding ways to work with and help science teachers (in colleges, high schools, middle schools and even elementary schools) in our region, by participating in a number of programs as volunteers and as an IEEE entity and promoting and participating in regional activities that celebrate technology, mathematics and scientific knowledge for all ages.

In particular I would like to create the following initiatives:

- Create training and resources to help IEEE members get and retain jobs in the current economy as well as develop skills for consulting or other entrepreneurship activities---more on specifics in the following bullets
- Help organize resources to help science teachers in region 6 (university and college, high school and lower grades as well). This could include working with some of the technical societies to create a centralized access to hardware and software development kits, electronic parts, software and other items of use to these groups
- Create a strong and active education committee in Region 6 that looks into and implements activities to improve technical education and attracts and meets the needs of our student members
- Working with IEEE societies, increase our participation and interaction with universities as well as junior and community colleges to draw more young members into IEEE volunteer activities—this should help us retain them as full members and allow us to expand our activities
- Make sure that the IEEE is involved with and embraces local technical oriented activities that appeal to the young, hobbyists and amateurs including: Science Fairs, Maker Faires, Space-UP, FIRST, Future Cities, Tech Shops, Rocket Clubs, Radio Ham Clubs, etc.
- Get the IEEE involved with investor groups and VC's to learn about the next big opportunities and potential job and consulting opportunities. In addition the IEEE should helping with participation in Hackathons, Start-up weekends and other activities to help our members participate in ways to enhance or change their careers
- Try to get an IEEE presence in as many regional technical trade shows as possible and as appropriate—in larger metropolitan areas perhaps we need participation committees that work on getting exhibit tables, spaces and manpower to be in these places to raise awareness and interest in the IEEE and to increase participating members exposure to new opportunities and knowledge in developing areas—we should try to create a regional schedule of such events that we are participating in

Changing society attitudes takes time, dedication and some effort. By pooling and multiplying our resources (increasing involvement and interest of younger members) we can help those around us to realize that “Geek is Chic” without

burning ourselves out—remember that this should be FUN. I hope that you will consider these ideas when you vote for Region 6 director-elect starting in mid-August 2012. Keep learning and keep changing!