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Ten Years of Objectives and Outcomes: Time for Change

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After about twenty years as a visitor using topics criteria, my first EC2000 visit was in 1997. In a post-evaluation discussion visitors and program directors struggled to distinguish between objectives and outcomes. I wrote a post-visit memo lamenting the change from topics criteria to EC2000 from an evaluator's perspective. Here's a sample: "The problem for me was the topics I was reading. I didn't enjoy reading about missions, objectives, outcomes, constituencies, processes, and assessments. It's all too abstract. In the past, we read about what was being taught, what was in the labs, who was teaching, and so on: concrete things you could go look at and compare to a standard."

The situation seems much improved. The criteria define objectives and outcomes. Institutions and visitors benefit from a decade of refinement, experimentation, experience, and lessons learned. Training programs are better.

The laudable objective of EC2000 was to transfer control from topics criteria and from ABET's auditors to the faculty and to the constituents of the engineering programs. The result may be that program implementers feel the overhead burden more than they appreciate the increased autonomy.

The accreditation process needs improvements. Shortcomings in objectives (C2) and outcomes (C3) dominate findings in the statistics for 2006-2007 visits. (C2 and C3 dominate shortcomings in every year for which I have seen statistical summaries.) C2 and C3 dominate before and after due process. Prior to due process, more than half of all programs have a shortcoming in C2; more than half of all programs have a shortcoming in C3. Prior to due process, there are more weaknesses in C2 than in C3 and there are more weaknesses in C3 than in the total for all remaining criteria. After due process, there are more weaknesses in C3 than in C2 and there are more weaknesses in C2 than in the total for all remaining criteria.

Something is wrong. After ten years dominated by shortcomings in C2 and C3 by half the country's engineering programs, shouldn't we be seeing the effects of these

shortcomings in other criteria? Shouldn't programs that cannot adequately implement processes for setting and assessing objectives and outcomes deteriorate in ways that are visible in ABET's visit process? I don't see it in the statistics. Weaknesses in engineering science and design remain low.

After ten years of asking why programs can't properly implement C2 and C3, it's time to ask whether C2 and C3 are contributing more than they cost.

Hundreds of programs have struggled for years to implement and to comply with the requirements of C2 and C3. The implementers are intelligent, they're diligent, and they are engineers—trained problem solvers. And yet, by the statistics available to us, it looks as if they aren't succeeding. There is something wrong with what we have asked of them.

Let's fix C2 and C3. They need clarity and simplification. Why, for example, does a program need objectives? Can they be rolled into the program's mission? The free market tells a program whether its product is in demand. Perhaps we could drop C2 and simplify C3. The current EAC outcomes are ambiguous and redundant and could be better organized.

For example, commitment to life-long learning sounds more like an objective than an outcome. Perhaps it should be part of EAC's suggested mission for an engineering program.

Outcome (a) is: "an ability to apply knowledge of mathematics, science, and engineering." Outcomes (c), (e), and (k) are variations of outcome (a). Outcome (a) could be a definition of engineering—if it didn't contain the word "engineering." (If engineering solves real-world problems by applying math and science, what is "an ability to apply knowledge of...engineering"?) If we find students that can "design a system, component, or process to meet desired needs within realistic constraints..." (outcome (c)) or solve engineering problems (outcome (e)), *without* having an ability to use techniques and skills necessary for engineering practice (outcome (k)), we should hire them as instructors.

By not accepting course, project, or exam grades as demon-

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stration of knowledge, we have mandated the creation of a redundant grading system with enormous overhead. I realize that evidence that a topic was “covered” is not evidence of knowledge gained. But should I be given a passing grade in a laboratory course if I could not design an experiment, carry it out, and analyze the results? Is it likely that I could pass all my design courses without being able to design a component, system, or process? We may be splitting hairs to ask for independent verification of minute subcomponents of course content. Suppose 70% of students earn a grade of 80 or better on a mid-term exam that covers course content in probability and statistics. That seems an acceptable proxy for demonstration of knowledge.

Perhaps tiered criteria would work. Divide the criteria into critical and non-critical categories. For example, C1, C4, C5, and C6 might be classed as critical, while C2, C3, and C7 are non-critical. Weaknesses and deficiencies in non-critical crite-

ria would not precipitate expensive remediation recommendations except in conjunction with weaknesses or deficiencies in critical criteria.

There may be experts with answers to these questions, but it’s clear from visit results that solutions aren’t obvious to the majority of program implementers.

The IEEE has been at the forefront of the accreditation process. The IEEE sets the standard in visitor quality, in industry and academic balance, in visitor assignment, in training, and in mentoring. It has also sponsored the best and most successful criteria revisions. The IEEE should continue its distinguished service in improving engineering accreditation. The situation with C2 and C3 is a project worth IEEE attention.

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Pancreatic Cancer – A Personal Experience

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This issue will be my last as Editor of *The Interface*. I took over this wonderful volunteer task from **Don Kirk** in 1996 and have enjoyed putting together each and every issue. Of course, the many articles submitted by you and your colleagues have made my editing task easy.

Some of you are aware I have been battling pancreatic cancer since September 2003. It’s a disease I had barely heard of, and when I heard the survival statistics (One year: 19%, Five years 4%), I was somewhat alarmed. Fortunately, my pancreatic cancer was caught reasonably early

and surgery was an option. I had a very successful “Whipple” surgery in October 2003. A colleague whose wife had died from pancreatic cancer told me Whipple surgery is the most complicated surgery one can schedule. My surgery lasted 5.5 hours and was incredibly successful—except some lymph node involvement could not be removed surgically.

In November 2003 I began chemotherapy with Cisplatin (the drug that cured **Lance Armstrong’s** testicular cancer) and Gemzar. In January and February 2004 I experienced a round of 30 irradiations, concurrently with the chemotherapy. After six rounds of chemotherapy ended in April 2004, I was pronounced in “remission”. That state lasted for about six

months, until a tumor marker began increasing, and I resumed chemotherapy. I continued chemotherapy in Metz, France, during the summer of 2005 and finally stopped the Cisplatin and Gemzar in October 2006. I had added a new targeted oral drug, Tarceva, that was supposed to keep things in check. And so, even with all the side effects of the various drugs, I lived a more or less “normal” life.

Unfortunately, a CT-PET scan in September 2007 revealed a large buildup of fluid in my right chest cavity, causing a near total collapse of the right lung. The fluid was drained and lab tests showed it contained cancer cells. I had surgery to drain the remaining fluid and enable my right lung to expand to fill the chest cavity in order to keep further fluid buildup from occurring. The surgery was completely successful. (I am very good at surviving surgeries.) Unfortunately, the pancreatic cancer had indeed metastasized to my chest wall. Fortunately, both lungs were clean and healthy. (Those 16 marathons I completed between 1991 and 2003 must have done quite a bit of good.)

I share this story with you because you, like me, might not know too much about this disease. It kills over 35,000 per year in the USA. There are almost no fundraisers for

research. Why? Because there are almost no survivors, as there are for many other forms of cancer. Many people would come up to me and say they had never known anyone who had had pancreatic cancer. With a one-year survival of 19%, it's no wonder why. The only proactive organization of which I am aware, and it's a good one, is PANCAN (Pancreatic Cancer Action Network). Most of the volunteers are survivors of relatives or friends who died from this disease. Very few volunteers are actual pancreatic cancer survivors, since there are so few of us.

I am still battling. My sister and her husband, who are organic farmers in Austin, TX, and my wife, who has remained my strongest ally through four years of “bad news/good news, etc.” are working on a nutritional arsenal to boost my immune system. I remain very positive — the mind and spirit are so powerful when combating disease -- and I greatly appreciate all the support many of you have given me over the past few years. Best of luck to all of you! Exercise and eat well!

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ECEDHA News: Preparing for the Future

Mark J. T. Smith and Ken Connor

For over forty years, the Electrical and Computer Engineering Department Heads Association (ECEDHA) has been serving the North American community of electrical and computer engineering programs. Through its special events, regional meetings, and annual meeting, ECEHDA continues to be an important enabler for department heads to respond to challenges and advance ECE education.

The Next Globalization Workshop

In response to significant interests in globalization, public policy, and engineering out-sourcing that emerged during the 2004 Annual Meeting, it became clear to the ECEDHA leadership that there is a growing need to educate engineering students for competitive careers in a global economy. Educators need to consider carefully how to educate engineering students to prepare them for changes in the profession due to globalization and outsourcing. Educators also face the challenge of recruiting students into ECE programs in the face of negative publicity from out-sourcing, and the perceived undercutting of the value of an engineering degree in the United States due to global competition. Another challenge to educators is retraining engineering professionals in fields that have suffered from excessive out-sourcing. Addressing these challenges requires a new emphasis on continuing education in providing opportunities for engineers at all career levels to refresh and change the direction of their evolving careers.

To more effectively serve the membership and the entire ECE community as they grapple with these issues, ECEDHA and the International Engineering Consortium (IEC) organized a workshop on Globalization Effects on ECE Education, which was held at the National Academy of Engineering in Washington D.C., on November 14th and 15th, 2005. All of the talks presented at the workshop were video taped and have been posted along with PowerPoint presentations at <http://www.ecedha.org/meetings.html#workshops>.

The two day workshop was opened with a plenary talk by **William Wulf**, President of the NAE and included talks from various constituencies, including NSF, industry, and academia. Breakout sessions were held on the second day for participants to address three issues: global awareness, technical skills for global engineering, and recruitment and retention of students and faculty in the face of globalization.

A number of action items came out of this workshop, following the presentations and breakout sessions. First were several general recommendations aimed at preparing ECE students for a global economy, including facilitating international student experiences, cultural education, collaboration and multidisciplinary experiences, service and people-oriented educational experiences, and enhanced technology in education.

Second, a number of action items were proposed to NSF, such as establishing international REU Programs and coopera-

tive international programs, performing benchmarking studies with foreign institutions, developing model curricula, assisting schools in making ECE programs more attractive, and sponsoring workshops on attracting K-12 students to engineering. Finally, participants proposed action items for ECEDHA. In particular, attendees recommended scheduling follow-on programs on global engineering at the 2006 and 2007 ECEDHA meetings, and a follow-on workshop organized jointly with NSF on best practices and curricular development for global education.

With vigorous discussions under our belts at the last two annual meetings (and also at most of the regional meetings) we are now in the process of organizing the final item on the ECEDHA action item list, i.e. the second ECEDHA/NSF Globalization Workshop. Like the January 2003 Workshop on Nanoengineering Education, this workshop will be held in conjunction with the DesignCon meeting in Santa Clara, California, February 4-7, 2008 <http://www.designcon.com/2008/>. This site was chosen because the Nano Workshop meeting went very well and because we felt the workshops should move around the country to assure maximum participation.

The 2005 ECEDHA/NSF workshop on globalization began with presentations that addressed a wide variety of background information, which was then considered in more detail in breakout sessions. The second workshop will start with an update session to determine where things currently stand with regard to globalization of the ECE profession. **Tom Friedman** has updated his book and we are now in a position to gather more information on how companies are doing with outsourcing. Updated information on the current ECE job market will also be gathered and presented.

During the first workshop we heard from managers. In contrast, the second workshop will focus on people with on-the-job engineering experiences. We will attempt to accumulate information about whether or not ECE-dominated companies are good places to work and what daily life is like for engineers working to develop small start-up companies.

A second theme of the workshop will be best practices and curricular development. There will be an attempt to accumulate information about the types of outreach activities in which ECE departments are currently engaged to address recruitment and retention of students and faculty in the face of globalization. Information on programmatic changes to improve global awareness and technical skills for global engineering will also be presented. Opportunities to provide information electronically will be made available to those of our members who are not able to attend the workshop.

Finally, breakout groups will be charged to discuss and prepare reports on the most important lessons learned. These reports will be presented at the spring ECEDHA meeting in San Diego, March 14th – 18th, after which the final report for this workshop will be prepared for distribution to NSF and the ECEDHA membership.

The First ECEDHA Survey Report

In addition to the Globalization Workshop planned for 2008, another notable highlight is the issuance of ECEDHA's first

survey report. The annual survey itself is not new. It has been a part of the ECEDHA program for more than a decade and provides benchmarking information that includes enrollment data, faculty salaries, graduate stipends, space allocations, graduation statistics for graduate and undergraduate students, research expenditures, and much more. In prior years, the survey results were distributed in spreadsheet form (with school identities omitted) to the ECEDHA schools that participated in the survey. During the annual ECEDHA meetings, the survey organizer typically presents an overview of the salary data. These presentations are not very detailed and are posted on the ECEDHA website, which is available to the public.

Unlike the past practice, the new report provides data arranged by peer cohorts in graphical form. Generally speaking, cohort sizes were chosen to be less than 20 and grouped by Carnegie designation. Where applicable, groups were subdivided according to US News and World Report ranking. ECEDHA members have been asked for comment as part of the ongoing effort to provide the most current and useful data to the participating community.

Curricular Innovation

The survey report not only serves the peer benchmarking needs of the ECEDHA membership, but also can provide useful longitudinal information (which we are just starting to assemble). A noteworthy example is the downward trend in students matriculating in ECE programs. This decline has been particularly acute in the computer fields and thus has been an obvious issue of concern motivating much discussion during the last few annual meetings. Special sessions were organized last year to report on recruiting and retention and approaches to making ECE program curricula more exciting and attractive to students.

Historically, engineering enrollments dip and peak over time in a cycle that is not always well understood. Last year, informal feedback from department chairs was mixed with respect to enrollments. Some believed they were seeing a rebound in matriculation; others felt they were still undergoing a decline. The ECEDHA survey data were interesting in this regard. An analysis of 47 schools who report undergraduate matriculation at the sophomore, junior, and senior levels for both 2005 and 2006 across the U.S. indicates concerns are still warranted. Overall EE enrollment numbers in this cohort dropped by 5 percent, which underscores the need for attention. Building on the theme from last year—Recapturing the Vision—the theme for the 2008 Annual ECEDHA Meeting is *Curriculum Innovation*. The meeting agenda will include sessions on instructional innovation, laboratory tools, and outreach to high school and middle school students. In accordance with presentations given last year, the Infinity Project www.infinity-project.org/ is envisioned to be a centerpiece of future outreach activities. Many schools have already embraced the vision. In a presentation by **Issa Batarseh**, a web version of the Infinity Project was highlighted, which is attractive because it's transportable and can be replicated in states and regions across the country. By enlisting multiple ECEDHA member contributors on a regional basis, we hope to amplify the project tools and materials and make them accessible to university outreach programs on a large scale.

ECEDHA Board Interactions

In parallel with the activities mentioned above, ECEDHA Board members (shown below) continue to maintain and expand relationships with complementary organizations, such as the Computing Research Association (CRA), the Canadian Heads of Electrical and Computer Engineering/Directeurs de génie électrique et informatique du Canada (CHECE-DGEIC), the IEEE Committee on Engineering Accreditation Activities (CEAA), and the IEEE.



The 2007-08 ECEDHA Board members in attendance at the July, Santa Fe meeting: (back row from left to right) Wayne Bennett, Terri Fiez, Kenneth Connor, Mark Smith, Gerald Kane; (front row from left to right) Horacio J. Marquez, Issa Batarseh, Jon Bredeson, and John Janowiak.

For the last three years, a representative from the ECEDHA Board has been attending the annual CHECE-DGEIC meetings. This has been helpful in strengthening the communication and collaboration between the two organizations. Past president **Jon Bredeson** gave a presentation to CHECE-DGEIC last year during their October 2006 meeting in Edmonton. Current ECEDHA president, **Mark Smith**, will be representing ECEDHA in November, 2007, at the CHECE-DGEIC meeting to exchange ideas and engage in discussion on common issues.

Smith also attended the IEEE Educational Activities Board (EAB) meeting, June 16, 2007 in Philadelphia, PA. Opportunities for collaboration between ECEDHA and EAB were particularly evident in the area of improving undergraduate student diversity.

In addition to these interactions, **Wayne Bennett** and Mark Smith have been in discussion with representatives from the Computing Research Association (CRA) and IEEE respectively regarding ways to leverage resources. Updates on these discussions along with possible proposals for joint initiatives will be presented during the 2008 Annual ECEDHA Meeting. With all of the activities currently in process, the 2007-08 academic year promises to be one of the most exciting and eventful in recent history.

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Hands-On Practical Electronics

John Torous, IEEE Student Branch Chair
Ken Elkabany, IEEE Student Branch Vice-Chair
University of California, Berkeley

Engineering outreach is an ever active if not turbulent field. With new efforts and programs constantly in development, the UC Berkeley IEEE Student Branch also decided to enter the area in fall 2005. Together its officers created and continue to lead Hands-On Practical Electronics (HOPE), a student-designed and facilitated electrical engineering outreach program aimed towards educating both liberal arts college majors as well as high school students.

HOPE is a new approach to introducing electrical engineering to non-technical audiences.

Because its lessons abstract away much of the calculus and other complex equations, no engineering or physical sciences background is a necessary prerequisite. Rather the lessons focus on hands-on learning, soldering together wires, measuring voltage and current, and building functional and dynamic devices. By taking electrical engineering off the pages and into high school student's hands, HOPE helps them to develop a nascent intuition.

HOPE is also unique in its structure and organization. The program is offered over ten weekly one-and-a-half hour lessons. While the first lessons begin with safety and an early look at voltage and current, later lessons teach transistors and

basic digital logic. Each lesson builds upon the others so that students learn a solid slice of electrical engineering rather than a single interesting yet isolated phenomenon.

HOPE's strength is in its flexibility. At UC Berkeley we offer the program in any classroom that is available as we are not weighed down by bulky equipment. Small wireless soldering irons and digital multi-meters are the main pieces of portable equipment. Because the program is facilitated by IEEE student members, it is easy to have a wealth of enthusiastic and friendly instructors.

While UC Berkeley IEEE currently offers the HOPE program to interested arts majors as well as local high school students, other student branches have also expressed interest. As information on HOPE disseminated across the globe, IEEE student branches from Columbia to Tasmania asked how they could begin similar efforts. Fortunately, the solution came this June when the IEEE Foundation awarded the HOPE program a \$25,000 grant.

With the grant, the UC Berkeley IEEE Student Branch is planning to soon host an international student conference for those schools interested in developing a new universal curriculum and set of lessons. Planning to fly in at least one stu-

dent from every IEEE region, UC Berkeley IEEE will work to train these student leaders in offering student-led outreach programs. As each representative IEEE student branch takes HOPE back to its own region and customizes the lessons to their local needs, they will also be able to upload their HOPE program to a central website. From this website, others interested in offering HOPE may select from the numerous customized options available to them and hopefully later themselves upload their own improvements.

HOPE will succeed as far as IEEE student members are willing to take it. While IEEE student branches hosting HOPE gain a new sense of purpose, IEEE student members facilitating HOPE gain valuable teaching experiences and IEEE communities gain an invaluable introduction to the fascinating world of electrical engineering.

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Highlights of activities in ASEE ECE Division, Education Society Membership



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IEEE Education
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Chair



Victor Nelson
ASEE ECE
Division Past
Chair



Jenna
Carpenter
2008 ECE
Division
Program Chair



Dennis
Silage
ECE Division
Chair

From the ECE Division of ASEE

The ASEE 2007 Annual Conference in Honolulu is a fond and lasting memory but its impact on electrical and computer engineering education is only beginning. The ECE Division hosted nine formal presentation sessions with educational topics ranging from digital and embedded system design, optical and wireless communication systems, innovation and design in the curriculum to pedagogy and assessment. The popular BS in EE Open Forum was moderated by **Victor Nelson**, Auburn University, 2007 ECE Division Chair. The Open Forum is well known for its diverse participation and lively discussions.

A reoccurring panel session on Teaching and Learning with Technology, organized by **Hossein Mousavinezhad**, is also always well-attended and featured **Charles Alexander**, Cleveland State University, **Dean Johnson**, Western Michigan University, **Ian Bennett**, National Science Foundation, **Gerald S. Jakubowski**, Rose-Hulman Institute of Technology and **Jenna Carpenter**, Louisiana Tech University. Jenna is also the ECE Division Program Chair for the ASEE 2008 Annual Conference in Pittsburgh and plans another panel session on this topic to be chaired by Dr. **Richard T. Jacobsen**, Dean of Engineering at Idaho State University.

The ECE Division will sponsor a workshop at ASEE 2008 on Embedded System Design using Programmable Gate Arrays given by **Lynne Slivovsky** and **Al Liddicoat** from California Polytechnic State University. This emerging trend in ECE education may soon affect the way in which microprocessors and microcomputers have been taught in the undergraduate curriculum.

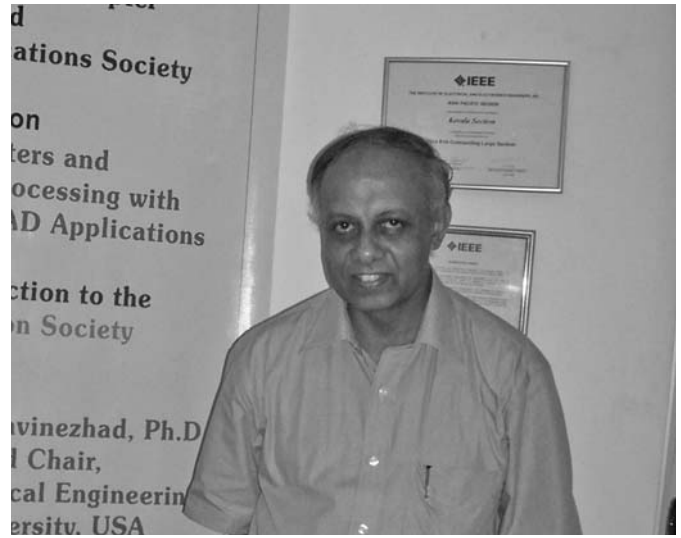
In 2008 ASEE is focusing on the critical need to make young students aware of engineering and engineering technology careers. The ASEE Annual Conferences have each held a K-12 Workshop on Engineering Education in an effort to work close-

ly with middle, junior and senior high school teachers. At the K-12 Workshop during ASEE 2006 in Chicago, **Dennis Silage**, Temple University, the 2008 ECE Division Chair, presented the Marconi Challenge, an inexpensive outreach program in IR digital data transmission. **Dennis** was also presented with the 2007 ASEE National Outstanding Teaching Award.

This year has also been a busy one for Education Society membership development and related activities, a couple of examples are mentioned here (there is more information about these and other events on EdSoc's website, www.ewh.ieee.org/soc/es). During June's AdCom meeting there was a discussion regarding establishing a GOLD ad-hoc committee, **Aju Thomas Abraham** of TATA Consultancy Services (TCS), Trivandrum, India who has been an active Society member invited **Hossein Mousavinezhad**, Society's MD Chair to visit the Kerala Section, August 3-4 and give a presentation regarding EdSoc, ABET and to deliver a technical talk on Digital Signal Processing. In addition to this visit, **Mousavinezhad** also participated at the International Conference on Global Software Development (ICGSD) hosted by PSG College of Technology, Coimbatore July 26 - August 2, 2007 and conducted a 1-week tutorial. Before the ICGSD, he visited S R Engineering College, Warangal. In all these events, we were impressed by the enthusiasm and energy of the participants including faculty, staff, students, section members and their hospitality as well as support for professional societies such as IEEE and ASEE. It is noted that Dr. **Rob Reilly**, Society's Webmaster and Chapters Coordinator also visited China during the Summer of this year and had a lot of interaction with members in that country. The readers are also encouraged to see the article in *ASEE Prism*, September 2007 (page 52) where a book is introduced (*IT and the East, How China and India are Altering the Future of Technology and Innovation.*)



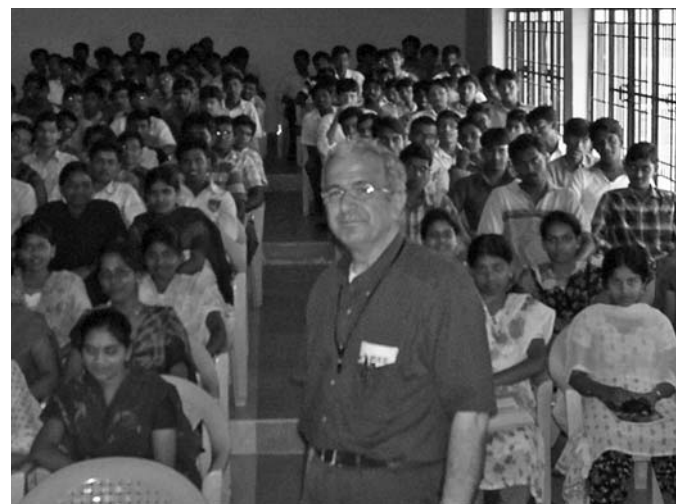
Mousavinezhad presenting at Kerala Section.



Amarnath, Raja Kerala, Section Chair.



Aju Thomas Abraham (to the right of Mousavinezhad) and other members of Kerala Section.



Mousavinezhad visiting S R Engineering College, Warangal, India.

On the Gallant but Misguided Struggle to Balance Academia and Industry in the Accreditation Process



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One of the most revered tenets of the accreditation activities in IEEE is that we must maintain equal an number of program evaluators from industry and academia. In addition, we ought to keep close-to-equal representation of industry practitioners and academics on all committees, commissions, and boards that are engaged in accreditation. Those who are privy to the intentions of the originators of this unchallenged doctrine (or at least those who have been volunteers long enough to give the rest of us the impression that they were contempo-

raries of Alexander G. Bell) sometimes go further. They wish to have also substantial representation of the government in the accreditation evaluator pool, and would like to see, in addition, some “preferred” government representatives, such as employees of national labs or other prestigious federal research enterprises.

The basic idea is that if we are to inform the accreditation process with the perspective of practitioners and use feedback from industry, we cannot do so without real life evaluators

who come “from the field.” These seasoned evaluators will supposedly contribute from their experience in the R&D lab, the testing lab and the production line, and ensure that a healthy dose of reality balances out the tendency that academics sometimes show toward over-reliance on theory and abstract reasoning. Presented this way, this motivation to have equal representation from academia and industry appears logical and commendable.

The ramifications of this system of belief are significant. In selecting program evaluators and committee members, and in recommending candidates to commissions of ABET and other organizations, IEEE has gone out of its way to identify and engage participants from industry. We advertise widely for program evaluator candidates from industry (and sometimes almost say in our advertisements *academics need not apply*). We make sincere efforts to accept candidates from industry into our evaluator and committee pools. We keep score cards and calculate percentages and maintain delicate balances. In our rosters and member lists we mark individuals as (A) for academic (the rather common type); (I) for Industry (the less common and hence more desirable type); and (G) for government (the truly rare and precious species). If a committee member’s tenure expires, we try to replace an A with an A and an I with an I. It is not rare to have a serious discussion on a candidate who defined himself or herself in one category, and to have a learned committee of IEEE volunteers modify the person’s self designation. The arguments on this subject often resemble detailed Talmudic deliberations. Candidate Smith declared that she is an Academic (A), but we have discovered, right there on page 3 of her application, that before she accepted her current position in Matterhorn University she had worked for ten years in IBM and for three years in Texas Instruments. “This is clearly an I” exclaims the thrilled Chair. Candidate Doyle, on the other hand, describes himself as a G person on account of his new position in a Federal lab in Virginia. But is he a real G or isn’t he? He had only been with the Federal lab for two (2) short years, say the opponents, and in the preceding 28 he had taught in two west coast universities, a military academy, and even a community college! This is an academic in governmental clothes!! The G-designation supporters try in vain to highlight the merits of the candidate’s government service and even mention in passing that “we really do not have that many candidates from Government.” The naysayers however will have none of that. They counter with another piece of incriminating fact, from the back of the resume; our so-called government employee (listen to that) still holds a part time teaching position at the university across the street... “Once an A,” they will tell you all excited, “always an A!”

The predisposition of academics to volunteer to serve on accreditation committees and evaluator groups is rooted in both interest and incentives. It is not surprising that educators are interested (often passionately) in the very process that ensures the quality of educational programs,

and that they would like to be part of the process that affects curricular trends. Some educators become evaluators in order to prepare their own programs better for future accreditation visits. Others, who have gone through years of teaching, education, grading and assessing of students, feel that they are qualified to engage in passing judgment on programs in other schools. Moreover, the academic system recognizes the importance of accreditation to academia by rewarding professors who engage in accreditation volunteer activities. Participation in accreditation work is part of the recognized “service” component that many academics are assessed by.

The predisposition of industry practitioners not to volunteer in large numbers to accreditation activities is rooted in disinterest and in lack of incentives. Academic education is often far removed from the immediate professional interests and goals of many practitioners. If these practitioners are inclined to volunteer, they often gravitate toward interests that are closer to industry – such as committees on standards or local committees of professional associations (e.g., IEEE Sections.) Many working engineers consider the academic world to be an unknown territory, and feel uncomfortable and even intimidated at the thought that they would engage in evaluating academic programs (often at the expense of time at work, having to use vacation days for this activity). As much as we want to believe otherwise, industry managers seldom understand the importance of accreditation. They are even less inclined to support an employee who requests time off to get trained as a program evaluator or to participate in committee meetings and accreditation visits.

So... what happens in practice? The primary outcome of our passion for equal representation is very good – we find and accept for service many excellent volunteers from industry and academia. The flip side is that we reject a large number of highly qualified candidates for volunteer positions who come from academia. Moreover, whether we like to admit it or not, we have established two separate (but not exactly equal) systems for evaluating volunteers for accreditation tasks. One for the “A”s, another for the “I”s and the “G”s. We have also distorted the composition of the accreditation decision-making group as compared to the volunteer body of the professional associations that support them. Whereas the interest in the volunteer body is perhaps 80:15:5 in the categories A:I:G, we created committees and evaluator groups with distributions such as 55:35:10. We insist on drawing more volunteers from groups that are less interested in the subject matter, and encourage volunteers from industry to put efforts in activities that are generally not favored (and sometimes actively discourages) by their employers... In order to get to this result we have created an unnatural system of notations and (complicated and expensive) checks and balances. Worst of all – we have started asking first the question *where is this volunteer coming from* and only second *how good this volunteer is*. This is hardly the path to excellence.

It does not appear we have gained much in return. Though we have followed the “equal representation” path religiously for years, there is no evidence that we (IEEE) have done particularly better or worse in the area of accreditation than other large professional associations that did not fight the natural trends as valiantly as we did. There is no evidence (at least no empirical evidence in the usual sense of the term) that the current doctrine has bought us much. We may feel good that we are “doing the right thing” but it is not clear at all that we do. In our deliberations and decision-makings one hardly senses the alleged big difference in aims, approaches or

methodology between the A, I, and G families.

These observations suggest that if we abandoned the complicated academia-industry-government calculus, the intricate designations, and the borderline ridiculous debates on the “true” allegiances of candidates for accreditation work, we could perhaps put our energy into more useful goals of the accreditation enterprise. Said more succinctly, it is time to do away with the quotas.

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Editor's Note: While I disagree with most of the comments made by Moshe in the above article, I believe he represents a view held by some. I hope our industry and government program evaluators, engineering accreditation commission representatives, and IEEE Committee on Engineering Accreditation Activities members will know they are appreciated for their valuable contributions to accreditation. I am pleased to recognize the fact that our current and previous chairs of the IEEE CEAA are both from industry.

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Reclaiming Academic Primacy in Higher Education: The Revised IRS Form 990 Can Accelerate the Process¹

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BACKGROUND – America’s institutions of higher education that support big-time (NCAA D-1A) athletics programs are now declining toward the total prostitution of their colleges and universities in their seemingly desperate quest for more money, power, and prestige. These institutions are apparently either unwilling or unable to work seriously to restore academic primacy and integrity to their institutions and to the whole of higher education.

With the co-option of the Knight Commission on Intercollegiate Athletics by the NCAA, there is no one outside the government charged with anything resembling responsibility for controlling the NCAA’s college sports entertainment business that has become expert at resisting true reform. The business has exploited college athletes, provided weak rules enforcement, shown a lack of concern with regard to violence by college athletes and the connection of violence to the use of performance enhancing drugs, while limiting access to higher education by real students and shrouding its conduct in a veil of secrecy – taking inappropriate, if not illegitimate, refuge in the privacy provisions of the Buckley Amendment to the Family Educational Rights and Privacy Act (FERPA).²

The increasing commercialization of big-time athletic programs and its negative impact on America’s higher education enterprise has become evermore apparent to some academic

leaders, elected public officials, the sports press, and to a growing fraction of the public.

After a century of ineffective efforts to reform college sports, there is a growing concern over this apparently out-of-control commercialization that is driven by the NCAA to further its financial interests. There is also concern about compromised academic integrity and the distracting influence of overly commercialized college sports on school officials, on America’s youth, and on the nation’s diminishing prospects as a leader in the 21st century’s global economy.

So it is ironic that current federal tax policy forces parents, students, and other American taxpayers to help foot the bill for multimillion-dollar salaries for coaches, ‘stadium wars,’ tax breaks for wealthy boosters, NFL and NBA minor league teams, and other artifacts of the big-time college sports arms race while the NCAA works effectively to thwart any and all serious reform efforts – especially those targeting its tax-exempt status.

In his most recent book,³ **Jim Duderstadt**, President Emeritus and University Professor of Science and Engineering at the University of Michigan, wrote: “While they (faculty) deplore the exploitation of student athletes and the corruption of academic values, they feel helpless to challenge the status quo in the face of pressures from coaches, athletic directors,

and boosters – not to mention the benign neglect by presidents and trustees.” This statement preceded Duderstadt’s conclusion that “it is time for Congress to step in, at least in a limited way, to challenge several of the current anomalies in federal tax policy that actually fuel the commercial juggernaut of big-time college sports.”

The good news is that the Senate Finance Committee has given serious consideration to recommendations for sports program transparency and reporting at the NCAA and its member institutions. Momentum built in Congress to investigate how universities with big-time sports programs use their tax-exempt status to pay multi-million-dollar coaches’ salaries and build extravagant athletics facilities. Senator **Chuck Grassley** of Iowa, the Ranking Member of the Senate Committee on Finance, asked the Congressional Budget Office to investigate the tax-exemption issue.⁴

Grassley and Senator **Max Baucus**, the committee chairman, have worked together to conduct oversight and achieve major legislative reforms of the laws that help to govern tax-exempt organizations. They not only sought greater transparency into the workings of these organizations, but also urged the Treasury Secretary to update the IRS tax form used by the nonprofit sector to make gathering more and better information a top priority and to pay particular attention to the operational complexities of nonprofit hospitals and universities.

“While we always hear that sunshine is the best disinfectant, sunshine can’t do its work unless we open the blinds,” Grassley and Baucus wrote.⁵ “The sooner we open those blinds the better.” “At this point, it’s clear the IRS needs to get a better picture on a wide range of issues involving tax-exempt organizations,” Grassley said.

THE RECENTLY REVISED IRS FORM 990 – The revised Form 990, “Return of Organization Exempt from Income Tax,” filed by many public charities and other exempt organizations, has the potential to fully expose the Achilles’ Heel of the NCAA and its member institutions – the extremely weak, if any, educational basis for the current financial structure of big-time college sports. This would not only force very major reform, but provide unassailable “cover” for reform-minded university presidents and governing boards as well.

The discussion draft of the Revised IRS Form 990 constitutes a significant redesign of Form 990 that was based on three guiding principles: 1) *Enhancing transparency* to provide the IRS and its stakeholders with a realistic picture of the organization and its operations, along with the basis for comparing the organization to similar organizations, 2) *Promoting compliance* demands that the form must accurately reflect the organization’s operations and use of assets, so the IRS may *efficiently assess the risk of noncompliance*, and 3) *Minimizing the burden on filing organizations* means asking questions in a manner that makes it relatively easy to fill out the form, and that do not impose unwarranted additional recordkeeping or information gathering burdens to obtain and substantiate the reported information.

The IRS solicited public comment on the discussion draft of the redesigned Form 990, that was due on September 14,

2007. The Drake Group (TDG) seized this opportunity to have the IRS ask for information regarding sports programs. The TDG commentary focused on the tax-exempt NCAA and its member institutions. Here’s why:

After work with the staff of Congresswoman **Jan Schakowsky** throughout 2004 – an effort that led to her Extended Remarks for the Congressional Record⁶ – TDG worked closely with the staffs of the Oversight Subcommittee of the House Committee on Ways and Means and the Senate Finance Committee to reveal the brutal truth about big-time college sports that is often obfuscated by myths, misrepresentations, and misinformation promulgated by ardent defenders of the status quo.

This work helped contribute to a sharply-worded letter from the then House Committee on Ways and Means Chairman Congressman **Bill Thomas** to NCAA President **Myles Brand** – seeking justification for the NCAA’s tax-exempt status as an institution of higher education, specifically asking Brand to explain why, given the NCAA’s similarity with pro sports entities in its dealings with media rights and other big-money issues, it should continue to be tax-exempt, and the December 5, 2006, meeting of the Senate Finance Committee that, among other things, probed the NCAA’s response to the Thomas letter via testimony from Duderstadt.⁷

TDG COMMENTS – Although TDG agreed with the guiding principles for the revised Form 990, it said that the revisions should be amended since the proposed Form 990 does not ask for the level of disclosure that TDG and the Congress are seeking as well as what the IRS ought to have. TDG said it focused its earlier recommendations to the U. S. Congress on the need for greater transparency and reporting that could be required of NCAA sports programs at colleges and universities – arguing that this transparency and reporting would provide supporters, the general public, present and future students and their parents, the media, and policymakers with a much better understanding of “what is really going on” at the NCAA and their sports programs at big-time colleges and universities. TDG said that without enhanced transparency via disclosure there will be no reform in big-time college sports. Here are some specific comments:

The FERPA Factor – TDG said the IRS needs be mindful of the fact that the NCAA and its member schools routinely resist requests for information or data on student athletes – citing the Family Educational Rights and Privacy Act (FERPA) and other federal laws – in effect, shielding academic corruption from public view. This corruption not only allows them to sustain their phony ‘student-athlete’ ruse with its derivative tax-exempt status, but also to recruit, sign, and roster academically unqualified blue-chip athletes requisite to fielding professional-level teams for their college sports entertainment businesses. Thus, the recommendations provided herein are rooted in the compelling need to require the NCAA and its member institutions to disclose information that can provide tangible evidence that their athletes function as real students.

The NCAA’S Student-Athlete – Without facts obtained by

independent parties, disclosure, and external oversight, the NCAA cannot know that athletes are really students receiving a bona fide, rather than a “pretend” college education. Since the NCAA lacks verifiable evidence – indicating that athletes are progressing on accredited-degree tracks – there appears to be no rational basis for the NCAA to use the term ‘student-athlete’ when referring to college athletes who are, in effect, full-time employees of their schools. The NCAA’s use of the term may very well represent a false claim in violation of laws governing truth in advertising.

Michigan State University College of Law Professors **Robert and Amy McCormick** argue in a Washington Law Review article that grant-in-aid athletes in revenue-generating sports at NCAA Division I institutions should not be viewed as “student-athletes” as the NCAA asserts, but should, instead, be considered “employees” under the National Labor Relations Act.⁸

In many, if not most, instances, college athletes’ participate in an alternative educational experience that is not part of the school’s serious academic life, but rather a customized pseudo-academic experience engineered by academic support center staff members who work at the behest of the school’s athletic department to maintain the eligibility of the school’s athletes.

Recent and ongoing research strongly suggests prevalence clustering of entertainment-sport college athletes, especially minority athletes, in such alternative educational programs.⁹ ¹⁰ In addition to such pseudo majors, the phenomenon of “one and done” athletes, who utilize college sport as a short-term stepping-stone to a professional sport career, contributes to a lessening of universities’ academic standards and a marked deviation from educational missions.

Just like the NCAA, the Congress and the IRS, must take the word of school administrators that athletes are really students on track to receive a bona fide, rather than a “pretend” college education. The fact that the NCAA has never endorsed proposals for academic disclosure by its member institutions seems to indicate that NCAA officials do not want to have public evidence that could prove embarrassing.

Transparency/Disclosure – It seems clear that the Congress and the IRS want transparency on the nature of a tax-exempt organization that would reveal whether or not it warrants this status. The issue here is whether or not intercollegiate athletics is an integral part of the educational mission which is indeed exempt. The way universities can establish their claim to their being integral to the educational mission is through transparency in the athletes’ experience and their progress as legitimate students.

Other than the new Schedule J, there appears to be nothing in the proposed form regarding specific disclosures on college athletic programs. In fact, Schedule E, which is the schedule filled out by “private schools” exempt under 501(c)(3), has not changed at all. As mentioned previously, the proposed Form 990 does not ask for the level of disclosure that TDG and (we believe) the Congress are seeking as well as what the IRS ought to have. Even if it did, public universities could probably evade such disclosure because many,

if not most or all of them, would not file a Form 990. This appears to be a major problem since public universities usually are not required to file Form 990s, because they are part of state government, not a private entity exempt under 501(c)(3). It would probably take a separate law enacted by Congress to require public universities to file a Form 990.

Compensation – The proposed revisions to Form 990 do require far more detail regarding compensation of officers, directors and “key employees” (generally defined as someone who has management-like responsibilities for “a discrete segment or activity of the organization that represents a substantial portion of the activities, assets income or expenses of the organization. . .” on new Schedule J. The new definition of “key employee” which is now essentially the same as the definition for “excess benefit transactions” in Section 4958 of the Code, is likely to include NCAA Div. I-A football and basketball head coaches, so the IRS will likely get to know somewhat more about their compensation packages than it does now, but only for organizations required to file a Form 990

Also, the Form 990 and Form 990T should be amended to include questions about the “total compensation arising out of the connection to the non-profit.” For example, coaches and others are paid a small salary by the university-relatively – but they receive much larger compensation from other sources that would not be available to them “but for” their position at the university. Accordingly, the Form 990 does not reflect the compensation that the institution is legally liable to provide. The form should show the highest paid people irrespective of the position they hold.

Contingent Benefits – Currently, quid-pro-quo contributions – payments that are required in order to receive benefits from nonprofit organizations – are eligible to be claimed as a charitable contribution, for example, seat “taxes” for premium seats or lease fees for luxury skyboxes. The large income stream stemming from the skybox boom has been assisted in large part by a 1999 IRS ruling that allows boosters to deduct most of the donations they make to lease skyboxes, donations estimated to account for billions of dollars to Division I universities.

Unrelated Business Income – The commercial connections and government subsidies to college sports are well documented. For example, **Andrew Zimbalist** provides the story behind the gutting of the law pertaining to Unrelated Business Income Tax (UBIT) ... law that was written to provide for the taxation of the activities of a tax-exempt organization that are not substantially related to the exempt purpose for which it was formed.¹¹ It is understood that public universities were made subject to the UBIT provisions by special rule.

In their account of the suppression of the 1977 UBIT case brought against Texas Christian University by the Dallas office of the IRS, Allen Sack and Ellen Staurowsky provide a good sense of the magnitude and ubiquitous nature of the very powerful legal and lobbying forces at the command of the NCAA and its member institutions.¹²

RECOMMENDATIONS – TDG recommendations and related explanatory notes were based on the above comments

and cited references.^{2, 5, 6, 8-16} It is understood that some of these recommendations may very well require congressional action. Specifically, TDG recommended that the IRS:

1. Amend the revised Form 990 and schedules to provide a meaningful level of enhanced transparency – requesting the NCAA and its member institutions to disclose information that will provide evidence that their athletes: a) Are maintained as an integral part of the institution's student body;¹⁷ b) Attend regular whole-period classes;¹⁸ c) Are on accredited degree tracks and are held to the same academic standards of performance as all other students;¹⁹ and d) Realize a 2.0 grade-point average, quarter-by-quarter or semester-by-semester to gain and maintain eligibility for participation in athletic events, with the grades and academic records certified by the school's chief academic officer.²⁰
2. Advise the NCAA and its member institutions that: a) The need to vastly improve their transparency and reporting is a very serious matter and that their tax-exempt status will be conditioned on full disclosure; and b) Their operations will be subject to IRS and congressional oversight as well to severe penalties (in addition to the loss of their tax-exempt status) for noncompliance.²¹
3. Eliminate what appear to be clear violations of fundamental tax principles such as the loopholes that were inserted in the tax laws to enable practices such as tax deductions for contingent fees on seat tickets and sky-box lease payments.
4. Be more rigorous in assessing the UBIT status of the revenues received by organizations, such as the NCAA, whose sports entertainment business mission is largely tangential to the educational mission of colleges and universities.
5. Require the NCAA and their member institutions to employ a standard uniform system of accounting in their athletic departments that is subject to public financial audits.²²

CONCLUDING REMARKS – The implementation of the above recommendations by the IRS – requiring enhanced transparency and reporting on the part of the NCAA and its member institutions – would not only increase tax revenues, but also help restore academic and financial integrity in colleges and universities supporting big-time sports programs, especially football and men's basketball. These restorations would go a long way toward reclaiming academic primacy in higher education – doing that which presidents, governing boards, faculty, the NCAA, the Knight Commission, and others have failed to do for a variety of reasons.

ACKNOWLEDGEMENTS – The author gratefully acknowledges insights, suggestions, and contributions from: **John Colombo**, Professor, University of Illinois at Urbana Champaign School of Law -- teaching primarily in the tax field with special focus on tax-exempt organizations, **James Duderstadt**, President Emeritus and University Professor of Science and Engineering at the University of Michigan, **Jon Ericson**, For-

mer Provost and Ellis & Nelle Levitt Professor Emeritus Drake University and a founding member of The Drake Group, **John Gerdy**, Author and Visiting Professor in Sports Administration at Ohio University, a former professional basketball player as well as a legislative assistant at the NCAA and the Associate Commissioner of the Southeastern Conference, **Amy McCormick**, Professor, Michigan State University College of Law, and cited author on sports related law, **David Ridpath**, Assistant Professor of Sport Administration, Division of Sport Administration, Ohio University and the Executive Director of The Drake Group, **Allen Sack**, Director of the Management of Sports Industries Program at the University of New Haven and a founding member of The Drake Group, **Richard Southall**, Director, College Sport Research Institute, Assistant Professor, Sport & Leisure Commerce, University of Memphis and a member of The Drake Group, and **Andrew Zimbalist**, Professor, Economics Department at Smith College of Economics, Smith College, and noted author in the realm of sports business.

Frank G. Splitt, a member of ASEE, is a former McCormick Faculty Fellow at Northwestern University and Vice President Emeritus of Nortel Networks, a Life Fellow of the IEEE, a Senior Director and Fellow of the International Engineering Consortium, and a member of The Drake Group. He was a member of the inaugural ABET Industry Advisory Council, the recipient of the *2006 Robert Maynard Hutchins Award*, and the author of "Reclaiming Academic Primacy in Higher Education" and "The Faculty-Driven Movement to Reform Big-Time College Sports." These, as well as his other essays and commentaries on college sports reform are available at URL <http://thedrakegroup.org/splittessays.html>

NOTES

¹ This article is a sequel the author's previous Interface articles related to college sports reform, "THE U. S. CONGRESS, HIGHER EDUCATION, AND COLLEGE SPORTS REFORM: Signs of Progress, Truth, and Consequences," and "Federal Intervention Required in the Accreditation Process," that appeared in the April and August 2007, issues. In large measure, it is based on the September 12, 2007, "Comments by The Drake Group on the Draft of a Redesigned IRS Form 990."

² FERPA is part of the Federal General Provisions Concerning Education (GEPA), a set of unfunded conditions on the receipt of federal education funds. It is commonly referred to as the Buckley Amendment to GEPA. See Matthew R. Salzwedel & Jon Ericson, "Cleaning Up Buckley: How the Family Educational Rights and Privacy Act Shields Academic Corruption in College Athletics," *Wisconsin Law Review*, Volume 2003, Number 6, 1053-1113. TDG has recommended that the Congress add interpretive wording to FERPA's student privacy provisions to make abundantly clear that this legislation does not prohibit release of information on the academic performance of individual athletic teams in whole or in part, so long as the data do not identify individual team members. Supplementary recommendations relative to FERPA that will ensure academic integrity of institutions of higher education are as follows: a) Under Department of Education guidelines, "Directory Information" shall be amended to insert "courses, including the name of the professor" following "major field of study," and b) Institutions shall make public academic records of members of student groups sufficient in number to protect the privacy of individual students, students' courses including the grade, name of the

professor and course GPA. The records shall be in the listed in order of grades received, i.e., courses in which the student received an A, courses in which the student received a B, and so forth.

³ Duderstadt, James J., *The View from the Helm: Leading the American University During an Era of Change*, p. 326, University of Michigan Press, Ann Arbor, Michigan, 2007

⁴ Fain, Paul, "Senator Questions Colleges' Tax Breaks," *The Chronicle of Higher Education*, April 13, 2007.

⁵ Senate Finance Committee Press Release, "Senators Work to Build Confidence in Nonprofits Through Greater Transparency," May 29, 2007, <http://www.senate.gov/~finance/sitepages/baucus.htm>

⁶ Schakowsky, Janice D. "Call for attention to the work of Dr. Frank Splitt," *Congressional Record*, Extension of Remarks, March 17, 2005, – p 9, http://thedrakegroup.org/Splitt_Essays.pdf.

⁷ Splitt, Frank G., "The U.S. Congress: New Hope for Constructive Engagement with the NCAA and Intercollegiate Athletics", *The Montana Professor*, Spring 2007, <http://mtprof.msun.edu/Spr2007/splitt.html>

This article contains details on these congressional efforts as well as historical perspectives that help get at the truth about big-time college sports. Also, an article by Brand titled "Faculty Members Constructive Engagement in Intercollegiate Athletics," <http://mtprof.msun.edu/Spr2007/brand.html>, appeared in the same issue. Geoffrey G. Gamble, President of Montana State University and George M. Dennison, President of the University of Montana said this in the Editor's Introduction: "While not arranged as an exchange, the two pieces by Myles Brand and Frank Splitt offer contrasting views about the role and control of intercollegiate athletics. Brand argues for faculty engagement to assure that intercollegiate athletics remains an integral part of the academy, while Splitt urges federal intervention by Congress to bring under control what he sees as excessive dedication of higher education resources to intercollegiate athletics."

⁸ McCormick, Robert A. and Amy C., "The Myth of the Student-Athlete: The College Athlete as Employee," *Washington Law Review*, Vol. 81, pp. 71-157, 2006, Available at SSRN: <http://ssrn.com/abstract=893059>

⁹ College Sport Research Institute, "Study of 2006 NCAA Division I men's basketball tournament players' majors," Memphis, TN, 2007

¹⁰ Finley, P. S. and Fountain, J. J., "Academic stacking of athletes on low-performing Division I football teams," Paper presented at the annual meeting of The Drake Group, Cleveland, OH, March 2007.

¹¹ Zimbalist, Andrew, *Unpaid Professionals: Commercialism and Conflict in Big-Time College Sports*, Princeton University Press, 1999; See pp. 128 and 129 in the Paperback Edition, 2001.

¹² Sack, Allen L and Staurowsky, Ellen J., *College Athletes for Hire: The Evolution and Legacy of the NCAA's Amateur Myth*, Praeger Publishers, 1998.

¹³ Splitt, Frank G., "Are Big-Time College Sports Good for America?" http://www.thedrakegroup.org/Splitt_Good_for_America.pdf

¹⁴ _____, "The U. S. Congress, Higher Education, and College Sports Reform" http://thedrakegroup.org/Splitt_The_Interface.pdf

¹⁵ _____, "The Congressional Challenge to the NCAA Cartel's Tax-Exempt Status" http://thedrakegroup.org/Splitt_Congressional_Challenge.pdf

¹⁶ _____, "Don't Overlook the Congress for Serious College Sports Reform" http://thedrakegroup.org/Splitt_Dont_Overlook.pdf

¹⁷ Over the years, the NCAA has made a number of rule changes that have emphasized athletics over academics so as to move their D-1A football and men's basketball programs to professional levels. The NCAA has resisted providing college athletes meaningful opportunities to function as real students by not agreeing to: a) Restore first-year ineligibility for freshmen with expansion to include transfer athletes; b) Reduce the number of athletic events that infringe on student class time, with class attendance made a priority over athletics participation—including game scheduling that won't force athletes to miss classes; c)

Restore multiyear athletic scholarships—five-year scholarships that can't be revoked because of injury or poor performance (currently, an athletic scholarship is an agreement between athlete and coach/athletic department, renewed based on ATHLETIC performance), or, replace athletic scholarships with need-based scholarships – agreements between a student and the institution based on academic performance. If the scholarship is need based, it will be awarded by the institution – just as the institution awards all other need-based aid – in that case, it does not need to be a five year award as the student will continue to receive his or her need-based aid, even if they leave the team. A strong case for switching to need-based aid as the only way to break the cycle of sponsoring professional teams on college campuses is made by John Gerdy in his most recent book, *Air Ball: American Education's Failed Experiment with Elite Athletics*; and d) Require athletes to honor the terms of their multiyear athletic scholarship with appropriate penalties to the school and athlete for broken commitments such as 'one and out' to the NBA.

¹⁸ Attending class is a public act; disclosing the names of courses and professors while not releasing students' grades provides the appropriate balance between a student's right to privacy and the public's right to know the conduct of faculty, administrators and governing board members. The purpose of transparency is to focus on the conduct of faculty, administrators and governing board members, not on student conduct. Transparency would require disclosure of courses taken by the school's football and basketball team players as well as cohorts representing 50% of the players with the most playing time, the average grades for the athletes and the average grades for all students in those courses, the names of advisors and professors who teach those courses, and whole-period class attendance records for the athletes.

¹⁹ The schools should be required to identify: a) The Department of Education's National Advisory Committee on Institutional Quality and Integrity (NACIQI) approved accrediting organization responsible for accrediting the tracks, especially for the general studies and other 'diploma-mill-like' degree tracks commonly engineered for athletes by their school's academic support center staff, and b) The responsible authority for academic counseling and support services for athletes. Such services should be the same for all students and in no way under the influence of the athletic department.

²⁰ It is reasonable to expect that a legitimate student have no less than a "C" average. The school's chief academic officer should be held personally accountable for academic corruption.

²¹ Conditioning the continuation of the NCAA's tax-exempt status on their meeting specific reporting requirements such as outlined herein and plugging the tax loopholes that help subsidize the college sports arms race will provide a strong message as to the serious nature of the revised Form 990 and its schedules. Self assessment and reporting by colleges and universities, as well as weak enforcement by the NCAA, and even weaker penalties for infractions, provide an enormous incentive for schools to scheme and cheat. Failure to implement and comply with the IRS reporting requirements should put the NCAA and/or individual institutions at risk of losing their tax-exempt status. Once implemented, evidence of a continuation of existing patterns of fraud, continued efforts by universities and colleges to circumvent the intent of these measures, or, retaliation against whistleblowers, should garner severe penalties

²² Convenience accounting and budgeting practices will continue to be used by the NCAA cartel to deceive and confuse faculty, the public, the Congress and the IRS about athletic department financials unless and until schools are forced to employ a uniform system of accounting that includes total capital expenditures, depreciation, and total staff costs from all sources, as well as be subject to public financial audits. The threat of Sarbanes-Oxley would certainly bring the NCAA and its member institutions to sharp attention.



TAAE Congress – Technologies Applied to Electronics Teaching (Tecnologías Aplicadas a la Enseñanza de la Electrónica)

Zaragoza, Spain, July 2-4, 2008

The 2008 Technologies Applied to Electronics Teaching Conference (TAAE 2008) is a well-consolidated congress oriented to Educators related to Electrical and Electronic areas (<http://taee2008.unizar.es/>).

The First Congress was celebrated in 1994 in Madrid (Spain), and since then congresses have been celebrated every two years. In 1998, during the celebration of the third Congress, the participation was opened to the Latin American countries. This situation has been followed in later congresses. The inclusion of Latin American countries was stimulated by the participation of many universities in a program of the European Commission called Alpha. In 2006, technical co-sponsorship of the IEEE Education Society was included.

Under the acronym of TAAE, not only congresses have been celebrated but other initiatives directed to the same objective have taken place such as the creation of a “TAAE Resource Centre”. In this Centre there are gathered the different didactic resources that have been presented in the TAAE Congresses or that have been donated by companies or groups of professors. This is a Centre of creation, application, evaluation and diffusion of resources and experiences on the use of the technologies for traditional or distance education. Its objective is the knowledge sharing and the reuse of the educational resources. Further information is in http://www.euitt.upm.es/taee/recursos/Centro_Recursos_TAAE.htm.

2008 Conference Information. Call for papers.

The TAAE 2008 conference will be celebrated in July 2008 at the University of Zaragoza, in Spain. In its organization, several Spanish and Latin American Universities that are part of the TAAE network, and different companies, will collaborate.

The main topics of the Congress are the following ones: European Space for Higher Education, Learning using the Internet and Educational Resources for traditional education.

TAAE 2008 will last three days. It will be structured in the following elements:

- Plenary sessions – Round tables.
- Parallel sessions for the presentation of oral papers.
- Parallel sessions for the presentation of posters.

- Demonstrations of finished educational products.
- Exhibitions of companies from the Electronics industry.
- Working group sessions.

The thematic areas used to organize the collaborations to the congress will be:

- Electronics fundamentals
- Analogue electronics
- Digital systems
- Microcontrollers
- Electronic instrumentation
- Power electronics
- Device technology
- Control systems
- Signal processing
- Communication systems
- Educational resources
- Educational experiences
- Distance learning: Methods, technologies, and assessment
- Elaboration of new curricula
- Adaptation to European Credit Transfer System
- Education for people with disabilities and elderly people

The official languages of the congress will be Spanish and English.

Manuscript deadline has been extended to 12 November 2007.

Zaragoza (Spain) and the Expo 2008

Along with the celebration of the conference, the International Conference Expo 2008 will take place in Zaragoza (<http://www.expozaragoza2008.es/>).

This International Conference is regulated by the BIE, French abbreviation for the International Expositions Bureau (Bureau International des Expositions). **Water and Sustainable Development** is the main topic of the Expo 2008

This coincidence will give all the TAAE 2008 attendees the opportunity to visit the Expo 2008 which will include exhibitions and performances by artists.

Letter to the Education Society Administrative Committee

Dear Colleagues,

I have recently returned from a conference in Poland, EUROCON 2007, where I presented a tutorial on the amateur radio in engineering education, for details see <http://eurocon2007.isep.pw.edu.pl/index.php?id=tutorials.php> Please note that the amateur radio computing is my personal long-time hobby and not-for-profit activity.

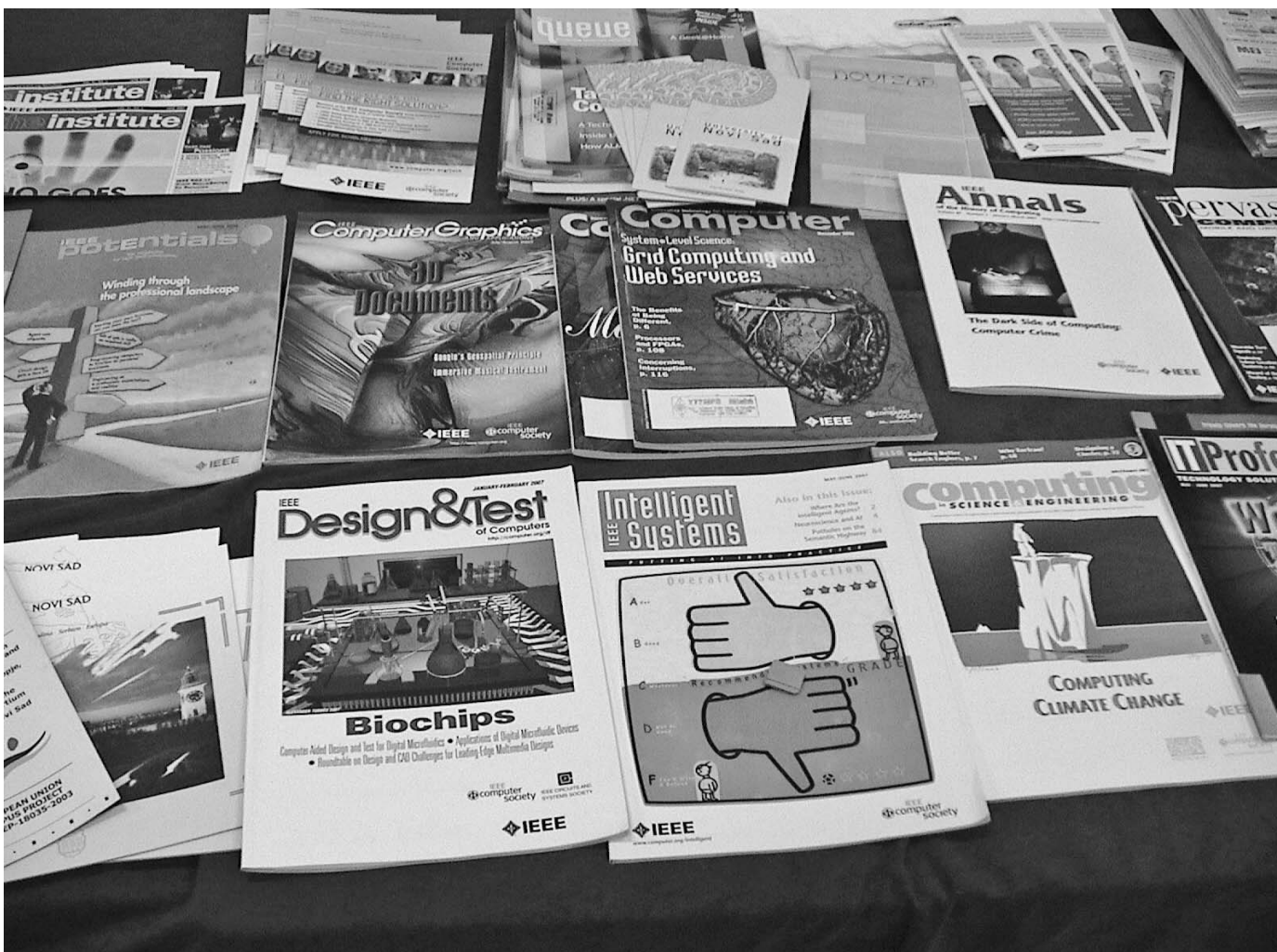
Besides the tutorial, I brought along some 20+ kilograms of various IEEE brochures and publications to display there, in order to promote IEEE membership and activities, as well as to award the most active discussants in the tutorial. I enclose a picture of the publications. As a Student member of IEEE

Computer Soc and Communications Soc I presented only their publications.

I plan to continue with that kind of promoting activities, and it makes me wonder if IEEE Education Society will be capable and willingly to donate some publications to be distributed during next events I am planning to participate. If so, please let me know.

Best regards,

Miroslav Skoric
<http://tldp.org/HOWTO/FBB.html>





IEEE Education Society Vice President **Susan Lord** stands beside one of the many banners that proclaim the 50th Anniversary of the society. The celebration at the 2007 FIE Conference in Milwaukee began a year long celebration of the 50 years of activity of the Education Society.

IEEE President and CEO **Leah Jamieson** (left) and IEEE Education Society President **Joseph L.A. Hughes** cut one of the many 50th Anniversary cakes that were prepared for the gala celebration and social event at the 2007 FIE conference.



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